Considering teacher cognition and motivation in teacher research engagement: A mixed-methods study involving English language teachers at Vietnamese public universities

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Table of Contents

List of Tables

List of Figures

List of Abbreviations and Acronyms

ANOVA	Analysis of Variance
CBADR	The Context Beliefs about Doing Research scale
CEFR	The Common European Framework of Reference
DV	Dependent Variable
EFL	English as a Foreign Language
ELT	English Language Teaching
IV	Independent Variable
KMO	The Kaiser-Mayer-Olkin
MOET	Ministry of Education and Training
PCA	Principle-Component Analysis
PD	Professional Development
PRIP	Peer-Reviewed International Publication
R-ATR	Revised-Attitudes Towards Research Scale
RMS	Research Motivation Scale
SDT	The Self-Determination Theory
TATR	Teachers' Attitudes Towards Research Scale
TPD	Teacher Professional Development
WEIMS	Work Extrinsic and Intrinsic Motivation Scale

Abstract

Teacher research has been recommended as a powerful and transformative model of teacher professional development, but remains a minority activity among the general population of teachers worldwide, including those who teach English as a foreign language (EFL). Since available empirical research into this situation in the field of the language teaching is scant and demonstrates several thematic and methodological limitations, this study seeks insights into the current status of research engagement among Vietnamese public university English language teachers, and the role their cognition and motivation play in the found scenario. Guided overall by Korthagen's (2004) Onion Model of Levels of Changes, the study explicitly investigates the research engagement practices reported by these teachers, their conceptions of research, self-efficacy beliefs, attitudes, context beliefs, and motivations surrounding the "research" concept, and the relationship between these factors and teachers' reported level of research engagement. Teachers' initial motivations and how they are sustained or eroded in the research engagement process is also qualitatively examined. Following the sequential explanatory mixed-methods design, the study employs a mixture of survey questionnaires, semi-structured interviews, and documents of both public and personal types to collect relevant data from a randomly-selected sample of 568 EFL teachers and 27 leaders of English departments from 31 public universities in Vietnam. Quantitative data, which were analysed with descriptive and inferential statistics, were explained, extended, and deepened by, or triangulated with qualitative data, which were analysed on a thematic basis, to fulfil the research objectives.

The results show a modest level of research engagement reported by the sample, who also described their research experience as mostly small-scale, practice-driven, and formally, domestically published. Data on the sample's demographics, cognition and motivation uncover many distinct features of the group as well as several unusual relationships between these factors and the frequencies of doing research the sample reported. For instance, instead of exhibiting a technical view towards research as commonly found among the participants of previous studies, Vietnamese tertiary EFL teachers demonstrated diverse views of research without any clear

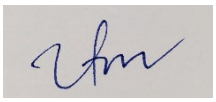
common tendency. Their experience of research mirrors the practice-driven, qualitative-oriented patterns shown in the teacher research manual literature, but does not bear significant relationships with certain aspects of research self-efficacy, motivations, teacher attitudes and context beliefs about doing research as normally predicted and previously found in the existing literature.

The findings of this study help add Vietnamese teachers' voices to the global picture of language teacher research engagement, and hopefully will be of practical and theoretical use for various stakeholders.

Statement of Originality

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

This study was granted approval by Macquarie University Human Research Ethics Committee (REF: 5201500833; 5201600169) and conducted in accordance with the guidelines stipulated.



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PART I: THE BACK GROUND FRAMEWORK OF THE STUDY

Part One provides the background framework for the present study. It comprises five chapters:

Chapter 1: Introduction

Chapter 2: Review of Relevant Literature

Chapter 3: Theoretical Considerations

Chapter 4: Context of the Study

Chapter 5: Methodological Considerations

Chapter 1: Introduction

1.1. Rationale of the study and preliminary research questions

Given the increasing global demand for learning English as a foreign language (EFL), the professional development (PD) of EFL teaching staff is an area of significant need. Among various PD options for EFL teachers, research engagement has been strongly recommended as an innovative model with "the potential to be a powerful transformative force in the [EFL teacher's] work and professional development" (Borg, 2010, p. 391). As early as in the first half of the 1980s, language teachers had been called on for more active participation in classroom-centred research, which was expected to contribute towards curriculum development or student learning improvement (Breen & Candlin, 1980). Since then, the growing significance of teacher-initiated research has been demonstrated in the number of publications of (i) the "how-to" type, which are often written by academics, offering detailed and practical guide for teachers to conduct their own research (e.g. Baumfield, Hall, & Wall, 2008; Burns, 1999; Nunan, 1989) and (ii) the "case studies" type, which collect and present studies written by in-service EFL teachers (Borg, 2006a; Burns & Burton, 2008; Burns & Hoods, 1995; Farrell, 2006). Action research, i.e. research conducted by teachers to improve their own practice, has been listed as one acknowledged model of professional development by many major names in the field (e.g. Borg, 2011; Burns, 2007; Kennedy, 2005; Richards, 2005; Tsui, 2011). On the practical level, research engagement has been made compulsory for tertiary EFL teachers in many contexts (see for example Anwaruddin & Pervin, 2013; Xu, 2014) including Vietnam (Pham, 2006). The fundamental argument underpinning this trend is that teacher research engagement and their research-informed pedagogical decisions should benefit both their teaching and their students' learning, or in other words, education quality in general (Borg, 2011; Burns, 2007; Hargreaves, 1999; Richards, 2005).

Such positive rhetoric, however, has remained weakly confirmed in practice. In the significant body of work that examines teachers' perceptions of research, research activities, and their awareness of the research culture in their institutions, findings show only a moderate level of

teacher research engagement, a technical view of research, and many personal and contextual constraints on teachers' research experiences (Borg, 2006a, 2007a, 2009; Borg & Liu, 2013; Gao & Chow, 2011a). According to Borg (2010), there is clearly a tension between the professional development potential for teachers to be research active, and the extent to which they actually engage in research as part of their on-going professional development. While this tension might be unsurprising in the contexts where research engagement is optional for teachers, insights into why it also exists in the settings where teachers are expected to be research-active would be valuable for stakeholders to approach the questions of whether and how to promote the research role among EFL teaching staff in a more feasible way.

Although existing literature provides some insights into this issue, some gaps can be easily noticed. Firstly, despite a substantial amount of work conducted into teacher's research engagement in mainstream education, empirical accounts of EFL teachers' research practices are scant (Borg, 2010). Among the available studies, there is furthermore a paucity of large-scale but context-specific research, resulting in a lack of situated and detailed insights into teacher's research practice to inform local decision making (Borg & Liu, 2013). Thirdly, while teachers' cognition (what teachers *know, think,* and *believe)* and motivation (*why* teachers behave the way they do) are widely believed to be an influential determinant of teachers' participation patterns in professional development activities (Borg, 2011; Boyd et al., 2003; Burns, 2007; Cave & Mulloy, 2010; Gorozidis & Papaioannou, 2014), these factors are largely overlooked in existing literature on teacher research engagement. A few studies have examined some aspects of teacher cognition and motivation (Bai & Millwater, 2011; Borg, 2006b, 2009) including, for example, teachers' perceptions about research or the reasons why they engage in research; nevertheless, none of them considers these two constructs comprehensively under well-established theoretical frameworks to explain teachers' research engagement practice.

Motivated by such a need and gap in the literature, this study aims to understand, in a context where teachers are expected to be research-engaged, the nature of such activity, and the individual-difference factors related to motivation and cognition that may shape it. Choosing

Vietnamese public universities, where the same expectation officially exists in policies but no research on such topic has been conducted so far (at least to the best of the author's knowledge), the current research will first explore the status quo of teachers' research practice and subsequently investigate their attitudes, beliefs and perceptions of research, as well as their motivation for being engaged in research – the personal factors that are believed to significantly shape the situation. In other words, the study seeks answer to four central research questions

(1) What is the current status of research engagement among EFL teachers at Vietnamese public universities?

(2) What is the relationship between teachers' cognition and teachers' research engagement?

(3) What is the relationship between teacher motivation and teacher research engagement?

(4) What factors affect teachers' motivation during the process of doing research?

It should be noted that the purpose of the study is not to argue that EFL university teachers should be research active, but rather to understand the practice in one specific context from the perspective of teacher cognition and motivation, with an aim to inform subsequent decision making concerning whether, to what extent, and how (if at all feasible) to promote teacher research. To put it differently, it aims to continue Borg's (2013) effort to stimulate the kind of concrete action in the field which can begin to address the paradox between theoretical possibility and the actual application currently occurring within the teacher research movement.

1.2. Significance of the study

The answers to the above questions are expected to contribute both theoretically and practically, at both local and wider levels, to the topic of EFL teacher research engagement.

In terms of theory, the current study is the first of its type to be conducted in the Vietnamese context. It is also the first to consider comprehensively two major individual-difference factors, namely cognition and motivation in the language teacher research field. It is therefore expected to add the voices of Vietnamese teachers to the existing literature on teachers as researchers, and deepen the understanding of teacher research practices from the perspective of teacher cognition

and motivation. In so doing, the current study would contribute to "the development of a comparable evidence base" which can inform policy on matters pertaining to teacher engagement in research in the EFL field (Borg, 2007a, p.745). Furthermore, as teacher research is one model of teacher professional development (TPD), the theoretical framework in use in this study might also be applicable to future research on teachers' participation in other TPD activities.

In practice, the findings of this research may be beneficial for a variety of stakeholders. First, they might enable teacher educators, professional development program designers, school leaders, and educational authorities in Vietnam and similar contexts to tackle the question of whether and how to promote research activities among pre-service and in-service teachers. For example, it is anticipated that findings about teachers' motivation for doing research could induce schools to offer suitable support and incentives to encourage language teacher research. Insights into teachers' research engagement from their own perspectives would also help policy makers to be more sensitive to the key role that teachers – together with their motivation and cognition– might play in the implementation of a professional development activity. Language teacher educators, furthermore, could become more informed that sustaining their student teachers' research practice after graduation may involve much more than merely equipping them with technical skills to do research; rather, a range of inter-related psychological factors including teachers' cognition and motivation must also be considered. For pre-service teachers and practitioners, the findings about teachers' conceptualisation of research may elucidate what research really is, the conditions in which they can be research-engaged, and the cognitive and motivational factors that might hinder them in so doing.

In short, the results of the current study are anticipated to contribute to the evidence-based planning, conduct, and assessment of professional development initiatives or policies that aim to promote teacher research engagement among both pre- and in-service teachers.

1.3. Definition of key terms and the scope of study

Explaining the key concepts and defining the scope of the study around those concepts is important for better understanding of the rest of the study. The definitions of the key terms, namely "teacher professional development", "research", "teacher research", and "teacher research engagement" and the way they are understood in the current study are presented as follows.

1.3.1. Teacher Professional Development (TPD)

According to Day and Sachs (2004), TPD is a term used to describe all the activities that teachers engage in during a career and which are designed to enhance their work. Several of other terms related to teachers' PD in the literature include *teacher development, in-service education and training, continuing education,* and *life-long learning*(Day & Sachs, 2004). Because of the broad meaning of the aforementioned definition and the difference in defining the related terms, this study adopts a working definition proposed by Day and Sachs (2004):

> Professional development consists of all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual [….] and through this, to the quality of education in the classroom. It is the process by which […] teachers […] acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice […] through each phase of their teaching lives.
>
> Day and Sachs (2004, p. 34)

In light of this definition, TPD is understood in this study as including both teacher-initiated and externally-designed or required activities, which aim to enhance teachers' teaching practice and ultimately students' outcomes.

1.3.2. Research and Teacher research

In the TPD literature, research conducted by teachers in their workplace has been commonly mentioned as a teacher-initiated model of professional development (Baumfield et al., 2008; Burns, 1999; Nunan, 1989). The core term "research" seems to be consistently understood across research methodology literature (e.g. Brown & Rodgers, 2002; Nunan, 1992; Creswell, 2015) as

consisting at the minimum of *four elements*: a research question or a problem, data, data analysis, discussion of data; and *two main characteristics*: being systematic and rigorous; and needing to be made public. For instance, Creswell (2015) defined research as (italics added):

> "a *cyclical* process of steps that typically begins with identifying a *research problem* or issue […]. It then involves reviewing the literature, specifying a purpose for the study, *collecting* and *analysing data*, and forming an *interpretation* of the information. This process culminates in a report, *disseminated* to audiences, that is evaluated and used in the educational community." (p.622).

The way research conducted by teachers at their schools for professional development is labelled, however, varies largely among different authors. Amongst the most common terms are *action research*, *practitioner research*, *classroom research* and *teacher research*. The last of these, teacher research, is hereinafter selected to discuss EFL teachers' engagement in research in this study.

Explaining why "teacher research" is deemed the most appropriate term in studying teacher engagement in research, Borg (2011) points out the difference between this and the three most common related terms, namely practitioner research, action research, and classroom research. First, "practitioner research", though similar to teacher research in purpose and characteristics, can refer to inquiries conducted by any professionals in any fields to investigate their own practice, i.e. including also nurses conducting research into their nursing skills. The term, "action research", on the other hand, is too restricted in meaning when featuring particular procedures, which typically involve identification of problem, introduction of new practice and reflection on application through one or more investigative cycles (Burns, 2010). In this sense, action research is just one type of teacher research, "a distinctive methodological orientation to research" (Burns, 2007, p.995) because not all teacher research necessary follows the same procedures as in action research. The third commonly mentioned term, "classroom research", is more concerned with the venue of conducting research, i.e. the classrooms. This makes the term tricky in defining research conducted by teachers since not only teachers but other academics can also conduct inquiries in classroom contexts (e.g. a research student can observe some classes to collect data

for their thesis). To conclude, while "TEACHER research" emphasises the investigators of the inquiry, "CLASSROOM research" highlights the venue and focus of the inquiry, "ACTION research" simply denotes one particular methodological approach of teacher research. Such a brief distinction explains and supports the use of the term "teacher research" in the rest of the study, which targets the EFL TEACHER population. It serves also as a foundation to concisely define this key term in the following paragraphs.

An early but influential definition of teacher research was given by Cochran-Smith and Lytle in early 90s:

> [teacher research is used] in the broadest possible sense to encompass all forms of practitioner inquiry that involve systematic, intentional, and self-critical inquiry about one's work in K-12, higher education, or continuing education classrooms, schools, programs, and other formal educational settings. This definition includes inquiries that others may refer to as action research, practitioner inquiry, teacher inquiry, […] and so on, but does not necessarily include reflection or other terms that refer to being thoughtful about one's educational work in ways that are not necessarily systematic or intentional.
>
> (Cochran-Smith & Lytle, 1999, p. 22)

Some noteworthy points from this definition include: (i) the agents of teacher research are teachers themselves ranging from K-12 staff to tertiary instructors, (ii) the key characteristics of teacher research are systematic and intentional, and (iii) the location and focus of teacher research is teachers' own work in their own educational settings such as classrooms, programs, or schools. These authors also helpfully list all the types of research that the term "teacher research" subsumes, and distinguishes between reflective practice and teacher research. That is, while research commonly involves reflection, simply reflecting on one's educational work does not necessarily comprise systematic teacher research and is thus not considered as such.

Sharing the same main points with the above definition, Carter and Halsall (1998) furthermore clarified the "systematic" characteristic as being grounded in data systematically and purposefully collected and analysed for clearly defined research questions and purposes. They also added the "purposes" of teacher research to their definition, which are to understand teachers' own professional activities and to ultimately improve student learning outcomes. The

nature of such contribution, according to Bell (1997) can be practical or theoretical, based on whether the research a teacher conducts is "formal research", which primarily aims at enriching the knowledge base, or is "practical inquiry", where the main objective is to improve and understand one's own practice (p.6). Although there is technically no restriction on the type of research teachers can or should conduct, Bell (1997) recommends that teacher research be best understood as the practical type, which is grounded in teachers' immediate experiences, respects students' needs, and is flexible in format.

In another definition, Lankshear and Knobel (2004, p.9) stress the "voluntary" nature of teacher research (i.e. teachers must be self-motivated to conduct the research and have some control over its topics and design) and note that it can be conducted individually or collaboratively. Their view is that, the general purpose of enhancing the educational vocation covers not only the external aspects like teaching quality and learning outcomes, but also encompasses the "internal' areas like teachers' acquiring a heightened sense of self-worth or greater personal satisfaction. The location of research, therefore, may extend beyond educational settings to anywhere else where a teacher researcher can obtain information pertinent to his/her teaching vocation.

Borg (2010), while attempting to define teacher research, raises one more concern over whether teacher research needs to be published to be considered as such. Given the common sense of "dissemination" as one most basic characteristic of academic research, Borg (2010) argues that teacher research needs to be shared for public scrutiny before potentially contributing either practically to decision-making, or theoretically to the existing body of knowledge, Consequently, while personal inquiry is still beneficial for teacher professional development, it does not suffice to be termed "research" (Borg, 2010). Having said that, Borg (2010) nevertheless found it "colonialist" or unfair if the academic notion of "publication" is rigidly imposed teacher research, and formal published research reports are seen as the only one "standard" way to diffuse teacher research (p.395). He therefore offers a "softened" view in this respect, and suggests that teachers can disseminate their research findings through varied formats – oral or written, formal or less formal, formative or summative; and through various channels – scientific

journal, school research symposium, international conferences or presentations with colleagues at schools.

All these considered, the current study will be based on the apparently most comprehensive definition of teacher research proposed by Borg (2010):

> [Teacher research is] systematic inquiry, qualitative and/or quantitative, conducted by teachers in their own professional contexts, individually or collaboratively (with other teachers and/or external collaborators), which aims to enhance teachers' understandings of some aspect of their work, is made public, has the potential to contribute to better quality teaching and learning in individual classrooms, and which may also inform institutional improvement and educational policy more broadly.
>
> (Borg, 2010, p. 395)

In light of this definition, the current study embraces a wide range of research in its discussion of "teacher research", from theoretical research which adopts the orthodox research structure, to practical inquiry which takes the shape of action research. "Teacher research" as discussed in the current study can be evaluative, exploratory, explanatory, or problem-solving in nature, as long as teachers are the *agents*, not the subjects of the research, and education quality improvement is the direct or indirect outcome of the research results. As such, research in the areas not related to and/or not aimed to accommodate classroom teaching in any way and/or conducted as a compulsory part of a formal degree (e.g. Master or Doctorate theses) will be excluded from the discussion henceforth. A detailed rationale for the exclusion of research conducted as part of a formal degree from the scope of the study will be further developed in the Literature Review chapter.

1.3.3. Teacher research engagement

In the body of literature on teacher research engagement, the term "teacher research engagement" covers two activities which teachers undertake, namely "engagement in research" and "engagement with research" (e.g. Borg, 2007; Borg, 2010). When teachers are engaged *in* research, they are the *agents* who conduct the inquiry; and the final outcome of this activity is

teacher research, which has been defined in the previous section. Teacher engagement *with* research, on the other hand, is an activity in which teachers are rather critical *consumers* of published educational research, i.e. they read and critique it, and evaluate its usefulness inform their instructional decisions (Borg, 2010; McMillan & Wergin, 2010).

Investigating EFL university teacher research engagement in Vietnam, the current study limits its scope to teachers' engagement *in* research only. Research engagement is therefore understood as "engagement *in* research" for the rest of the study.

Chapter 2: Review of relevant literature

The previous chapter highlights the study's chosen focus on teacher cognition and motivation in the context of language teacher research engagement. This chapter provides further insights into the general topics of teacher research, teacher cognition and motivation, and review relevant literature to explore how these topics have been researched in the field of English language teaching in particular.

The writing of this literature review chapter began at the preliminary stage and spanned the whole process of conducting the present study itself. This chapter, in other words, is the outcome of an on-going process in which relevant literature is continuously searched for, updated, revisited, and revised until the final stage of the present study. The dual aims of this chapter are: (i) to provide up-to-date background knowledge on the three key topics of *teacher research, teacher motivation for research,* and *teacher cognition in the context of teacher research engagement*, and (ii) to reveal the research gaps that necessitate the conduct of the current study. On so doing, the chapter further highlights the significance of the study that was briefly introduced in Chapter 1, and establishes a coherent thread of arguments that lead to a more detailed description of the proposed study in latter chapters. To achieve the dual aims, the chapter begins with defining the scope and the organisation of the literature review. It then synthesizes the relevant studies selected on the basis of the scope defined, and finally summarises the outcomes of the chapter.

2.1. Introduction

This section clarifies the scope of the literature review, and presents a strategy for organising the main contents of the review.

2.1.1. Defining the scope of the literature review

An attempt was made at the beginning of the study to comprehensively search for and examine the whole body of relevant work. Due to word limitation, the vastness and the ever-evolving nature of the literature, no claim can be made as to whether this chapter completely covers all the

types of work and all the contents of the existing relevant literature. Rather, an attempt has been made to control (as much as reasonably possible) the quality and relevance of the materials selected for inclusion in the literature review by clearly defining four criteria based on which existing studies were chosen for review. In this way, the literature review process is also made more feasible and manageable.

First, the literature review substantively restricts its scope to studies with particular focus on language teachers. The obvious reason is that EFL teachers are the targeted population of the present study. On a deeper level, teachers working in other disciplines may not share the similar knowledge base and working conditions with language teachers, so findings on their research engagement patterns, although available (e.g. Borg & Alshumaimeri, 2012) may not be applicable to the language teaching cohort, and therefore not relevant to the purpose of the study. An exception, however, was made to the Section 2.2. Since this section aims to describe the general background knowledge on teacher research (its origins, benefits, and critiques), the literature involving teachers in general were considered.

Within the body of work on language teachers, the study is also selective in choosing the themes discussed in this domain. Overall, studies around the topic of language teacher research can be categorized into three major types according to their substantive focus: (i) the "How-to" type, which guides teachers through the conduct of their own research and are often written by academics (e.g. Baumfield et al., 2008; Burns, 1999; Nunan, 1989); (ii) the "collection" type, which presents studies written by English language teachers themselves (e.g. Burns & Burton, 2007); and (iii) the "evaluation" one, which is carried out by academics to provide a critical look into the whole picture of teacher research engagement. Within the "evaluation" category, four central themes were present: the *actual level* of teacher research engagement in different contexts (e.g. Borg, 2008), the *contributing factors* to teacher's level of research engagement (e.g. Yuan, Sun, & Teng, 2016), the *impacts* of research engagement on language teachers and their teaching (e.g. Henson, 2001) and the *effectiveness* of teacher research promotion efforts (e.g. Al-Maamri et al., 2017; Atay, 2008; Fareh & Saeed, 2011). For the purpose of this study, which is to

examine the current situation of language teacher research from the perspective of teacher cognition and motivation, the literature which evaluates the *impacts* of language teacher research and the *effectiveness* of teacher research programme is deemed to be only tangentially relevant and therefore *excluded* from the review. The publications in the remaining themes and categories, which are more closely related to the central topic of the present study, are all included and critically reviewed in this chapter.

Third, the current study gives the highest priority to journal articles published in respected peer-reviewed academic journals. Although other sources of relevant literature such as book chapters, PhD theses, conference proceedings, international organisation reports are available, journal articles are generally considered most current, and "the most popular sources for literature review" (Creswell, 2002, p.122). Apart from journal articles, seminal and recent studies reported in book chapters (e.g Borg, 2013), and recognised international peer-reviewed conference proceedings (e.g. Moore, 2011a, Keuk, 2015), are sporadically cited where applicable.

Finally, although the current study chooses Vietnam as its geographical focus, the scope of it literature review is broader, extending to the international literature and including all relevant studies regardless of their contexts. A literature review as such allows for the wholeness of the current picture of language teacher research engagement to be captured, and highlights the need for studies in the Vietnamese context to be conducted. It is important to note that a detailed review of individual studies around *Vietnamese* teacher research engagement is saved for the Context of the Study chapter (Chapter 4), which includes a synthesis of the empirical descriptions of teacher research practices at Vietnamese public universities.

2.1.2. The strategy for organising the literature review

To logically organise the review of literature surrounding teacher research engagement, the current study selected and sequenced major studies to review based on their relevance to the following key questions:

1. What are the origins of teacher research? What are the different views on teacher research, the benefits and criticisms that have been made of it?
2. What is the actual state of language teacher research engagement worldwide since the emergence of the teacher research movement?
3. What are the reasons for such situations of language teacher research engagement?
4. How have teacher cognition and motivation been considered to provide insights into the research engagement patterns of language teachers?

The rest of the chapter reviews the relevant literature to seek answers to these questions and is organised in light of these questions.

2.2. Teacher research: some fundamental issues

Before the empirical studies on teacher research practices are reviewed, it is worth understanding why teachers are expected to do research at the outset. The origins of teacher research, its claimed benefits and critiques, are therefore discussed in this section.

2.2.1. Origins of teacher research

The origins of teacher research have been well documented. Although its inception was in the first introduction of action research back in the 1950s (Cochran-Smith & Lytle, 1992), it was not until the early 1970s in the UK that the real teacher research movement emerged. In an influential work on curriculum research, Stenhouse (1975) proposed that curriculum development should involve so-called action researchconducted by teachers rather than academics to test educational theories through real-life application. In the USA, the interest in teacher research is believed to most closely associate with the work of Schorn (1983) on reflective practice, in which he views teachers as critical, thinking and reflective practitioners, and emphasises the need to place teachers in the role of chief investigators of their own work. In light of this argument, teacher research - with its strong reflective character - is considered as an ideal means for teachers to understand and develop their own practice. Another drive to engage teachers in research was from the perspective of Evidence-Based Practice (EBP), or in other words, a desire to make teaching an evidence-based profession (Borg, 2007, 2010). The

fundamental argument for EBP is that when teachers based their pedagogical decisions on evidence generated from the research they do, both their teaching and students' learning will be beneficially affected. While the questions of how teacher research should be implemented are still the subject of much debate, teachers' research engagement is generally believed to ultimately enhance the education quality (Borg, 2007, 2010).

In the field of language teaching, teacher research evolved from a shift in the awareness about how to generate the best way to promote language learning, in the late 1980s. As Allwright and Bailey (1991) explained, after the unproductive search for global pedagogical prescriptions, the local, classroom-based research was opted for as a more promising alternative. The following logical step of such move was the narrowed distinction between teachers and researchers, which means teachers started to conduct classroom studies by themselves, and teaching was no longer a profession that teachers do and others research (Freeman, 1996).

Since the emergence of teacher research, numerous efforts to promote it have been seen. These include and may not be limited to increasing funded opportunities for teacher research projects (Bell et al. 2010), a number of book-long teacher research manuals (e.g. Lankshear & Knobel, 2004); educational policies that mandate or reward teacher research (e.g. Gao & Chow, 2011; Haiyan, 2016); and the conduct and publication of empirical studies aiming to draw improvement lessons from previous and current teacher research initiatives (e.g. Allison & Carey, 2007; Al-Maamari et al., 2017; Atay, 2008; Wyatt, 2011; Yayli, 2012). Teacher research has also been included as one official model of professional development in various books on teacher development in both mainstream education (e.g. Soler, Craft, & Burgess, 2001; Wilkins, 201) and language teaching domain (e.g. Burns, 2007; Borg, 2011; Kennedy, 2005; Richards, 2005; Richards and Burns, 2009; Tsui, 2011). Like any other teacher professional development model though, this does not mean teacher research is unreservedly appreciated by both academics and teachers. The current contesting views on this model of teacher development will be discussed in the following sub-sections.

2.2.2. Different views on teacher research

2.2.2.1. Advocacy of teacher research

Advocates of teacher research argue for the importance and necessity of this model on three main grounds. *First*, as Cochran-Smith and Lytle (1992) reason, the knowledge base for teaching should contain the voices of the insiders, i.e. the teachers themselves, who clearly are expert knowers of their own classrooms and students. Uniquely advantaged by knowing first-hand which issues about learning and teaching are seminal and possessing a truly emic perspective of classroom life, teacher researchers can refer to rich examples of classroom experiences which are often more memorable, powerful, and applicable than the general rules produced by the academic research findings (Cochran-Smith & Lytle, 1992). Sharing the same view on the potential impact of teacher research, Burns (1999) added the reason that teacher research takes the approach of practice to theory rather than theory to practice and it thus encourages teachers to reach their own conclusions and solutions rather than being presented with ideals which cannot be attained as in academic research.

Second, the process of conducting research itself can lead to professional enhancement for the teachers (Lankshear & Knobel, 2004). The step of reviewing the literature, for instance, means immersing oneself in potent sources of ideas, insights, theories, explanations pertaining to one's own questions and concerns. When evaluating and comparing different approaches to decide which are the most applicable ones to use, the teacher researchers are inevitably challenged to question their own assumptions, and gain deeper understanding of their own work, not just in terms of what works, but also regarding where, how, and why things works (Lankshear & Knobel, 2004). In designing a data collection tool, teachers train themselves to be imaginative, creative and knowledgeable of the relevant concepts and theories in order to "translate" them into valid tools to explore their concepts of interest. Proceeding from one step to the next in the research journey, teachers can develop their ability to be logical and systematic. When interpreting their research results, teachers advance their understanding of how their actions may affect students' learning. The whole process of conducting research, in short, adds the many

extra qualities of a critical thinker, an active knowledge maker, a trouble shooter, a creator, a designer, and so on, to a teacher's capacities, thus enhancing his/her overall professionalism.

The *final* argument centres on the important role of teacher research in educational reforms. Reviewing the decades-long history of educational reform initiatives, Militello, Rallis and Goldring (2009) conclude that "if change does not happen in the classroom, it is not happening at all" (p. xi). To bring about meaningful changes at the classroom level, schools must orchestrate "efforts from within", of which classroom research conducted by teachers is one integral part (Haiyan, 2016, p.18). Unlike top-down support, which is often criticized for being generic and incapable of successfully penetrating classrooms, bottom-up initiatives such as teacher research are more capable of generating the change strategies that can cater to the school context thanks to their basis in the context-specific insights and evidence (Haiyan, 2016). Also, with the *active* participation of teachers in the process, teacher research makes educational changes more likely to occur than do top-down mandates, whereby teachers are *passive* recipients of support and guidelines for changes (Beverly, 1993).

In light of such arguments, an extensive list of benefits of teacher research can be found in the literature. Most of them are concerned with teacher professional enhancement. Specifically, engagement in research is believed to develop teachers' critical, reflective, and analytical thinking about their teaching practices (Atay, 2006), enhance their capacity to make autonomous pedagogical judgments and decisions; update their professional knowledge with the latest educational trends and theories (Borg, 2009); bestow in them the confidence and sense of self-worth that accompanies being reliably informed (Lankshear & Knobel, 2004, p.10). At a wider level, schools and larger communities can also benefit from teacher research. In the list of prospective values of teacher research, some authors include curriculum innovation and school improvement (Gurney, 1989; Olson, 1990); the strengthening of teacher-researcher connections (Crookes, 1993); and the improvement of the whole educational process (Olson, 1990). In short, the advantages of teacher research are assumed to penetrate all levels of an educational system, from individual teachers and their students, to schools and the broader community.

Seeming idealistic, many of these claimed benefits have nevertheless been reported to actually occur in certain contexts. Henson (2001) found a statistically significant gain in teacher self-efficacy in eight U.S. teachers after their one-year engagement in a teacher research project. Analysing several other teacher initiatives in the same context, Zeichner (2003) saw evidence that engagement in self-study research "helps teachers to become […] more proactive in dealing with difficult situations that arise in their teaching" (p. 317), and reported a direct correlation between teacher research and improvement in students' behaviours, learning, and attitudes. Edwards (2005) cites one teacher researcher's feelings of "excitement" about her gain in knowledge, "satisfaction" about deep understanding, "confidence" in facing and addressing professional challenges in a principled way, and "awareness" about her instructional activities (p.261). Attay's (2008) study of 18 Turkish teacher researchers reveals their gain in self-esteem and renewal of teaching enthusiasm. Wyatt and Dikilitaş's (2016) study shows that engagement in research helps all three participating teachers "develop […] deeper practical knowledge in relation to the specific tasks that concern them" (p.550). At the school level, research-driven improvement has been reported in several countries such as the UK and Singapore (Dimmock, 2012; Colucci-Garry et al., 2013; Halsall, 1998; Sharp, 2007). Sharp (2007, p.22) particularly emphasises that teacher research may "make a real difference to […] the whole school and the wider community" and is an engaging means for the school to devise their own innovation and improvement agenda. Positive impacts beyond the school levels (school districts and knowledge of policy-making) were recorded in Rust and Meyers (2006).

2.2.2.2. Criticisms of teacher research

Besides the benefits mentioned above, numerous criticisms of teacher research have also been raised.

A common criticism surrounding teacher research is its potential feasibility. One of the earliest and strongest supporters of the teacher research movement, Stenhouse (1975) conceded that "it will require a generation of work […] if the majority of teachers – rather than only the enthusiastic few – are to possess this field of research" (p.142). Four decades have passed since

then and similar scepticism still lingers in the literature. Allwright (1997) questioned the claim that teachers could produce quality research, and found it unlikely that the few who could successfully do so would manage to indefinitely maintain their effort (p.386). Block (2000) commented that "the whole enterprise is strong in theory but very difficult to carry out in practice" (p.138); Haiyan (2016) doubted that teachers have sufficient time, knowledge, skills and self-motivation required for conducting research. Jarvis (2002) even wondered whether it is the business of teachers to do research at all.

The reasons for such an uncertainty, as summarised by Freeman in his guidebook to teacher research in 1998, lie the stark differences in training, working conditions, and professional autonomy that tend to separate teaching professionals from academic researchers. The kind of specialised training teachers receive, he clarifies, focuses on *implementing* knowledge rather than *creating* knowledge, in contrast to the specialised training that researchers undergo (Freeman, 1998). Teachers therefore do not have ready access to a similar level of information, nor can they articulate the same type of knowledge and understanding as researchers normally do. Unlike researchers who are given a certain level of control over their work, teachers, furthermore, are usually obliged to follow the curriculum, materials, or even the pedagogy set and imposed on them by others. The primacy and pressure of conforming to a set curriculum, Freeman (1998) points out, limits to some extent the opportunities for experimentation inherent in certain types of research, thus further precluding teachers from doing research in their own classrooms. At the pragmatic level, a heavy teaching schedule and a wide range of beyond-classroom responsibilities features most teaching contexts; therefore, a call for doing research can be considered "exploitative" of teachers (Zeichner & Noffke, 2001), a double burden added to teachers' already complex and hectic lives, and even teachers themselves may well resist it (Burns, 2007). It appears, in short, that engaging teachers in research is already problematic when simply seen from the working conditions' perspective. Empirical evidence to support the feasibility criticism, in fact, is not rare. The lack of specialised research knowledge and unfavourable conditions were reported by Edwards and Burns (2016), Gao & Chow (2012), and

Rubdy (2005); the status issues were recorded by Allison and Carrey (2007); teachers' disengagement from their initial intention to do research in Christenson and colleagues (2002), pre-service teachers' reluctance to integrate research into their future professional lives in Reis-Jorge (2007), and teachers' negative experience of research in Leat, Reid, and Lofthouse (2015).

Maybe partly due to this feasibility issue, teacher research, if ever conducted, also attracts debates in terms of its quality. Huberman (1996) for instance, proffered a trenchant critique of the interpretive methods often utilized in teacher research and questions whether teacher research is research at all. He points out that understanding an event when one is a participant in it is almost impossible; and the possibility of teachers functioning as researchers in their own classroom settings is thus seriously disputable (Huberman, 1996). Even when teacher research is assumed to be real research and the teacher does try to function as a researcher, Huberman (1996) suggests both the teacher and his/her research be bounded by the rules and "classic criteria" conventionally imposed on both qualitative inquiries (e.g. freedom from bias, provision of evidence), and on qualitative inquirers (e.g. being able to transform an "emic perspective" to "a more widely shared idiom") (p.126). Against such criteria, he found teacher research not "coherent" enough in language, not "strong" enough in evidence, and not "rigorous" and "reliable" enough in methods to safeguard it against "delusion and distortion" (Huberman, 1996, p.132). Although such criticism, commented Borg (2013), was reflective of only one particular among many views about the nature of research, and alternative criteria exists to support the methodological soundness and rigour of teacher research (e.g. Burns, 2005), examples of poor quality research conducted by teachers are unfortunately available in the literature. Foster (1999) for example conducted a methodological assessment of teacher research sponsored by a teacher training program in the UK, and found five reports to be "personal descriptions of, or justifications for, their own practice; or accounts of their efforts to improve pupil achievement, or of their involvement in staff development activities', which, according to Foster, actually did not constitute "research" at all (p. p.383)

The final criticism of teacher research concerns its protean nature and the very multiplicity of benefits it is supposed to generate. In the previous section, the effects of teacher research have been argued to penetrate various levels of an educational system, from the individual teacher, the curriculum, the school, to the overall education quality. The concept of teacher research itself is, moreover, non-monolithic, ever growing, and has various manifestations (Cochran-Smith & Lytle, 1998). The model of teachers conducting their own research has therefore been used in the service of "virtually any educational agenda", from renovating the traditional transmission model of teacher education, reconstructing curriculum and pedagogy, to even altering arrangements for schoolings; and in each agenda, the concept of teacher research may be shaped and reshaped to fit within its particular purposes (Cochran-Smith & Lytle, 1998, p.20). Such a potential for widespread application, however, puts teacher research into the danger zone of "becoming anything and everything"; which, as Cochran-Smith and Lytle (1998) warns, "often leads in the end to nothing of consequence or power" (p.21). Indeed, incidences of non-research activities found in a teacher research movement as mentioned above may be one example of such inconsequentiality. In short, the generative nature of teacher research in terms of its conceptualisation and benefits can be advantageous for its potential for widespread application on the one hand, but may otherwise lead to its trivialization and marginalisation on the other (Cochran-Smith and Lytle, 1998).

With both merits and drawbacks as such, which are equally soundly argued and empirically evidenced in the literature, teacher research seems by no means to be a model of professional development that is guaranteed to work for all teachers in all contexts. Whether it is viable, and if it is, then for whom, under what conditions, and how the potentials of teacher research can be maximally preserved and their inherent issues minimally present, are the questions that were posed long ago (Cochran-Smith & Lytle, 1998) and still require extra empirical evidence to be addressed (Borg, 2013). This study, which specifically focuses on the extent to which teachers in one particular context are being engaged in research, and the cognitive and motivational features

of the sample that potentially shape their research experience, is hence a timely and relevant contribution to answering these questions.

2.3. Language teacher research practices

The previous section has presented the fundamental issues relevant to teacher research. From this background, the rest of the chapter will critically review the body of work particularly pertinent to the topic of language teacher research engagement and the influences of teacher cognition and motivation. It starts with a review of the research manuals below.

2.3.1. Teacher research manuals

Publications that provide guidelines for teachers on conducting teacher research are not difficult to locate, and fall into two groups: General research methodology texts that devote a separate discussion to action research (e.g. Creswell, 2015; Johnson & Christensen, 2017; Nunan, 1992); and research manuals that are explicitly designed for teacher researchers (e.g. Babione, 2015; Baumfield et al., 2008; Freeman, 1998; Hopkins, 1985, 1993, 2002; Nunan, 1989; Wallace, 1998; Burns, 1999; Lankshear & Knobel, 2004; Lassonde & Israel, 2008). Both categories are generally written by academics; both provide definitions of research, illustrating examples, step-by-step guidelines for conducting research, and criteria for evaluating a research study. The timeline and focus of each group, however, exhibits several interesting features that merit attention.

Concerning the timeline, the manuals designed exclusively for teacher researchers were dated earlier than the general methodological texts that offer one section discussing teacher research. While the former appeared in as early as 1985 (e.g. Hopkins, 1985), paralleling with the emergence of the teacher research movement in the 1980s, teacher research issues were not included in mainstream research method publications until 1992 (Nunan, 1992). This creates the overall impression that teacher research, as described by the academics, represents a genre which is distinct from the traditional research paradigms.

Regarding the content, an overwhelming proportion of the teacher research manuals identified from database search (Googlescholar, GoogleBooks) using the key word "teacher research" centre solely on action research (Babione, 2015; Burns, 1999; Hopkins, 1985, 1993, 2002; Lassonde & Israel, 2008; Wallace, 1998). In the very few publications that discuss teacher research as a term that overarches both traditional and action research (e.g. Lankshear & Knobel, 2004; Freeman, 1998), the instructions also tend to guide teachers towards the kind of research that is practice-oriented, and "sensibly and actively a part of teaching", (Freeman, 1998, p.8), or in other words, the kind that ultimately resembles action research in its focus and basic features. In the mainstream research methodology texts, the special sections for "teachers" are all titled "action research", which are usually positioned after the presentation of traditional major research paradigms (e.g. qualitative and quantitative) (see for example Nunan, 1992; Creswell, 2015). Such an arrangement is understandable because action research is a relatively new approach added to the traditional research paradigms after the emergence of the teacher research movement. What is interesting is that, despite being just "one way of working" for teachers doing research (Burns, 2007, p. 995), only action research (not any other traditional research approaches in the methodology books) is described in the materials as the design particularly done by "teachers", or "practitioners". Creswell (2015) for instance, introduced action research designs as systematic procedures "done by teachers […] to gather information about and subsequently improve the ways their educational settings operate, their teaching, and their student learning" (p.579). Johnson and Christensen (2017) discusses "action research" from a more functional perspective, identifying it as one among other kinds of research such as "evaluation research", "basic research", "applied research", and "orientational research", but still emphasises that it is conducted by "educational practitioners" including "teachers" (p.11), a point not mentioned in the authors' descriptions of the other research types.

The final noteworthy feature of the "how-to" literature is its general tendency to methodologically characterise teacher research as being principally qualitative in nature. In both teacher-research manuals and mainstream methodology materials, almost all illustrating

examples of teacher research or action research involve solely qualitative data collection, or mixed data collection whereby quantitative data playing the supplementary role to the primary qualitative data (see for example Creswell, 2015; Hubbard & Power, 1999; McKay, 2002). The data collection tools recommended in the manuals also consist mostly of qualitative data generators such as notes, recordings, interviews, photographs, interviews, focus groups, diaries, journals (e.g. Burns, 1999). Questionnaire survey, the only quantitative data collection tool listed, is nevertheless accompanied with very basic quantitative data analysis instructions like frequencies or percentages, and is described as a strategy that follows and assists qualitative data collection and analysis (e.g. quantifying data within a priori data analysis approach, see Freeman, 1998, p. 105).

In short, the "how-to" literature, which is mostly composed by academics, has largely depicted teacher research as being practice-oriented, primarily qualitative in nature, and features, if not impressively synonymises, "action research". Since teacher research is actually a much larger concept (see definition of the term in 1.3.2.), such a portrayal may be seen as consistent with Farrell's (2017) point that teachers are being directed to do the kind of research that "the academic (not the teachers) perceive as important" (p.29, 30). It is clear from the literature that the "personal" side of teaching, which includes the moral, ethical, spiritual, and aesthetic aspects, and which is no less important than the "practical" side (Farrell, 2017), is being overlooked in the picture of teacher research that the academics draw.

2.3.2. Collections of publications of language teacher research

In an extensive review of language teacher research, Borg (2013) documented a number of publications which provide the evidence that language teacher research is available. Among the earliest are the series of conferences titled "Teachers Develop Teachers Research" organised by International Association of Teacher of English as a Foreign Language (IATEFL) since 1993. More recently came the "Language Teacher Research" series published by TESOL, Inc. with 7 volumes to date that collect studies by teachers from Americas, Asia, the Middle East, Europe, Australia and New Zealand, and Africa (Burns & Burton, 2007; Borg, 2006a; Coombe &

Barlow, 2007; Farrell, 2006; Makalela, 2009; McGarrell, 2007). Two renowned journals, TESOL Journal and Canadian Modern Language Review, have also devoted special issues (Volume 4, issue 1; and Volume 54 issue 1 respectively) to teacher research. Notably in Australia, "Teacher's Voices", an exclusive publication outlet for teacher research, has released as many as eight volumes (e.g. de Silva Joyce, 2000). Other regions in the world have also released their own collection of teacher research papers, for example Freeman (1998) presenting teacher research based on a project in South Africa, Hadley (2003) and Sachs (2003) in Asia, Warne et al. (2006) in Dubai; and Borg (2008) with the collection from the Sultanate of Oman. Internationally, Edge (2001) has showcased action research in a range of ELT settings; Johnson and Golombek (2002) presented narratives written by teachers investigating their own work while Edwards and Willis (2005) introduced a collection of reports by language teachers researching their own instructional activities. Finally, teacher research has started to be included in highly reputable academic journals such as English Teaching Forum and ELT Journal (there were a significant number of 28 articles in Volume 57 and 27 in volume 60); *Research Notes,* Cambridge ESOL's quarterly journal (a collection of six teacher research reports based on a project in Australia was published in Issue 4, 2011). TESOL Journal has even dedicated a section to teacher research on a regular basis.

It can be seen from the listed publications that both teachers themselves and the academe have somehow welcomed and valued teacher research in a wide range of international settings. The increasing availability of publication of research conducted by teachers and the acceptance from the academe towards it does speak positively to the potential contribution of teacher research to the general knowledge base of learning and teaching as discussed earlier.

It must be noted, however, that despite such surface positivity, a closer look at the collection of teacher research publications reveals a critical observation: the potentially limited and inequitable level of research engagement among the EFL teachers. It can easily be noticed that the volume of publications of teacher research remains out of proportion to the huge population of language teachers worldwide. Albeit the increasing number of publications authored by

teachers, Dornyei (2007) remarks that there is still "too little of it" (p.191). Borg (2013) also shares this view when admitting that globally speaking, research engagement remains a minority activity for the general population of English language teachers. The inequitable situation, on the other hand, is reflected in the majority of teacher research authors being university lecturers holding PhD degrees, and many examples of teacher research being produced as a part of formal degrees (Borg, 2013). Research activity, as this situation indicates, seems to be a more feasible task for teachers of higher qualifications and even so, has not become a frequent part of their continuing professional development process.

2.3.3. Language teachers' actual engagement in research

As introduced earlier, along with the "how-to" and "collection" types of publications, the "evaluation" strand of inquiry also offers a critical look by the academics at the whole picture of teacher research engagement. This section reviews one of the four main themes discussed in the "evaluation" category: language teacher's actual engagement in research, which a key area of the literature for the present study to situate its argument. The general observations, major findings and research gaps of the available studies are presented in turn in the three sub-sections below.

2.3.3.1. General observations

The search for empirical studies on language teacher engagement in research resulted in a total of 29 studies, which are chronologically listed in table 2.1.

Table 2. 1. A chronological overview of empirical studies on language teacher engagement in research

	Authors	Dates	Participants	Locations	Research methods used	Aspects of teacher research engagement discussed
1	McDonough and McDonough	1990	34 EFL teachers of mixed teaching backgrounds	Different countries (14 participants are from Spain)	- Questionnaire - Descriptive and analytical methods	- Frequencies and nature of teacher engagement in research - The desired research issues - The sources of research issues
2	Brown et al.	1992	607 English language teaching professionals (including administrators, teacher educators)	Different countries	QUAN (Questionnaire)	- Whether teachers do their own research
3	Rainey	2000	229 regular EFL teachers	10 different countries, constituting China, Colombia, Greece, Japan, Morocco, Poland, Qatar, Saudi Arabia, Thailand, and Tunisia	QUAN (Questionnaire)	- Frequencies of doing action research among teachers who know about it. - Barriers to engagement in action research
4	Doan and Nguyen	2006	202 tertiary English teachers	Vietnam	Mixed methods: QUAN (questionnaires) + Qual (Interviews)	Frequencies of doing research
5	Pham	2006	7 tertiary English educators	Vietnam	QUAL (interviews)	Barriers to teacher engagement in research
6	Allison and	2007	22 tertiary language teachers	Canada	Mixed methods:	Barriers to teacher engagement in

	Authors	Dates	Participants	Locations	Research methods used	Aspects of teacher research engagement discussed
	Carrey				QUAN (22 questionnaires) + Follow-up Qual (17 interviews	research
7	Borg	2007	50 English teachers at one university	Turkey	QUAN (Questionnaire)	- Frequencies of doing research - Barriers to teacher research engagement
8	Borg	2008	92 teachers of English with diverse teaching background	The Netherlands	QUAN (Questionnaire)	Frequencies of doing research Barriers to doing research
9	Barkhuizen	2009	83 tertiary English teachers	China	Qualitative (narrative frames)	- The aims and topics of research teachers do - The barriers to teachers' research engagement
10	Borg	2009	505 English teachers of mixed teaching backgrounds	13 countries, consisting of Australia, Mainland China, France, Hongkong, Japan, Nigeria, Oman, Poland, Slovenia, Spain, Switzerland, Turkey, UAE	Mixed methods QUAN (505 questionnaires) + follow-up Qual (12 interviews)	- Frequencies of doing research - The research teachers do
11	Gao, Barkhuizen, and Chow	2011	40 primary school English teachers	China	QUAL (focus group interview)	- Barriers to teacher research engagement
12	Moore	2011	40 tertiary EFL	Cambodia	QUAN (Questionnaire)	Frequencies of doing research
13	Bai and Hudson	2011	182 tertiary teaching English as	China	QUAN	Teachers' research outputs

	Authors	Dates	Participants	Locations	Research methods used	Aspects of teacher research engagement discussed
			a foreign language (TEFL) teachers		(questionnaires)	
14	Gao, Barkhuizen, and Chow	2011	33 primary school English teachers	China	QUAL (33 open-ended questionnaires + follow-up group interviews)	Barriers to teacher research engagement
15	Gao and Chow	2011	33 primary school English teachers	China	QUAL (interviews)	Barriers to teacher engagement in research
16	Yayli	2012	4 English language teachers attending a Master course	Turkey	QUAL (documents, observations, and interviews)	-Difficulties in the process of conducting research. -The nature of collaboration with the supervisor
17	Kutlay	2013	52 English instructors at one university	Turkey	Mixed-methods: QUAN (53 questionnaires) + Follow-up Qual (interviews)	Frequencies of doing research Barriers to teacher research engagement
18	Tavakoli and Howard	2012	60 teaching-English-to-speakers-of-other-languages (TESOL) teachers of mixed teaching backgrounds	England	QUAN (60 questionnaires)	- The last time teachers conducted research - Barriers to teacher engagement in research
19	Borg	2013	1,349 language teachers of diverse teaching background	15 different countries in North America, Europe, Asia, Australia and New Zealand, Africa, the Middle East,	Mixed-methods: QUAN (Questionnaire) + follow-up Qual (Interviews)	Frequencies of doing research Barriers to teacher research engagement

	Authors	Dates	Participants	Locations	Research methods used	Aspects of teacher research engagement discussed
				South America		
20	Kutlay	2013	52 English instructors at one university	Turkey	QUAN (52 questionnaires)	Frequencies of doing research
21	Bai, Millwater, and Hudson	2013	Six teaching English as a foreign language (TEFL) teachers from one university	China	QUAL (interviews and documents)	- Obstacles and facilitators to teacher research engagement
22	Borg and Liu	2013	725 college English teachers	China	Mixed-methods: QUAN (725 questionnaires) + Follow-up QUAL (20 interviews)	- Frequencies of doing research - Barriers to doing research
23	Bai, Milwater, and Hudson	2014	36 TEFL teachers from one university	China	Mixed-methods: QUAN (36 surveys) + Follow-up Qual (6 interviews	- Barriers to teacher engagement in research
24	Xu	2014	104 university EFL teachers	China	QUAL (narrative frames and interviews)	- Frequencies of doing research - Barriers to research engagement
25	Mehrani	2015	24 EFL teachers of mixed teaching backgrounds	Iran	QUAL (Interviews)	- Level of research engagement
26	Keuk	2015	- CamTESOL conference handbooks (2005-2013), - Conference proceedings - 37 EFL tertiary teachers at one institution	Cambodia	Mixed-methods: QUAN (survey, documents) + QUAL (documents)	- Teachers' involvement in research as reflected in the conference documents - Teacher's research profiles as shown in teachers' self-reported survey - Research methods and data collection instruments that teachers used for their research.

	Authors	Dates	Participants	Locations	Research methods used	Aspects of teacher research engagement discussed
27	Le	2017	21 tertiary EFL teachers from the same institution	Vietnam	QUAL (interviews)	- Obstacles to teacher research engagement
28	Mehrani	2017	68 EFL teachers of mixed teaching backgrounds	Iran	QUAL (narrative frames, research report and reflective essays, interviews)	- Teachers' research priorities and concerns in action research. - Teachers' perceived opportunities and challenges in doing action research
29	Sadeghi and Abutorabi	2017	100 EFL teachers of diverse teaching background	Iran	Mixed-methods: QUAN (100 questionnaires) + Qual (10 Interviews)	- Frequencies of doing research - Barriers to doing research

Note: QUAN/Quan = Quantitative , QUAL/Qual = Qualitative. Capitalized words (QUAL, QUAN) indicate the use of the method as the primary one in the study

Table 2.1 lists 29 empirical studies that include the topic of English language teacher engagement in research in their scope. Apart from the information about the authors and dates, Table 2 also provides details regarding the participants, countries in focus, methods used, and the sub-topics discussed in each study. Such detailed information provides a useful snapshot of how the topic of language teacher research engagement in research has been examined. From the table, three general observations can be drawn.

First, there appears to be an increasing interest in and evidence of how often teachers do research, which can be seen from the increasing number of publications and wider coverage of relevant issues over time. In terms of the publication number, while there were only three studies on this topic conducted between 1990 and 2000 (Brown et al., 1992; McDonough & McDonough, 1990; and Rainey, 2000), more than double of this number (7 studies) were produced in the following 10 years between 2000 and 2009, and the last seven years alone witnessed the publication of 19 studies, nearly twice as many as the total number of studies produced in the previous two decades. Regarding the research foci, research within the first 10 years of the publication timeline (from 1990-2000) is limited to examining whether teachers do research themselves, and which topics teachers tend to favour for their own research, latter studies have gradually extended their scope to exploring exactly how often teachers do research, the different features of the research they do, and the obstacles that prevent them from being research active.

Second, tertiary English teachers seemed to be at the centre of the academics' interest in this strand of inquiry. Of the 29 studies found, more than half (15 studies) focus solely on college and university EFL staff. Most of the remainder (12 studies) involves teachers of diverse teaching backgrounds, which also include tertiary professionals, and only two studies target only primary school English teachers. Such a predominance of attention paid to tertiary teachers may result from the fact that this cohort is more likely to be required to do research than those working in other contexts (e.g. secondary schools or language centres) (Borg & Liu, 2013; Le, 2017). Research into the tensions that may exist between such requirements and the actual level of

research engagement among them is therefore of more immediate use to tertiary institutions that would like to promote, in a principled manner, a strong research culture among their language teaching staff (Borg & Liu, 2013). One more explanation for the exclusive selection of university teachers was the authors' easier access to this population than those working at the other levels. Allison and Carrey (2007) and Le (2017), in fact, admitted that they selected university lecturers as participants because the collegial relationship they had with them would ease the data collection processes. Such reason, however, is explicit in only two studies, and therefore is minor to the overwhelming amount of attention paid to the EFL professionals working at tertiary contexts in the rest of the literature. Research into this cohort, in summary, is urgent and relevant to the broader practical and theoretical interest in teacher research in the general field of language teaching as Borg and Liu (2013) insisted.

Third, there seemed to be a move from a global description to context-specific analyses of language teacher research engagement in the literature. As can be seen from Table 2.1, while all the studies in the 1990-2000 period investigated teachers in general terms, almost all studies in the following two decades (2000 to present) examine language teacher research engagement in specific geographical places. Only two studies, Borg (2009) and Borg (2013), of which the former is actually an integral part of the latter one, are of a global scale. Explaining for this move, Borg and Liu (2017) convincingly reasoned that the practices of teacher research engagement are likely to vary from context to context, depending on the conditions and factors that feature each language teaching situation. General insights from global-scale studies like Borg (2009), therefore, must inevitably give way to detailed and locational analyses, which can provide the "situated understanding of teacher research engagement that are required for the informed local decision making in a particular context" (Borg & Liu, 2013, p.271). In this respect, the table shows that three studies have been conducted in the Vietnamese higher education context but are unfortunately out-of-date (Doan & Nguyen, 2006; Pham, 2006), or constrained the findings to the boundaries of only one single university (Le, 2017). Findings of these studies will be further discussed in Chapter 4 – Context of the study.

Finally, the single-method approach seems to dominate the available studies. Among the 29 available studies, as many as twenty of them employed a single data collection tool and data analysis method, either qualitatively or quantitatively. Only 9 studies examined language teacher research engagement with multiple methods. Given that "detailed" but "large-scale" analyses of teacher engagement in research in specific countries are currently needed so that both generalizations about the teacher research situations and personalized support can be inferred (Borg & Liu, 2013), this limited number of mixed-methods studies indicates a clear paucity of such analyses. While the "quantitative" inquiries can only address the "large-scale" need, and qualitative research can exclusively generate "details", the mixed-methods approach can combine both features into one study and provide the kind of insights of which the literature is currently in need (Borg & Liu, 2013).

Due to word limitations, reviewing each of the 29 studies in table 2.1. individually is beyond the scope of this study. The following sub-sections focus instead on synthesizing the major findings and limitations of the available studies collectively in approaching the topic of teacher engagement in research. Such synthesis, together with the general observations above, will allow the research gaps to emerge, necessitating the conduct of the current study in general, and the review of the literature on teacher cognition and motivation in the next main section (2.4) in particular.

2.3.3.2. Major findings and limitations of the available studies on teachers' actual engagement in research

Available empirical studies on language teacher engagement in research have approached the topic in terms of the extent to which teachers do research, the types of research teachers do, and the barriers to doing research teachers encounter. Major findings pertinent to each theme and the limitations of available studies as a whole are synthesized and discussed below.

The prevalence of doing research: Findings and Limitations

In terms of the prevalence of doing research, the existing literature consistently confirms two critical points made from the "collection" of teacher research presented previously in section 2.2.2: a relatively modest and inequitable extent to which language teachers are engaged in research.

The first point is reported in studies of both global and local scales. In the study conducted with participants from 13 different countries by Borg (2009), more than 50% of the 505 participating teachers said they only 'sometimes' or 'never' do research. This figure might be even larger in reality as it depends on how participants conceptualise "research", and the frequencies adverbs used in the questionnaire (e.g. "sometimes"). One teacher who stated in the survey questionnaire that she sometimes did research actually explained what she did as "providing data for someone's thesis", which actually does not constitute a "research" activity (Borg, 2013, p.376). The situation is not more positive in a tertiary teaching context, whereby teachers are required by their institutions to be research-active. In Xia (2002), as many as 50% of 476 participating Chinese college English teachers, reported "never" conducting a research project before. A higher level of research engagement is recorded in Borg's and Liu's (2013) study with 725 Chinese college English teachers with just over 20% of them saying they *rarely* or *never* conducted research, but still more than half admitted to just *occasionally*. In Turkey, the figures are over 26% for *rarely* or *never* but still nearly 40% for *sometimes* according to a study that surveyed 62 tertiary English teachers (Borg, 2007).

The level of research engagement furthermore tends to be higher among teachers of higher qualification level, and research does not seem to be an integral part of the professional life for most teachers. In Borg's (2009, 2013) extensive studies, statistical analysis shows a significant positive association between the frequencies of doing research teachers reported and their declared educational degrees, and as large as 40% of research engaged teacher said that they did research for their master or doctoral theses. The same patterns were found in locally conducted studies. In Doan and Nguyen's (2006) research on 202 Vietnamese EFL teachers, for instance,

over half (53%) of those who reported conducting some research before had done it only once, and many admitted their research was a required part of a higher research degree, or was done because "they cannot avoid it" (Doan & Nguyen, 2006, p.4). These findings collectively applaud Borg's (2013) remark mentioned earlier in the "collection" section that research engagement is yet to be a perfectly feasible professional development activity to even highly qualified language teachers, let alone the general population. The work available belongs largely to a small proportion of tertiary teachers, but is still limited in quantity, and "unsustainable" in nature (e.g. as part of one's formal qualification). When compared against the vast rhetoric celebrating teacher research for its numerous potential benefits that affect all levels of an educational system from individual teachers to schools and broader communities, this contrary picture in reality is a reminder of Peeke's (1984, p. 24) question: "If good reasons exist for teacher involvement in research, why is it not more common?". Some possible answers to this questions will be reviewed in the later sections of this chapter.

Insightful overall, the whole picture of teacher research engagement depicted by the available studies, however, exhibits three limitations. The first one lies in the scales by which the level of engagement in research is measured. The four adverbs (never – rarely – sometimes – often) constituting the frequency scale in use by most available quantitative studies may be interpreted in various ways by the participants, potentially reducing the validity of the results reported. Given such a problem, no authors, however, included any way to validate the findings other than follow-up interviews, which actually showed various interpretations of a single adverb in the scale (see for example Borg, 2009). A more concrete scale accompanied by validation items were therefore needed to provide a more accurate picture of teacher research engagement. Available studies are also limited in their inclusion of the research teachers do as part of a formal degree in their scope. Such an inclusion is problematic because although research in formal study programs can be counted as a professional development activity, it is not a frequent one happening throughout a teacher's career. In addition, research for formal education can be distinguished from the knowledge-making activities in teachers' everyday professional lives due

to its being "too high demanding of time and specialised expertise" (Reis-Jorge, 2007, p.405). This is not to mention the "compulsory" nature of the research when it is an integral part of a formal degree where teachers as students normally do not have other choices. All these considered, the research teachers do for a formal degree is of little value in reflecting the research engagement pattern in the overall professional life of teachers. Counting them in a study on how often teachers do research as a self-initiated professional development activity might as well inflate the obtained results, and invalidate the findings about the impact of individual-difference factors on teachers' research endeavour. Finally, none of the available studies appears to have high generalization value. While the qualitative studies themselves can only provide context-specific insights into the topic, no available studies with quantitative data claims to have a random sample, which is the minimum condition for the research findings to be generalized to the larger population. Even in the extensive program of research conducted by Borg (2013), the 1,349 EFL teachers involved were selected with a non-probablistic sampling method (p.45). The major findings of the current literature, therefore, are reflective of only the immediate contexts and participants on which they focus. Insights into the EFL population or contexts beyond the focus of the available studies, for instance, tertiary EFL teachers at Vietnamese public universities, must be obtained from further research. The current study aims to fill this gap by selecting the participants on a probabilistic basis (see Chapter 5), making its results potentially generalizable to at least the population of EFL teachers working at Vietnamese public universities.

The research teachers do: Major findings and limitations

Regarding the kind of research teachers do, conclusions are more diverse and divisive across different contexts. In the global context, McDonough and McDonough (1990) noticed a tendency among the international participating teachers to take up "given" topics from the existing literature rather than developing their own research questions from their immediate teaching experience; the aims of the research teachers do were mostly to complete a formal educational degree. A study conducted in China two decades later, by contrast, found teachers

deriving their research topics right from the concerns teachers had in their own classrooms, such as student participation, or appropriate use of the materials; and the research they conducted mostly aim to improve their teaching practice (Barkhuizen, 2009). In the Vietnamese context, teachers are "unlikely to do […] genuine research" and tend to choose the "superficial" type to simply satisfy the institutional requirements (Doan & Nguyen, 2006, p.4). In Cambodia, Keuk (2015) recorded a prominence of qualitative research method chosen by teacher researchers, who did so on the basis of research viability rather than their awareness of the research rigour inherent in the approach. The recent global research project by Borg (2013) recorded the presence of almost all of these patterns, ranging from the type of research teachers do for post-graduate studies, to the activity that teachers themselves identified as not "real" research, yet with the dominance of "pedagogical evaluation" activities, examples of which include action research and critical reflections on one's practice (p.110). These findings generally reflect positive changes in the nature of teacher research engagement from being passive (McDonough & McDonough, 1990) and instrumental (i.e. to fulfil a top-down requirement) (Doan & Nguyen, 2006), to being more active and self-motivated (Barkuizen, 2009). Qualitative, small-scale, and practice-driven type of research, however, remains predominant in the types of research that teachers do to date (Borg, 2013).

It is noticeable that none of the available studies comprehensively described different features of the research teachers do. Borg (2013) captures only the typologies of approaches to research teachers took via some examples they quoted in the follow-up interviews, Keuk (2015) gave information on the data collection tools and methods only, and Barkhuizen (2009) on the aims and topics of teacher research. Other aspects which are also important in reflecting the extent to which teachers do research such as the way they published their research results, the average length of their project, or whether it is collaborative or individual, and so on, is overall outside the scope of the available studies.

Barriers to teacher engagement in research: major findings and limitations

Finally, findings on the barriers to teacher research engagement are quite unanimous in identifying the barriers, but understandably different in the extent to which each barrier was found to hinder teachers' effort to do research. The documented barriers for teachers to be research engaged can be grouped into four categories: teacher cognition (e.g. teacher's research knowledge and skills), teacher motivation (e.g. presence or lack of personal interest in doing research), and contextual factors (e.g. institutional support for research culture), and teachers' demographic characteristics (e.g. age, qualifications, experiences) (cf. Borg, 2013). On a global scale, the lack of time, the unfavourable attitudes teachers hold towards the role of research, and lack of research knowledge are found to be the three top barriers (Borg, 2013). Locally, the dearth of publication opportunities, the lack of collegial support, and lack of research knowledge are the three most prevalent in China (Borg & Liu, 2013), while the lack of time, the unfavourable attitudes teachers hold towards the role of research, and the lack of teachers' motivation towards research took the dominant places among EFL teachers in Turkey (Borg, 2007a). Such barriers were found via either qualitative research method (e.g. Le, 2017) or quantitative one (e.g. Borg, 2013).

Such findings have illuminated to a certain extent the reasons behind the modest level of teacher engagement in research described earlier. They are, however, still restricted in the generalization value due to either the non-random sample or the qualitative nature of all the available studies. The prevalence of each obstacle in a certain context, in addition, was determined via only the frequency counts of teachers' responses to the questionnaires. The exact extent to which each barrier is associated with the degree of teacher's research engagement, which is important for institutions to decide the relevant amount of support for teachers, is yet to be explored. The existing studies, finally, are based solely on teachers' self-report. Their findings are therefore left untriangulated and lack the validity obtained from the comparison between different sources of data. The study aims to address these issues by considering three sources of data: teachers,

department leaders, and documents, and examines in more depth the actual impact of the motivational and cognitive factors on teacher research engagement.

2.3.3.3. Summary of major findings and research gaps

In summary, a review of the available studies on teacher engagement in research worldwide has acknowledged several important contributions but also uncovered a number of important gaps in the existing literature. In terms of contributions, a wide coverage of themes, including the level of teacher research engagements, the obstacles facing teachers doing research, and the research teachers do have been discussed. A diversity of participants and contexts are also involved in the 29 reviewed studies. There remains, however, methodological and substantive gaps. More specifically, the current literature on language teacher engagement is methodologically limited (lacking studies using mixed methods, random sample, and concrete scale and validation items in measuring the level of research engagement), and substantively lacks studies that collectively considers a wide range of aspects of research engagement practices. Some particular patterns in the major findings also indicate a need for large-scale, context-specific studies describing the current situation of language teacher research engagement. The present study aims to close the gaps and fulfil the needs by investigating the research engagement practices of EFL teachers at public universities in Vietnam, a context where the topic has been relatively unexplored (see chapter 4), and by using a mixed-methods approach (see chapter 5).

2.4. Explaining teacher research engagement practices

Given such a tension between the prospective benefits of teacher research in theory and teachers' poor participation in practice as revealed in the previous sections, there has been increasing interest worldwide in the reasons why teacher are or are not engaged in research as professional development. The documented barriers (mentioned in the previous section) as well as facilitators for teachers to be research engaged can be grouped into four categories: teachers' demographic characteristics (e.g. qualifications, experience), teacher cognition (e.g. teacher's perceptions of research), teacher motivation (e.g. presence or lack of rewards for doing research), and contextual factors (e.g. institutional support for research culture) (see for example Borg, 2013).

Among them though, cognition and motivation are consistently acknowledged as two single determinative factors in directing teachers' practices, yet have been under-examined in the literature aiming to explain teachers' engagement in research. This section focuses on reviewing how these two psychological constructs *have been* (contributions) and *have not* been approached (research gaps) in the studies on language teacher research. The synthesis of literature this way will lay the rational foundation for the description of the current study in the latter chapters.

2.4.1. Teacher cognition

2.4.1.1. Definition, importance, and suggested investigation approach

By definition, teacher cognition generally refers to the combination of three integral concepts: teacher beliefs, teacher knowledge, and teacher attitudes, which are consistently revealed by different definitions of the terms to date. One of the earliest authors in the field, for example, defined teacher cognition as "teachers' self-reflection; beliefs, and knowledge […]; and the awareness of problem-solving strategies endemic to classroom teaching" (Kagan, 1990, as cited in Borg, 2006b, p. 36). Later, Wood (1996) proposed the BAK networks which also include three similar interrelated propositions: belief, assumptions, and knowledge to describe this notion in his book on teacher cognition in language teaching. Recently in Borg (2011), teacher cognition means "what teachers think, know, and believe" (p.218); and in Hennissen et al. (2010), it is constituted by knowledge, beliefs, concerns, ideas, perspective, attitudes.

In explaining teachers' behaviour, there is a popular consensus among many researchers that teacher cognition is one single significant predictor of teachers' actions. Clark (1986) and Pajares (1992) stress that teachers' thoughts and beliefs are important for understanding their behaviours. According to Korthagen (2003), what teachers believe about different aspects of their professional work "determines" their actions (p.81). Johnson (2006, p. 235) states "none is more significant" than teacher cognition in our understanding of teacher's work. He also emphasised that "teachers' prior experiences, their interpretations of the activities they engage in […] are extremely influential in shaping how and why teachers do what they do" (Johnson, 2006, p. 236). Hennissen et al. (2010) mention teacher cognition as "a framework of reference",

based on which teachers act (p.207). Korthagen's (2013, 2014, 2016) conclude from a series of studies on reflection in teacher education that a teacher's beliefs and competencies unconsciously influence his/her behaviour; and it is the reflection upon such cognitive "underlying processes" that contribute to a deep understanding of the teacher's professional practice and to long-term professional development. In the literature on language teacher research practices presented in the previous section, cognition and motivation related factors consistently appear in the list of top potential barriers to teacher engagement in research. The study of teacher's behaviour, or in the case of the present study, teacher's research engagement, therefore, clearly cannot overlook teacher cognition simply because what teachers know, believe and think inevitably influences their behaviours.

Concerning the manner in which teacher cognition should be studied to provide insights into teachers' actions, it has been commonly suggested that the whole cognitive system be considered if a full understanding of the action level is to be achieved. For example, Tsui (2011) claimed that teacher cognition is a hugely complex system with many interwoven elements that are not easy to be teased out in a single empirical inquiry; and Sikes (1992) asserted a holistic approach is needed to understand teacher thinking. Korthagen (2014), similarly, has acknowledged in his "wholeness" approach to understanding teacher development that the more dimensions of teacher cognition are included in the reflection on a teacher's professional situation, the deeper the situation can be understood. In his review of research on teacher beliefs and practices, Fang (1996) has in fact reported the inadequacy of the insights into a single belief factor in explaining how teachers act (e.g. Paris, Wasik, & Turner, 1991; Roehler & Duffy, 1991) and recommend a collective consideration of extra cognitive factors in further research.

Based on this general background, the body of literature considering teacher cognition in language teacher research engagement is reviewed below.

2.4.1.2. Review of literature considering teacher cognition in language teacher research engagement

General observations

Available studies investigating teacher cognition in the context of language teacher research engagement are chronologically displayed in Table 2.2. In the table, information about the authors, dates, methodology used, and the cognitive concepts covered, and the major findings in each study is presented. Among 28 studies listed in the table, twenty-three studies have been earlier listed in Table 2.1. The remaining five, which are put in bold, (Bai & Millwater, 2011; Bai, Millwater, & Hudson, 2012; Gao & Chow, 2011b; Reis-Jorge, 2007; Trent, 2012) put a sole focus on teacher cognition in the context teachers doing research without an explicit discussion of teachers' research practices.

Table 2. 2. Review of studies considering teacher cognition in the context of teacher engagement in research

	Authors	Dates	Research methods used	Conceptual frameworks or theories used	Cognitive concepts considered	Key findings/Conclusions
1	McDonough and McDonough	1990	- Questionnaire - Descriptive and analytical methods	[No explicit use of theory]	-Views of research and the role of research in teachers' professional life	-Teachers' notions of research are closely tied to statistical and quantitative methods -Teachers show mixed attitudes towards the role of research in teachers' professional life
2	Brown et al.	1992	QUAN (Questionnaire)	[No explicit use of theory]	-Conception of research	-Teachers' conception of research are closely associated with "scientific" notion of research.
3	Rainey	2000	Mixed methods QUAN (Questionnaire) + Qual (interviews)	[No explicit use of theory]	-Knowledge about action research -Opinion about action research	- A limited knowledge of action research among 229 participating EFL teachers - A positive attitudes towards the potential usefulness and relevance of action research to classroom teachers.
4	Gao, Li and Wu	2000	QUAL (interviews)	[No explicit use of theory]	-Conception of "research" and "research method"	- A continuum of "researcher", who holds positivist, and cognitive view about research, "teacher researcher" with practical, and cognitive-instrumental view about research, "the researching teacher" with primarily instrumental view of conducting research, and the "teacher" who considers research as an irrelevant activity for their profession.
4	Doan and Nguyen	2006	Mixed methods: QUAN (questionnaires) + Qual (Interviews)	[No explicit use of theory]	-Attitudes towards classroom-based research	-Positive attitudes towards the benefits of teacher research but doubts about its feasibility in their institutions.

	Authors	Dates	Research methods used	Conceptual frameworks or theories used	Cognitive concepts considered	Key findings/Conclusions
5	Pham	2006	QUAL (interviews)	[No explicit use of theory]	-Conception of research -General attitudes towards teacher research engagement	- Definitions of research in terms of purposes (to improve learning and teaching) and forms (formal and informal) - Positive attitudes towards the benefits of teacher research engagement but doubts about the feasibility of its viability at Vietnamese universities.
6	Allison and Carrey	2007	QUAL (Open ended questionnaire and follow-up discussions	[No explicit use of theory]	-Attitudes towards the feasibility of research engagement for language teachers	Teachers show mixed attitudes towards research, which reflects the potential benefits of doing research for teachers in theory on the one hand and the complexity and ambivalence of research for language teachers in reality on the other. Teachers also expressed doubts over whether teacher research should be encouraged.
7	Borg	2007	QUAN (Questionnaire)	[No explicit use of theory]	- Conception of research - Attitudes towards research culture	- Teacher's conceptions of research reflected in their evaluation of research scenarios and the importance of different characteristics of a "good" research. The conclusion reflected an overall conception of research predominantly associated with a "standard" view of scientific research. - The context was seen to constitute an overall positive environment for teacher research engagement. A favorable perspective on research culture is significantly and positively correlated with teachers' frequencies of doing research.
8	**Reis-Jorge**	**2007**	Mixed methods	A	-Conception of	- A loose and practical view of research, which

	Authors	Dates	Research methods used	Conceptual frameworks or theories used	Cognitive concepts considered	Key findings/Conclusions
			QUAN (questionnaire) + QUAL (interviews, field notes, and direct observations)	continuum of teacher-research (Reig-Jorge, 2004)	research	does not experience any radical changes during teachers' experience of a research course. - The highly-structured academic format of research may fail to provide teachers effective tools for reflections that are easily transferable to practice.
9	Borg	2008	QUAN (Questionnaire)	[No explicit use of theory]	-Conception of research -Attitudes towards research culture	-The predominant view of research was a conventional scientific one. -Teachers do not feel their institutions are supportive to their research engagement
10	Barkhuizen	2009	Qualitative (narrative frames)	[No explicit use of theory]	-Teachers' views of research they wanted to conduct	-Qualitative studies on student participation in communicative activities are the most recurrent theme.
11	Borg	2009	Mixed methods QUAN (505 questionnaires) + follow-up Qual (12 interviews)	[No explicit use of theory]	-Conception of research	- Conceptions of research aligning with conventional scientific notions of enquiry - A distinction between research and routine teaching
12	Gao, Barkhuizen, and Chow	2010	Mixed methods QUAN (questionnaire) + Follow-up Qual (Focus-group interviews)	[No explicit use of theory]	-Conceptions of research	-A preference for experimental research which aims to solve classroom problems
13	Moore	2011	QUAN (Questionnaire)	[No explicit use of theory]	-Conception of research -Attitudes towards	- Conceptions of research aligning with conventional scientific notions of enquiry - "Usefulness" is the most important

	Authors	Dates	Research methods used	Conceptual frameworks or theories used	Cognitive concepts considered	Key findings/Conclusions
					research cultures	characteristics of a "good" research. -A limited amount of interest and support for teachers to do research in the institutions where the teachers work.
14	Bai and Hudson	2011	QUAN (questionnaires)	[No explicit use of theory]	-Perceptions of researching-teaching nexus, research benefits, and the research culture - Self-efficacy beliefs for conducting research	-A positive attitudes towards the importance and benefits of conducting research for teachers. - An overall lack of self-confidence in conducting research. - A developing research cultures in China from the perspective of the participating teachers.
15	**Bai and Millwater**	2011	QUAL (Interviews)	[No explicit use of theory]	-Perceptions about research	- Teachers' strong belief in the teaching-research nexus - A negative attitudes towards the "publish or perish" culture - A tendency to emphasise research quality over quantity among active researchers
16	**Gao and Chow**	**2011**	Mixed methods QUAN (questionnaire) + Qual (interviews)	[No explicit use of theory]	-Conception of research	-A centrality of quasi-experimental research design and a reservation about the use of qualitative methods in teachers' perception -A potential impact this perception may have on teachers' research engagement
17	Gao, Barkhuizen,	2011	QUAL (33 open-ended	[No explicit use of	-Conceptions of research	-A quasi-experiment in teachers' conceptions of research

	Authors	Dates	Research methods used	Conceptual frameworks or theories used	Cognitive concepts considered	Key findings/Conclusions
	and Chow		questionnaires + follow-up group interviews)	theory]		-An ambiguous attitudes towards the dissemination of research results
18	**Bai, Millwater, and Hudson**	**2012**	QUAL (interviews)	[No explicit use of theory]	-Attitudes towards teaching-researching nexus -Attitudes towards the value of research to EFL academics	-Positive attitudes towards teaching-research nexus -Instrumental value of research to teacher professional development from the participants' perspectives
19	**Trent**	**2012**	QUAL (interviews)	Models of identity by Wenger (1998) and Fairclough (2003)	-Conception and construction of professional identity -How research participation is shaped by identity conception	-Conflicts between different identities (e.g. 'full-time teachers", "teacher researcher" -Potential impact of identity conceptions on future research engagement.
20	Yayli	2012	QUAL (documents, observations, and interviews)	[No explicit use of theory]	-Interpretations of conducting research in ELT and the collaboration with supervisors in the procedures	- Data analysis and interpretation of findings are the most troublesome stages in conducting research from the teachers' perspective - A power imbalance is observed with teachers' sublimation of supervisors as knowledge and power holders.
21	Tavakoli and Howard	2012	QUAN (60 questionnaires)	[No explicit use of	-Conception of research	- Teachers' conceptions of research are sometimes radically different from the

	Authors	Dates	Research methods used	Conceptual frameworks or theories used	Cognitive concepts considered	Key findings/Conclusions
				theory]		conventional notion of research. - Some teacher do not distinguish research and reflective practice.
22	Borg	2013	Mixed methods QUAN (Questionnaire) + follow-up Qual (Interviews)	[No explicit use of theory]	- Conception of research - Attitudes towards research cultures	- An overall conception of research predominantly associated with a "standard" view of scientific research. - The moderate extent to which language teaching contexts are seen by teachers to provide an environment supportive to teacher research.
23	Kutlay	2013	Mixed methods QUAN (52 questionnaires) + Qual (Interviews)	[No explicit use of theory]	-Conceptions of research	-A general conception of research guided by the scientific concepts. -An awareness of the distinction between research and reflective practice
24	Borg and Liu	2013	Mixed methods QUAN (725 questionnaires) + Follow-up QUAL (20 interviews)	[No explicit use of theory]	-Attitudes towards research cultures	-A moderately positively perspective on the research cultures
25	**Tabatabaei and Nazem**	**2013**	QUAN (Questionnaire)	[No explicit use of theory]	-Conception of research	-A conventional scientific view of research -A clear distinction between research and routine teaching activities.
26	Bai, Millwater, and Hudson	2014	Mixed methods QUAN (questionnaire) + follow-up Qual (interviews)	[No explicit use of theory]	-Perceptions about the significance of research	-Generally positive perception of the value of research. However, the positive notions derived from rhetoric rather than actual experience.
27	Xu, 2014	2014	QUAL (narrative	[No explicit	-The construction	-Four scenarios of identity construction: "a

	Authors	Dates	Research methods used	Conceptual frameworks or theories used	Cognitive concepts considered	Key findings/Conclusions
			frames and interviews)	use of theory]	of identity as researcher	struggling periphery research practitioner", "a self-contented established researcher", " a passive would-be researcher", and " a disheartened researcher" -An overall positive but passive and powerless attitudes towards research, which seems to underlie teachers' research practices.
28	Sadeghi and Abutorabi	2017	Mixed methods QUAN (100 questionnaires) + Qual (10 Interviews)	[No explicit use of theory]	-Conception of research	-Teachers' views of research are generally associated with the conventional scientific concepts of inquiry.

Note: QUAN/Quan = Quantitative , QUAL/Qual = Qualitative. Capitalized words (QUAL, QUAN) indicate the use of the method as the primary one in the study.

Table 2.2. above chronologically displays 28 studies on teacher cognition in the context of language teacher research engagement. For each study included in Table 2.2., information about the authors, the date of publications, the methods used, the conceptual frameworks or theories adopted, the cognitive concepts covered, and the major findings are presented under relevant columns. From the table, a number of general observations can be made as follows.

The first general observation is that there is an evolution of interest in teacher cognition in teacher research engagement. This is evidenced in the number of 23 studies which also incorporate a discussion of different cognitive constructs in their investigation of teacher research practices, and five studies published in the last 10 years with a sole focus on teacher cognition in the context of teachers doing research (Bai & Millwater, 2011; Bai, Millwater, & Hudson, 2012; Gao & Chow, 2011b; Reis-Jorge, 2007; Trent, 2012). The rationale for such an interest in teacher cognition explained by the authors varied, but mostly centred on the essential role that cognition plays in directing teachers' behaviours, and thus, the huge potential that the insights into teacher cognition would contribute to the understanding of teacher engagement in research. Borg (2013) for instance, argues for his focus on teachers' conceptions of research on the premise that teacher beliefs have long been found to "have a powerful influence on teachers' decisions" in a substantial volume of research on teacher cognition, and information about the conceptions can thus "inform our understanding of how language teaching professionals respond (often negatively) to calls for them to be research engaged" (p.49). He also added that initiatives to encourage teacher research are more likely to have an impact if they are based on a thorough understanding of teachers' beliefs about research and its relevance to their work (Borg, 2013, p.49). When explaining for the choice of the "identity" construct in his research, Xu (2014) cited Holland and Lachicotte's (2007) finding that teachers' sense of themselves is essential to provide a full understanding of the complexities of EFL teachers' research practices. Such rationale and evolving interest is in line with the emphasis on the importance of cognition in directing teacher's actions raised in the wider teacher cognition literature as presented earlier in the background section.

Second, it is noticeable that different studies put different cognitive concepts in focus, and no studies so far have comprehensively incorporated all the main elements of the cognitive system. Most available studies cover a single aspect of teacher cognition, be it "conception of research" (e.g. Tabatabaei & Nazem, 2013), "attitudes towards teaching-research nexus/research benefits/ research cultures/engagement in research" (Bai, Millwater, & Hudson, 2014; Borg & Liu, 2013), "perception of identity" (e.g. Xu, 2014). Only five studies examined more than one cognitive construct (e.g. Borg, 2013; Rainey, 2000); and in these studies, the researched constructs still do not collectively represent the whole cognitive system, which consists of at least teacher's knowledge, teachers' attitudes, and teachers' beliefs as defined in the previous section.

Such a lack of studies which comprehensively consider the whole cognitive system may have resulted in the third observation on the existing literature on teacher cognition in the context of teachers doing research: most studies do not employ any theoretical lens. Among 28 available studies, only two explicitly described the use of a conceptual framework: A continuum of "teacher research" in Reis-Jorge (2007), and models of identity in Trent (2012). The two models, however, only provide the theoretical lens to the specific cognitive concepts in focus in the two studies: teacher conception of research, and teacher's perception of professional identity. Since the remaining studies also focus on only one or two cognitive concepts, none has been found to mention any cognitive theories to guide the investigation. Such an absence of theory use may be justified in the cases of data-driven studies (e.g. Barkhuizen, 2009; Xu, 2013) or those following a grounded theory approach, but has currently led to a consequent lack of a "consistent set of substantive, conceptual […] frameworks" to guide future researchers in terms of the key dimensions of language teachers' cognition (Borg, 2006b, p.87).

Finally, a diversity of research methodologies in use can be noticed from 28 available studies. All the three main approaches (qualitative, quantitative, and mixed-methods approaches) are found, and the numbers of studies employing each approach are proportionally similar (11 mixed methods, 8 qualitative, and 9 quantitative). A variety of data collection instruments were also described. In the qualitative studies for instance, not only were the popular interviews used (e.g.

Pham, 2006), but less conventional tools such as narrative frames (Barkhuizen, 2009), documents, observations (Yayli, 2012), or open-ended questionnaires (Gao, Barkhuizen & Chow, 2011b) are also enlisted.

Since reviewing each of the 28 studies in Table 2.2. individually would challenge the word limit of the present thesis, the following sections will instead synthesize the contributions and research gaps of these studies collectively on the basis of the general observations above. Such a synthesis will provide a direction for the description of the current study in the latter chapters.

Contributions

From Table 2.2. and the general observations made in the previous sections, there are two important contributions that 28 studies considering teacher cognition in the context of teacher research engagement have made.

First, the available studies have provided insights into the different aspects of teacher cognition, contributing to the general understanding of teacher research practices from the perspective of teacher cognition. As mentioned in the previous section, teacher attitudes, conceptions of research, and sense of identity have been researched and accounted for in different contexts (major findings can be seen in the last column of Table 2.2.). In some studies, the authors also established some evidence-based links between each cognitive concept and the manner in which teachers do research themselves. Borg (2013) suggested that the conventional, scientific view of research held by most teachers in his study may be the reason why they reported engaging in research on a modest level. When teachers tend to associate "research" with "large sample", "use of statistics", Borg (2013) explained, they are likely to consider research as an impractical activity for them, who normally do not have either easy access to large sample or sufficient knowledge of statistics. In the same vein, Trent (2012) analysed how teachers understand themselves as teachers, and found three factors that may underscore their future engagement in research: (i) the image of a teacher-researcher participants created, (ii) the extent to which their "researcher" identity would harmonize with their "full-time teacher" identity, and (iii) what they

perceived the premium of their future schools would be. The beliefs that teacher-researchers would be isolated individuals working towards private goals, which fail to bring about the learning and teaching enhancement changes that feature "real" research, the perceptions that the future working place would prioritize teaching over research, and the state of "antagonism" experienced by the teachers who imagined the world of a full-time teacher as being so preoccupying that it precludes the possibility of simultaneously doing research all possibly explained why teachers are so reluctant to engage in research despite their positive endorsement of the activity.

Second, the diversity in research designs of 28 available studies offer various methodological models for researching teacher cognition. As mentioned in the previous section, examples of qualitative, quantitative, and mixed-methods studies can all be found in the literature. A model of a well-designed research instrument for researching teacher cognition is also available. Specifically, ten scenarios designed by Borg to elicit teachers' conceptions of research in 2007 (Borg, 2007) have since been reused and retested for reliability in seven studies (Borg, 2008, 2009, 2013; Kutlay, 2012; Moore, 2011a; Sadeghi & Abutorabi, 2017; Tabatabaei & Nazem, 2012). With a high reliability score reported in all the replicative studies, the scenarios are readily usable for future research into the same cognitive construct.

In short, both substantive and methodological contributions can be seen from 28 available studies on teacher cognition in the context of teacher research engagement.

Research gaps

Despite the above contributions, two important gaps exist in the existing literature on teacher cognition in the context of teacher research engagement.

The first gap is a substantive one. It can be noticed that against the important role of teachers' cognition in explaining teachers' behaviours, the construct as a whole remains relatively under-examined as reflected in the small number of available studies and the limited range of cognitive concepts that have been investigated. As can be seen from Table 2.2., there have been 28 studies

investigating the topic so far, and this number, although seeming impressive, is spread over a 27-year timeline between 1990 to 2017. Such a volume and evolution of publications around the topic of teacher cognition in teacher research engagement, as Borg (2013) observed, reflects an "increasing, though still emergent interest" in the topic (p.50). More scholarly attention should thus be paid to teacher research engagement from the perspective of teacher cognition. In addition to the volume, the coverage of the cognitive system in the available studies is also fragmentary and limited. As mentioned earlier in the general observation section, all available studies tackle only one or cognitive constructs, which have, furthermore, never been discussed under any cognitive theoretical framework; the term "cognition" is in fact not even mentioned in studies including one of these factors in their scope. The discussion regarding teacher's knowledge (teacher's conceptualisation of research), moreover, appears to dominate other aspects of teacher cognition (attitudes and beliefs) although all studies point to the similar conclusion that attitudes, knowledge, or beliefs all act as powerful barriers or facilitators to teacher research engagement (see Borg's review, 2010). Some important cognitive constructs such as teachers' attitudes towards research per se or teachers' research self-efficacy have been left untouched. All the findings about the relationship between teacher cognition and teacher research practice, in addition, are interpretive in nature, i.e. no studies have yet provided statistics-based evidence to back such findings. The actual existence of an association between different cognitive factors and the extent to which teachers engage in research, and the strength of such association (if any) thus still remains unknown.

Such a fragmented approach to cognition as demonstrated above leaves the existing literature on teacher research engagement with two major limitations. First, the reasons why language teachers choose to be research-engaged or not be so, which are believed to enable many stakeholders to approach the task of promoting language teacher research culture in a more feasible way, have not been fully uncovered. Unexplored cognitive concepts (e.g. teachers' attitudes towards research per se.) means potentially hidden explanations for teachers' research engagement; lack of statistical evidence on the relationship between the studied constructs and

teachers' research practices means that the available reasons are still subject to confirmation. Second, it remains unknown "how different elements in teachers' cognitive systems interact and which of these elements are core and which are peripheral" (Borg, 2006b, p. 272) in deciding teachers' participation patterns in research as professional development. Such an understanding is important since it may allow policy makers to tailor their support according to the extent of influence of each cognitive factor. For instance, more effort could be invested in improving teacher's knowledge if it turned out to be the most influential factor in teachers' research engagement. Such limitations imply a need for studies that include the whole cognitive system in its scope, and consider simultaneously the influence of each element in the system on teacher research practice.

The second gap in the current literature is concerned with the research methodology. Although a variety of research methods have been used by the 28 available studies, the single-method approach still prevails with 17 studies being either of purely qualitative or quantitative design. In the quantitative group, questionnaire is the sole data collection instrument; and among 10 qualitative studies, only two (Xu, 2014; Yayli, 2012) employed more than one instrument for gathering data. The dominance of the single-method approach in the investigation of teacher cognition - "an extremely complicated matter" which requires "a judicious blend of methods of data collection in order that the information […] can be compared, contrasted, and triangulated" (Barnard & Burns, 2012, p.4) - obviously leads to the limited extent to which the complexity of the construct has been tackled by the available literature. Against this background, the need for multi-methods studies with triangulation techniques to examine teacher cognition in the context of teacher research engagement is well suggested.

To sum up, a review of 28 available studies that consider cognitive factors in the context of language teachers doing research reveals two important gaps: the lack of studies that comprehensively investigate all aspects of teacher cognition and their impacts on teacher research practices, and the lack of studies using mixed methods to address the complexity of the cognitive construct. The current studies aims to close this gap by incorporating all the main

aspects of teacher cognition (teacher's knowledge, teachers' attitudes, and teachers' beliefs) in their scope (see chapter 3), adopting mixed research methods with triangulation techniques (see chapter 5), and examining also the impacts of different cognitive factors on the extent to which teachers report they do research (see chapter 3).

2.4.2 Teacher motivation

Along with cognition, motivation provides another significant standpoint from which teacher engagement in research can be understood. Hargreaves (1998) asserts that despite the important role that cognition plays in teachers' professional development, a one-sided focus on cognition is not sufficient. In addition to cognition, motivational aspects also play a role in deciding what teachers do (Evelein, Korthagen, & Brekelmans, 2008). According to Hoekstra and Korthagen (2011), these two sources of influence are furthermore interwoven, and therefore should not be separated in the analysis of teacher's behaviour. As cautioned by Korthagen (2016), the one-sided rational approach to teacher professional development (which assumes cognition as the sole source of teacher behaviour), may even lead to failure of attempts to promote teachers' learning. Motivation is therefore included in the present study as another perspective from which language teacher research engagement can be investigated.

In this section, the motivational construct is first defined and its importance in studying teachers' behaviour explained. Empirical studies on language teacher motivation in research engagement, which constitutes the focus of the section, are then critically reviewed to locate the gaps that lead to the direction of the present study.

2.4.2.1. Definition and importance

By definition, human motivation in mainstream psychology simply refers to the reasons why people think and behave in the way they do or the process whereby a goal-directed activity is initiated and sustained (Kazdin, 2000). Put it a different way, Graham and Weiner (2012) defined motivation as "what gets people's behaviour started, what directs, energizes, sustains, and eventually terminates the action" (p.367). It is clear from these definitions that insights into an individual's motivation for an action cannot only explain *why* s/he does so, but also indicate

how long s/he is willing to sustain the activity and *how much effort* s/he is going to spend pursuing it. This also implies two aspects of the motivational construct, namely, the *choice* aspect (why does a person behaves the way s/he does), and the *intensity* aspect (how much s/he wants to do it). In terms of characteristics, it is generally agreed that motivation is temporal, dynamic (Dörnyei, 2001, 2005; Gardner, 1985; Gottfried, 1990; Graham & Weiner, 2012); and domain-specific (Fernet er al., 2008; Gottfried, 1990). This means motivation varies over time, across subject areas, learner groups and learning situations. Such characteristics necessitate the account of the factors that influence motivational changes in the whole course of action in studies that aim to examine an individual's motivation for an action.

Similarly to all the disciplines it encompasses, motivation is frequently mentioned as a factor worthy of special attention in the field of teacher professional development. Day (1999) consistently argues for motivation to be the most critical factor in teacher's participation in professional development. Guskey (2002) cautioned that any TPD models that do not take teachers' motivation to engage in PD into account, will fail. Cimer, Cakir, and Cimer (2010) even found that a TPD program perfectly intended and prepared on paper might fail only due to the low motivation of the participants or teachers. Teacher engagement in research as a means of professional development, therefore, cannot be fully understood without insights into teacher motivation. Empirical studies have also supported such claims. Findings by Deci & Ryan (2002) in educational psychology accentuate that teachers' actions are not only guided by their cognition but also as much by their personal needs or motivation (Deci & Ryan, 2002). This concurs with findings in psychological and neurobiological research which indicate that cognition, emotion and motivation are interwoven inside a human's brain (Korthagen, 2013), which collectively explains why people who are well aware of what is good to do may not translate the knowledge into correspondingly good behaviour in practice. Effective behaviour, in fact, is the result of the harmony between thinking (cognition), and wanting (motivation) (Korthagen, 2013). Such an acknowledgement implies an insufficiency in the account of teachers' behaviours from solely on the basis of cognitive insights, and furthermore calls for the

need to examine teachers' motivation if a fuller understanding of teacher practice is to be achieved (Korthagen, 2014).

2.4.2.2. Review of existing literature on language teacher motivation in teacher research engagement

Due to the importance of motivation in deciding human behaviour in general and teacher professional development in particular as mentioned above, available literature that attempts to understand teacher's research practices has therefore considered motivation-related factors. A full chronological list of 14 available studies on teacher motivation, or have findings related to teacher motivation in the contexts of teachers doing research can be found in Table 2.3.

Table 2. 3. A chronological review of available studies considering teacher motivation in the context of language teacher research engagement.

	Authors	Dates	Research methods used	Conceptual frameworks or theories used	Aspects of motivation covered	Key findings/Conclusions
1	Borg	2007	QUAN (Questionnaire)	[No explicit use of theory]	Reasons why teachers do research	- A mixture of intrinsic (e.g. enjoyment of doing research) and extrinsic motivations (e.g. a required part of a course one is doing) -"Professional development" and "teaching improvement" are the most commonly cited reasons
2	Borg	2008	QUAN (Questionnaire)	[No explicit use of theory]	Reasons why teachers do research	Three most common reasons are "teaching improvement", "professional development", and "problem solving". Promotion and employers' demands are not important.
3	Borg	2009	QUAN (questionnaires)	[No explicit use of theory]	Reasons for doing research	Prominent motivations have strong personal, pedagogical, and professional focus.
4	Gao, Barkhuizen, and Chow	2010	QUAL (Focus-group interviews)	[No explicit use of theory]	Reasons for doing research	Felt responsibilities (school requirement, teachers' role in innovation), personal interest in exploring teaching.
5	Bai and Hudson	2011	QUAN (questionnaires)	[No explicit use of theory]	The level of intrinsic motivation to do research	Intrinsic motivation is lacking among a large proportion of Chinese TEFL academics in the study.
6	Bai and Millwater	2011	QUAL (Interviews)	[No explicit use of theory]	Reasons for doing research	-A wide range of motivations, from passive and utilitarian purposes of fulfilling research obligations and keeping the job, to the interest in research and the desire to contribute to knowledge. -While interest and passion for research is expressed equally strongly by different groups of teachers,

	Authors	Dates	Research methods used	Conceptual frameworks or theories used	Aspects of motivation covered	Key findings/Conclusions
						external pressures are more clearly pronounced among early-career and less research-active teachers.
7	Gao, Barkhuizen, and Chow	2011	QUAL (33 open-ended questionnaires + follow-up group interviews)	[No explicit use of theory]	Reasons for doing research	A mixture of intrinsic interests (in exploring pedagogical issues, and findings ways to improve teaching) and external pressures (school requirement).
8	Kutlay	2013	QUAN (52 questionnaires)	[No explicit use of theory]	Reasons for doing research	Teachers engage in research mostly for professional (improve teaching and professional development) and academic (a part of a course) reasons.
9	Borg and Liu	2013	Mixed methods: QUAN (725 questionnaires) + Follow-up Qual (20 interviews)	[No explicit use of theory]	Reasons for doing research	-Mixture of internal motivations (e.g. to find better ways of teaching) and external influence (e.g. requirement from the employers). -The most commonly-cited reasons have pedagogical and professional foci (e.g. to improve teaching or develop professionally),
10	Bai, Millwater, and Hudson	2014	QUAL (Interviews)	[No explicit use of theory]	Reasons for doing research	"Professional benefits" among young teachers, and "self-esteem" among the seniors, who also disclosed instrumental purposes: promotion, good incomes.
11	Xu	2014	QUAL (narrative frames and interviews)	[No explicit use of theory]	Reasons why teachers do research	Predominantly extrinsic motivations (for promotion, graduation), intrinsic ones (to improve teaching, personal interest) are marginal.
12	Mehrani	2015	QUAL (interviews)	[No explicit use of theory]	Reasons why teachers do research	Professional development appears to be the key motive.
13	Yuan, Sun, and Teng	2016	QUAL (longitudinal	Possible selves	-Motivations to engage in action	Both initial and on-going motivations for research are mediated by the congruence and disparity among

	Authors	Dates	Research methods used	Conceptual frameworks or theories used	Aspects of motivation covered	Key findings/Conclusions
			interviews)	theory and Self concepts (see Yuan, Sun, & Teng, 2016)	research -Motivation changes during a research project	different selves teachers constructed and reconstructed in their action research projects.
14	Sadeghi and Abutorabi	2017	QUAN (100 questionnaires)	[No explicit use of theory]	Reasons for doing research	Professional, pedagogical, and personal reasons are the most common. External pressure is the least mentioned reason.

Note: QUAN/Quan = Quantitative , QUAL/Qual = Qualitative. Capitalized words (QUAL, QUAN) indicate the use of the method as the primary one in the study.

General observations

Table 2.3. presented the 14 available studies that considered language teacher motivation in a chronological order. A number of general observations can be made from the table.

The first general observation is that the volume of the teacher motivation literature is much more modest than that of teacher cognition as described previously in Table 2.2. Whereas teacher cognition has been examined in 28 studies, published during nearly 3 decades, language teacher motivation for research appeared for the first time in the literature just 10 years ago in Borg (2007a), and have been examined in only 13 other major studies since then. Among 14 studies listed in Table 2.3., only one study, moreover, puts a sole and explicit focus on teacher motivation (Yuan, Sun, & Teng, 2016); the remaining 14 studies (which are all previously listed in Table 2.1. or Table 2.2. or both) discussed multiple topics, and teacher motivation is just one integral part of the discussion. Against the background which highlights the importance of teacher motivation in determining teacher's action as described in the previous section, the concept clearly deserves more scholarly attention in the field of language teacher research engagement.

The second general observation is concerned with the aspects of motivation covered in the reviewed studies. These in general, as indicated in Table 2.3, are wide-ranging, from the "why" aspect (e.g. Borg, 2007a), the "how-much" aspect (Bai & Hudson, 2011), to the factors that trigger motivation changes during the process of doing research (Yuan, Sun, & Teng, 2016). However, most studies consider a single aspect, with Yuan, Sun and Teng (2016) being an exception with two aspects in focus. No studies have so far examined simultaneously why teachers engage in research, how strongly motivated they are, and what factors affected their motivation in the research process. Of the three aspects covered, discussion of the reasons why teachers do research (the "*why*") aspects dominates the literature, being the focus of 12 out of 13 reviewed studies. The motivation *intensity* was the aim of only one study (Bai & Hudson, 2011); so was the *on-going motivational influences* (Yuan, Sun, & Teng, 2016).

From this general observations, discussion of the contributions and research gaps of the 13 reviewed studies are given below.

Contributions

There are two noticeable contributions that the listed studies have made to the understanding of the topic of teacher motivation for research.

The first and most notable contribution of the 13 available studies is the identification of several types of teacher motivation for being engaged in research. For example, in a series of duplicative quantitative studies in which Borg and colleagues asked teachers why they do research, results consistently show a similar mixture of both intrinsic motivations (e.g. enjoyment of doing research) and extrinsic ones (e.g. professional development, top-down expectations; career advancement; contribution to the knowledge base of the discipline; requirement of a qualification) but with different ranking in significance in different contexts (Borg, 2007a, 2009; Borg & Alshumaimeri, 2012; Borg & Liu, 2013). The earliest in the series, done with 62 English language university teachers from Turkey (Borg, 2007), found "professional development" most commonly cited and "career advancement" the least significant. In the replicative study in the Chinese context, career advancement, in contrast, was among the top 4 most important drives to do research among 698 college English teachers (Borg & Liu, 2013). At a global level, the most cited motives are primarily personal, pedagogical and professional, and much less emphasis is placed on the external drivers such as employer pressures or promotion (Borg, 2009; 2013). Teachers' choice motivations are found by all the major research methods (qualitative, quantitative, and mixed methods). A full list of reasons why language teachers choose to do research reported in the existing literature can be found in the "Major findings" column of Table 2.3. above.

Another contribution is an in-depth description of the motivational changes in the process of doing research. In light of the self-concepts (ideal self, ought-to self, future self, actual self), Yuan, Sun and Teng (2016) analysed the research journey of three Chinese EFL teachers via semi-structured interviews, and found the alliances and conflicts among the selves to be the

major mediators of their motivation towards research, which then visibly shape and influence their research engagement. Teacher research engagement, they concluded, was (i) initiated by the congruence between their perceived ideal self (e.g. facilitators of student development), and ought-to self (i.e. teacher researchers as required by their schools), (ii) maintained by the support from school leaders, collaboration with colleagues, and on-going benefits they reaped from the immediate research experience and (iii) thwarted by their perceived lack of research knowledge and experience and a number of contextual constraints such as conflicting school policies, rigid school curriculum, or students' unfavorable attitudes towards their researched ideas (Yuan, Sun & Teng, 2016). This topic, i.e. motivational influences during a teacher research project, is unfortunately absent from all the other studies focusing on English language teachers[1].

The final contribution is the availability of evidence about how much teachers is motivated to do research. In Bai and Hudson (2011), the only study that attempts to quantitatively measure teachers' motivation for research, the result show that nearly half (43%) of 182 Chinese EFL academics respond negatively to the questionnaire item about the intrinsic motivation, indicating an overall low level of genuine interest in researching among the sample. The findings, however, are confined to the local context of three Chinese tertiary institutions where the participants come from. Other possible types of motivation, in addition, are not included in the questionnaire, and thus not measured.

Research gaps

Despite the contributions as such, a number of research gaps can still be noticed from the studies listed in Table 2.3.

The first one is concerned with the limited *number* of publications. As mentioned before in the general observation, statistically, there have been only 13 empirical studies examining language

[1]Motivational changes and influences can also be inferred from Zamorski and Bulmer's (2006) report on a local teacher research program in the UK albeit the explicit aim of the paper was to explore the changes in teacher learning rather than teacher motivation. The paper lists several factors that cause teacher research motivation to diminish, namely teacher researchers' loss of absolute authority over their research project, the disconnection with their immediate "intimate" working environment, and a loss of self-reliance concerning the research (Zamorski & Bulmer, 2006, p. 283-84). The report, however, is merely a personal chronicle of the impacts of a specific teacher research program. It is unclear whether the teachers' quotes used in the report were systematically and purposefully collected and analysed, and if they were, by which instruments and methods. The report also did not specify whether the participants are teachers of English or of any other subjects. For these reasons, Zamorski and Bulmer's (2006) has been excluded from review of the empirical studies on language teacher research motivation.

teacher motivation towards research engagement conducted over the past decade. Although this implies an evolving interest in the role of this individual-difference factor in driving teacher research practices, the publication of such a number of studies during a timeframe of 10 years can be considered modest if seen against the importance of motivation in the study of teachers' behaviour (see section 2.3.2.1.), and the over-four-decade-long history of teacher research (see section 2.1.1.1.). Teacher research motivation, therefore, remains a relatively unexplored topic that deserves more scholarly attention in the field of teacher research engagement.

The second gap lies in the *theoretical* approach taken by teacher research motivation studies. As can be seen from Table 2.3., most available studies are atheoretical, meaning a lack of theoretical framework to guide the investigation, except for the only qualitative one by Yuan, Sun, and Teng (2016). None of the remaining 12 studies, be it of quantitative, qualitative, or mixed-methods designs, explicitly indicates any use of theory or a conceptual framework. Although such an absence of theory use, as mentioned before, can be justified in the cases of studies grounded on data, an atheoretical literature as described offers little theoretical guidance on how to construct the measurement instrument, or how to interpret qualitative data to generate findings on teacher research motivation. The only one study with an explicit theoretical framework (Yuan, Sun, and Teng, 2016), is unfortunately limited in its application of a single theoretical lens, which narrowly focuses on the interactions of the selves and contextual factors in the understanding of teacher motivation towards research. Since motivation involves much more than that, also including for instance the domain being discussed (e.g. teacher professional development rather student learning), the dynamics of the researched subjects (e.g. teachers rather than learners), such a single lens use is likely to leave the complexity of the motivational construct inadequately uncovered. In this regard, Dörnyei and Ushioda (2009) have convincingly argued that no single motivational theory or model is entirely adequate in describing all the relevant motivational influences, and that an integration of multiple motivational conceptualisations is necessary to account for the dynamics of an individual's motivation for a specific action. The reviewed

literature is, in short, in need of studies with multiple theoretical lenses to investigate teacher motivation.

Methodologically, the use of cross-sectional research design and single data collection instrument appears to dominate the available studies, further indicating that the complexity of the motivational construct has not been sufficiently captured in the existing literature on language teacher research motivation. Among 14 reviewed studies, thirteen investigated the motivational construct based on data collected at a single point in time; only one study (Yuan, Sun, & Teng) looked at the construct on a longitudinal basis. In all the quantitative studies that examined the reasons why teachers do research, the findings are interpreted simply from teachers' choices from a list of prescribed answers in the questionnaire (e.g. Kutlay, 2013). Such a "superficial snapshot measure" (Ushioda & Dörnyei, 2012, p. 40), which relies purely on teachers' self-report at only one particular point of time, is clearly unable to reflect how teachers' engagement in research is initiated, maintained, or eroded, and which factors may cause the motivational changes across the whole process of doing research. In other words, the temporal and dynamic feature of the motivational construct (i.e. motivation changes over time under the influences of various factors), which has been widely acknowledged in the mainstream psychology as well as other disciplines (see section 2.3.2.1.) has not been captured in the majority of the available studies. In the only one study of the longitudinal design that addresses this short-coming (Yuan, Sun, & Teng, 2016), the findings are unfortunately reliant on interviews as the sole data collection instrument. Since motivation is a hugely complex construct which requires a wide range of data collected from multiple sources of information to be reliably accounted for (Han & Yin, 2016), the use of only one data collection instrument may have limited the comprehensiveness of the motivational changes or influences that could otherwise be uncovered by combining multiple sources or types of data. Motivation seen from a longitudinal perspective, through a wide range of data, and from multiple sources of information, as Han and Yin (2016) recommended, is the gap that needs filling in the current language teacher motivation research.

Thematically, there is a clear tendency in the available studies, as mentioned in the general observations, to focus on the "why" aspect of the motivation construct and to overlook the others as well as the actual relationship between motivation and teacher research behaviour. As mentioned earlier, all motivation-related survey questions in the quantitative studies asked teachers to indicate the reasons for their research engagement; only Bai and Hudson (2011) attempted to measure how much teachers are motivated to do research, but restrictively focused on intrinsic interest only. In Yuan, Sun and Teng (2016), the "motivational influences" in the whole course of the research engagement action is added, but the design still does not allow for the construct measurement. The lack of motivation measurement moreover results in the lack of established evidence on the existence, the nature and the strength of the relationship between motivation and the extent to which teachers engage in research. Given the importance of all three dimensions of the motivation construct (the "why", the "how much", and the motivational influences) as indicated in the previous section, as well as the potential impact of motivation on teachers' behaviours, the literature as such clearly requires further research that acknowledges the multidimensionality of the construct, and attempts to explore the exact association between it and teacher research practices.

All the limitations considered collectively, the available literature on teacher motivation for research engagement is insufficient in fully depicting the complex nature of the motivational construct as well as the role it plays in the whole picture of teacher research engagement. Further research with a holistic theoretical approach to motivation, of multi-methods and longitudinal design is needed if the processes of teacher research engagement are to be better understood (Richardson & Watt, 2010). In other words, what appears to be missing is, as Ushioda and Dörnyei (2012) stated,

> valid stories of motivation which are backed by sufficient empirical evidence, which are comprehensive rather than reductionist so that the complexity of motivation is not treated in a simplistic manner by focusing on one or two selected aspects only, and which offer concrete suggestions for application. (p.406).

The current study, which adopts an integrated theoretical lens (see chapter 3) to investigate motivation, and pragmatically employs multiple methods (see chapter 5) to capture the key features of teacher motivation in the process of teacher research engagement, is clearly a timely and necessary response to this gap.

2.5. Summary of chapter 2

In summary, the chapter has provided the background information about the general topic of teacher research, reviewed the literature on the research practices of the English language teachers' population, defined the concepts of teacher cognition and teacher motivation, and finally critically synthesized the empirical studies which considered teacher cognition, and motivation in the context of language teachers doing research. This literature review drew three major qualifications, which are also the chapter's three main outcomes: (i) the need for large-scale, context-specific studies describing the current situation of language teacher research engagement, (ii) the need for investigating language teacher research engagement from the cognitive and motivational perspectives, and (iii) the research gaps (the content gap, the methodological gap, and the theoretical gap). While the first and the second qualifications flag the key arguments for the substantive and contextual focus of the study, the third qualification serves as the direction for the theoretical and methodological considerations of the present study. With these three major qualifications, this literature review indicates that not only is the present study grounded in the significant topics in the literature, it is also distinctive from the previous research, potentially making significant contributions in terms of both theory and practice, to the existing literature on and the promotion of language teacher research.

Chapter 3: Theoretical considerations

This chapter elaborates on the theoretical perspectives that guide the whole study, from the initial stage of reformulating the research questions, selecting appropriate research design to the later ones of data analysis, reporting and discussion of results. The aims of the chapter are threefold: (1) to discuss the validity of using Korthagen's Onion Model of Levels of Changes as a common theoretical framework for the whole study; (2) to develop (based on the main insights and concepts of the Onion model) two conceptual frameworks for investigating teacher cognition and teacher motivation - the main concepts of interest of the study; and (3) to redefine the broad research questions introduced in Chapter 1 of this dissertation.

The chapter is organized into three main sections. After a general theoretical introduction, the first main section 3.1. presents the theoretical model used for the whole study, then sections 3.2 and 3.3. respectively describe the conceptual frameworks for the investigation of teacher cognition and teacher motivation.

3.0. Theoretical introduction

As indicated in the literature review, most research aiming to explain language teachers' research practices from the perspective of teacher cognition and motivation is atheoretical, meaning lacking a guiding theoretical framework. A theoretical perspective, however, has been commonly acknowledged as playing an important role in the conducting of scientific research in general and educational psychology research in particular. As early as 1970, Thomas Kuhn (1970) had emphasised in his influential book "The Structure of Scientific Revolutions" that philosophical paradigms or substantive theories are essential in science. The same recognition of the importance of a theoretical framework was then echoed by many subsequent authors in science (Chalmers, 1999); in social science (Miles & Huberman, 1994; Robson, 2011; Silverman, 2010; Silverman & Marvasti, 2008), educational research (Creswell, 2015); and educational psychology alike (O'Donnell et al., 2016; Borg, 2006b). Silverman and Marvasti (2008) emphasised that "any scientific finding is usually to be assessed in relation to the theoretical perspective from which it derives and to which it may contribute" (p.130). Given

their importance as such, theoretical considerations are necessary for this study on teacher cognition and motivation in research engagement.

According to Creswell (2014), theories or theoretical approaches considered for the conduct of scientific research may have different intended uses. Researchers can use a theory deductively in quantitative studies for the purposes of testing or verifying relationships between variables derived from it. In this case, the chosen theory normally serves as a framework, or an organizing model for the entire study, from formulating the research questions or hypothesis, to data collection and analysis. In qualitative research, a theoretical model or approach, on the other hand, can be developed inductively from the emerging themes observed from collected data. Other than that, a theory may simply be used at the beginning of a study as an overall theoretical lens or perspective to orient the whole study. From these three general approaches to using a theory, namely the theory testing approach, the theory generating approach, and theoretical lens approach, the current study opted for the *theory testing* and *theoretical lens* approaches to examine the role of cognition and motivation in teacher research activities. Specifically, relevant theoretical models or approaches will be considered for the dual objectives of *quantitative testing* of theory-derived questions, and *qualitative* provision of theoretical lenses, which guide the collection, analysis and interpretation of the qualitative data related to teacher cognition and teacher motivation.

The two following main sections will describe the particular theoretical model and approach chosen for the present study: The Onion Model of Levels of Change for the investigation of the cognition construct, and the dynamic and process-oriented approach to understanding teacher motivation.

3.1. The Overall Theoretical Framework for the Study

From the literature reviewed above, it has become apparent that different aspects of the cognition construct and teacher motivation need to be collectively studied to provide a sound understanding of teachers' research practice. In formulating a theoretical framework that depicts all these aspects and their relation to teachers' behaviour, Korthagen's (2004) Onion Model of

Levels of Change offers a relevant prototype. The following subsections will elaborate on the background and main insights of Korthagen's (2004) Onion model, followed by the description of two refined conceptual frameworks developed from the Onion model to study the two constructs of interest in the study: teacher cognition and teacher motivation. Guided by the refined conceptual frameworks, a set of subsidiary research questions reformulated from the general ones introduced earlier in chapter 1 will be presented at the end of this section.

3.1.1. The background of Korthagen's (2004) Onion Model of Levels of Change

Korthagen's (2004) Onion Model of Levels of Changes (or *the Onion model* for short) is the result of the author's attempt to develop a holistic model of teacher development that explicates the relationship between a teacher's behaviour and personal characteristics. Stressing the importance of addressing the whole person in the reflection of a teacher's professional practice, the model depicts the possible levels, from the unobservable "inner world" of a teacher to the visible one of the external environment, at which the teacher's functioning may be influenced. Conceived as "layers of changes", each level then represents a standpoint from which teachers' behaviour can be looked at and understood. The model is illustrated in Figure 3.1.

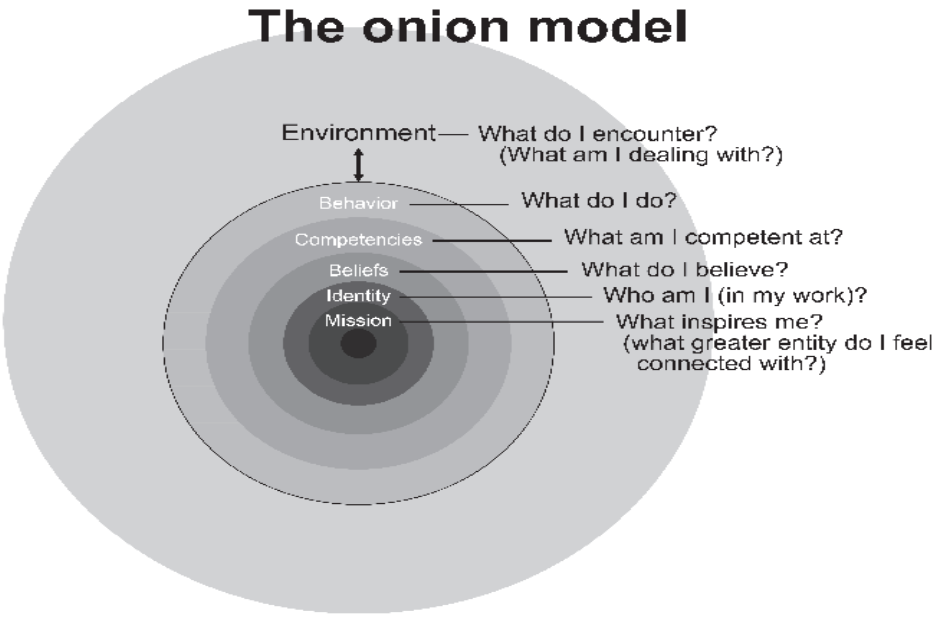

Figure 3. 1. The Onion Model of Levels of Change (adapted from Korthagen, 2004)

As can be seen from Figure 3.1, the Onion model comprises six layers: mission at the core, then respectively identity, beliefs, competencies, behaviours, and environment at the outermost. These layers are considered inter-dependent and influence one another; that is, what teachers do (their behaviours) depends simultaneously on the external environment and a series of inner personal and cognitive factors (as demonstrated in the felt mission, identity, beliefs, and competencies).

The meanings of these various layers in the Model are fully explained by Korthagen (2014) as follows:

- E*nvironment* involves everything that exists outside of a teacher and exerts direct or indirect impacts on his/her practice. Examples of environmental elements include the students, the subject being taught, the school culture, and so forth.

- *Behaviour* refers to the teacher' activities or practices related to his/her teaching. How the teacher deals with the obstacles in the *environment* or how actively she/he chooses to be engaged in research to improve their teaching quality, for example, can be considered instances of teachers' behaviours.

- *Competencies* denotes what the teacher is competent at doing. Generally conceived of as "an integrated body of *knowledge*, *skills* and *attitudes*" (Stoof, Martens, & Van Merriënboer, 2000 as cited in Korthagen, 2004, p. 80), competencies demonstrate a potential for behaviour, not the behaviour itself. Whether one's competencies can be expressed or translated into behaviour depends on the immediate circumstances (Caprara & Cervone, 2003).

- *Beliefs* means what teachers believe about the outer world or the specific situation they are dealing with.

- *Identity* includes teachers' personal beliefs about themselves, their self-concepts or their perceived professional roles. Self-efficacy belief, in this sense, is one possible component of a teacher's identity.

- *Mission,* which is also called the "spirituality level" of a human's belief system (Dilt, 1990), is concerned with the teacher's innermost inspirations – the ultimate ideals to which they attribute the meaning of their lives. It refers to the spirituality level of one's inner world that deals with such highly personal questions as why one wants to become a teacher, what gives meanings and significance to his/her life and work. While the previous layers are more connected to a teacher's cognitive *thinking*, missionhas more to do with the motivational *wanting,* emotional or "less rational" sources of their actions (Korthagen & Vasalos, 2005, p.5).

Given this general background, the Onion model has been widely adopted by teacher trainers to guide both practicing and in-service teachers in reflecting upon practical classroom situations (e.g. Adam, Kim, & Green, 2013; Hoekstra & Korthagen, 2011; Kim & Green, 2013; King & Lau-Smith, 2013; Meijer et al., 2009; Rozelle & Wilson, 2012; Schepens et al., 2007; Sööt & Viskus, 2015; Wilder, Green, & Kim, 2013; Williams & Power, 2010). It has also been used to define the concept of teacher success (Elizabeth, May, & Chee, 2008); to examine the cognitive factors that may have influenced career changers' transition to teaching (Tigchelaar et al., 2008), or to investigate several cognitive constructs in the context of teacher education such as teacher beliefs, conceptions of teaching (Cheng et al., 2009), or teaching self-efficacy (Zwart, Korthagen, & Attenma-Noordewier, 2015). Its potential application in providing insights into a teacher-initiated professional development activity like teacher research has not yet been found in any research. This study may claim to be the first one that uses this holistic model of teacher development to understand language teachers' engagement in research as a professional development activity.

3.1.2. Main insights of the Onion model

The Onion model is a suitable theoretical framework for this current study because of several unique insights it offers into the inter-relationship between teachers' inner world and their behaviour.

Firstly, while the need for a holistic approach to studying teacher cognition has been widely acknowledged in the literature, the Onion model is the only conceptual one available that

illustrates comprehensively the relevant aspects of the cognitive system and the interconnection between them and teacher behaviour. Except for the core layer of *mission* (which is more concerned with spirituality and motivation), all the other inner layers the model depicts, namely competencies, beliefs, identity, are congruent with different aspects of teacher cognition listed in teacher cognition literature. While *competencies* includes teacher knowledge and attitudes, *identity* and *belief* are equivalent to what teachers think and believe about different aspects of their work and selves. This is not to mention a vast number of other cognitive concepts these layers encompass as suggested in empirical research using the Onion model as a theoretical framework, for instance, teacher's self-efficacy beliefs (Lucero, Valcke, & Schellens, 2013; Zwart, Korthagen, & Attema-Noordewier, 2015); teacher's conceptions of teaching (Cheng et al., 2009); context beliefs (Lucero, Valcke, & Schellens, 2013) to name but a few. Since what is needed for the currently "fragmented nature of language teacher cognition research" is "substantive, conceptual […] frameworks" to guide researchers in terms of the key dimensions of language teachers' cognition (Borg, 2006b, p.87), the Onion model with such a comprehensiveness in depicting the cognitive system promises a meaningful analytical tool for the current study to close the substantive research gap.

In addition to providing a comprehensive approach to depicting the integrative elements of the cognitive system, the Onion model also reflects the importance of integrating (rather than separating) them in the analysis of teachers' practices by acknowledging the powerful influence that the "wholeness" can collectively bear upon teacher's professional experiences (Korthagen, 2013). To put it simply, the model suggests that the more inner layers of changes are included in the reflection of a teacher's behaviour, the more deeply such behaviour can be understood. This insight has enabled Korthagen's (2004) Onion model to be "an effective tool" for locating the aspects of teachers' cognition that can direct their practice (Sööt & Viskus, 2015); a "comprehensive and inclusive model" for defining teachers' personal qualities (Elizabeth, May, & Chee, 2008, p. 627); or "a holistic, humanistic approach" to exploring teachers' behaviours within the field of teacher education (Willams & Power, 2010, p. 128-129). In use for the present

study, the model is clearly a suitable framework for identifying relevant cognitive influences on language teacher research engagement, or a means for the author to fulfil the major research objective of explaining teacher's research practices in the light of the broader cognitive system.

Second, the Onion model has gone beyond a mere cognitive view of teacher professional development. An important idea behind the model is when one's behaviour responds effectively to the demands of the situation (the environment layer) and at the same time agrees with his/her personal values (the inner layers), it reflects the *alignment* of the layers in the Onion model (Korthagen, 2013) and the person experiences what is called *flow* (Csikszentmihalyi, 1990). The behaviour of the teacher in this situation would be fulfilling and is likely to be sustainable. On the other hand, problems such as dissatisfaction, pressure, or potential abandonment at the behavioural level will happen, when there is a friction or discrepancy between different layers; for example, when the professional expectations imposed on a teacher by his/her school are not in line with his/her inner views and beliefs. Such insights imply that the nature and viability of a teacher's professional behaviour may also be explained by identifying the disagreement among different cognitive and contextual factors, apart from the conventional way of simply examining the correlation between cognitive variables and behavioural patterns as teacher cognition and motivation research has so far normally done. In the present study, such an insight is expected to add an extra explanation for teacher's research practices besides the findings from correlational statistics on teacher cognition and the reported level of research engagement. In formulating recommendations to promote teacher research, such extra insight directs attention to the kind of support that not only (i) prepares teachers with necessary skills and competencies to respond to contextual constraints but also (ii) aims to fix the tensions between different layers of their deeper cognitive thinking, and between the inner cognitive thinking and the external environmental requirements (Meijer, Korthagen & Vasalos, 2009).

Finally, the model can be seen to simultaneously address the short-comings and integrate the merits of several important theoretical perspectivesin teacher education. By incorporating teachers' *competencies*from the performance-based approach (which judges teachers based

solely on an observable set of skills and knowledge), and teacher's *self-concepts* (as expressed in the identity and beliefslayers) from the humanistic-based view of teacher professional development (which views teachers' qualities as comprising also favourable personal characteristics such as strong beliefs in self-efficacy), the Onion Model has fixed the "rigidity" of the performance-based approach (Combs, Blume, Newman, & Wass, 1974; Hyland, 1994), and at the same time counterbalanced the over-estimation of teacher personalities in the human-based approach. Including the*environment* layer, the model has avoided assuming the direct impact of cognition on behaviours,and acknowledged the mediation role of the contextual factors in the relationship between the two – the advantages that both competency-based and humanistic-based approaches lack. Such insight is also in line with the well-known "socio-cultural perspective" to teacher education, whereby Johnson (2009) argues for a thorough consideration of cultural, institutional, and historical situations in the study of teacher cognition. Using this insight, this study on teacher research engagement placed equal emphasis on not only teacher cognition, motivation, and behaviour, but also the immediate context where the research participants act.

3.1.3. Critiques of the Onion model

Despite the useful concepts and insights it offers, the Onion model is not free from short-comings. The *first* criticism is concerned with the lack of a strong empirical foundation and support on which the model is based. Elizabeth, May, & Chee (2008) pointed out that despite its comprehensive nature, the Onion model was developed solely on the basis of literature review. This goes against the common acknowledgement that a theory or a theoretical model, normally emerges from either rigorous grounded theory research or repetitive experiments and empirical hypothesis testing the same (Creswell, 2014). In addition to this, most empirical research found using this model, although positively reflecting a relation between different cognitive constructs and behaviours as described in the model, is purely qualitative in nature (e.g. ethnographic study, self-study; qualitative case study), leaving the arguments and relationships the model depicts open to rigorous testing and far from being firmly established. Such a lack of sound empirical

basis and support calls for further empirical research that re-examines or challenges the arguments that the model has developed so far. In response to this need, the current study does not assume a direct causal relationship between teachers' reported research engagement level (behaviour) and their cognition as guided by the Onion model, but aims to explore on the correlation between them, the results of which are expected to finally contribute to reinforcing or modifying the model.

Second, it is critically noted by the author of the Onion model himself that the main concepts of the model, especially the unobservable ones (identity, mission, competencies, and beliefs), demonstrate "a certain scientific vagueness" (Korthagen, 2004, p. 83); i.e. it is hard to coin a clear-cut definition for each of them. Taking the "identity" layer as an example, Korthagen (2004) acknowledges that the related concept of "self" has taken the form of an overwhelmingly vast number of notions, including the actual self, the future self, the possible self, self-efficacy, self-conception, self-appreciation, self-development, self-actualization, to name just a few. The same conceptual confusion is also observed in the more well-known concepts of competencies (Eraut, 1994) and beliefs (Pajares, 1992). It is therefore really a challenge for researchers to clarify these concepts to make them manageable for research purposes. To address this problem, the current study has identified at each layer of the Onion model one or more specific concepts relevant for the topic of teacher research engagement. Related literature has also been extensively consulted to operationalise these concepts for the immediate purpose of the study.

The *final* limitation of the Onion model is related to its geographical scope. Most studies theoretically framed by this model are contextualised in the U.S or European countries with advanced educational systems (Korthagen, 2014). Although the results of these studies are consistent with the insights of the model, it is unknown whether such consistencies would occur in less educationally developed regions like South East Asia. Choosing Vietnam as the research field, this study can claim to be the first one that advances the use of the Onion model to a non-Western context.

3.1.4. Conclusion: The Onion model as a relevant theoretical framework for the study

Despite its weaknesses, the Onion model generally does demonstrate its potential merits in being a theoretical framework for this study. Its key concepts and insights as described above are relevant and useful for the study of the cognitive and motivational factors that may impact language teachers' engagement in research. In other words, the Onion model is a perfect fit for the research aim, which is to seek insights into the reported level of research engagement among language teacher from a holistic view of teacher cognition and motivation. As Tigchelaar and colleagues (2008) put it, Korthagen's (2014) model of levels of change is "one suitable theoretical framework" to identify all the relevant cognitive influences on teacher professional development that "might otherwise escape attention" (p. 1549). From a practical point of view, the Onion model is uniquely useful for formulating feasible recommendations to promote language teacher research activity. Specifically, it does not only draw attention to the facets of teacher cognition and motivation that need to be addressed to build teachers' research capacity, but also recognises the importance of "aligning" different layers of teachers' deeper cognitive thinking and the external contextual conditions (Meijer, Korthagen & Vasalos, 2009). The weaknesses, being its lack of empirical support, the conceptual vagueness, and the limited geographical scope, can be furthermore compensated by a suitable research design, a well-defined conceptual framework, and a non-Western context on which to base the study. The context of this study - Vietnam, and the design of the study - the mixed-methods research, will be described in the latter chapters 4 and 5. The rest of this chapter below presents the specific conceptual frameworks for studying teacher cognition and teacher motivation which are developed from the Onion model.

3.2. The refined conceptual framework for studying teacher cognition

3.2.1. The chosen concepts

Guided by the main concepts and insights of the Onion model, this current research placed equal focus on all six layers of the model, namely *mission*, *identity, beliefs, competencies, behaviour*

and *environment* for studying the role of cognition and motivation in language teacher research engagement.

Corresponding to the chosen layers, six specific concepts relevant to the topic of the study (teacher research engagement) were identified as follows: (i) teacher engagement in research; (ii) context beliefs; (iii) conception of research; (iv) attitudes towards research; (v) self-efficacy beliefs, and (vi) teacher motivation. While the first concept represents a *behaviour,* the latter four encompass the major components of teacher cognitive system, which, together with teacher motivation, are supposed to have a certain impact on their intentional behaviour. The following sub-section will further elaborate on the rationale for choosing these concepts and operationalize each of them, starting with the concept of teacher engagement in research.

3.2.2. Operationalization of the chosen key concepts

3.2.2.1. Teacher engagement in research

As engagement in research is one example of teacher *behaviour*, which is illustrated in the Onion model as being dependent on the inner cognitive factors and the external environment, it was chosen in this study as the key dependent concept.

Generally defined as an activity in which teachers are the agents who conduct an inquiry (see Chapter 1), the indicators of teacher's engagement in research vary in the literature. A global-scale research study by the OECD (2009) judged the situation of teachers' engagement in research simply by *whether or not* they had participated in a research project in the previous 18 months and the kind of research, being *individual or collaborative*, they had conducted. Other research on teacher research engagement in different countries (e.g. Borg, 2013; Borg & Alshumaimeri, 2012; Rainey, 2000) further stratified the level of research engagement by adding the *level of frequency* (ranging from *never, rarely, sometimes* to *often*) at which teachers reported doing research. Accounts of teacher research engagement in research which is based purely on these indicators, however, display potential flaws due to the possible variations in the way different teachers interpret the adverbs on the frequency scale and especially the term "research"

(see Chapter 2). To address this issue, Borg (2009) suggests future research use an alternative way to ask participants to report on how often they do research be used to obtain a more accurate status of teacher research engagement. Borg (2007) also generated qualitativeinformation about the research teachers do to supplement the quantitative data he collected on the level of frequency teachers reported they did research. Such follow-up details may deepen the understanding of the research engagement level among a chosen population and help "screen" any flawed data provided by teachers who have a misconception of what "research" really is.

Given this background, the status of teacher engagement in research in the present study will be *quantitatively* measured by teachers' *level of frequency* of doing research, and *qualitatively* interpreted from the account of *examples of research* they previously did. The measurement was furthermore supplemented by the number of projects teacher had done in the previous five years. Extra information about the last research project teachers did, including its duration, the average number of hours spent on it per week, its major aim, its publication methods, and teachers' collaborative experience (individual or collaborative or a mixture of both) were also quantitatively collected for an overall assessment of the current situation of language teacher research engagement at Vietnamese public universities.

3.2.2.2 Self-efficacy beliefs

Concerning the factors that may direct teacher engagement in research, *self-efficacy* is the first important concept placed under the spotlight in this study. As a self-concept, self-efficacy belongs to the *identity* layer of the Onion model and as the model suggested, is supposed to be one potential source of teachers' research behaviour.

The need for examining self-efficacy in the current study also derives from the consistent acknowledgement by other authors in both psychology and teacher education literature about its relationship with an individual's behaviour in general and research involvement in particular. Bandura (1997) called self-efficacy beliefs the major mediators or powerful predictors of behaviour, while Henson (2001) emphasises that such predictive power can apply to practically any behavioural task. Educationally, self-efficacy is found to dictate learners' academic

performance (Schunk & Pajares, 2005, 2009) and teachers' instructional strategies (Enochs, Scharmann, & Riggs, 1995; Gibson & Dembo, 1984; Woolfolk, Rosoff, & Hoy; 1990). As regards research engagement, self-efficacy is found to predict doctoral students' future involvement in research (Bieschke, Bishop, & Garcia, 1996) and interest in research (Bard et al., 2000; Bieschke, 2006; Vaccaro, 2009); and even to mediate research productivity (Bard et al., 2000; Briggs & Pehrsson, 2008; Gelso, 2006; Phillips & Russell, 1994; Kahn & Scott, 1997). An understanding of the current situation of language teacher engagement in research, therefore, requires examination of teacher self-efficacy beliefs.

By definition, the concept of self-efficacy is consistently perceived in the literature as (i) the personal beliefs one holds about how able he/she is in performing a task and (ii) being situation specific, i.e. it varies across situations and depends on the type of behaviour a person holds self-efficacy beliefs about. Bandura (1997), for example, defines self-efficacy as "*beliefs* in one's *capabilities* to organize and execute the courses of action required to produce *given* attainments" (1997, p.3). Similarly, Phillip and Russell (1994) conceptualized it as one's personal *judgment* of his/her own *ability* to successfully conduct a *specific* behaviour. Based on the theoretical nature of self-efficacy as shown in these definitions, researchers suggest the construct be best examined in regard to specific behaviours (Bandura, 1997; Enochs & Riggs, 1990; Pajares, 1996). This present study, therefore, drew from the research self-efficacy literature in order to appropriately operationalize the concept in the context of teacher research engagement.

In the research engagement domain, research self-efficacy is commonly measured by an individual's reported level of confidence in performing various research-related tasks (Bieschke, 2006; Forester, Kahn, & Hesson-McInnis, 2004; Greenley et al., 1989; Phillip & Russell, 1994; Rezaei & Zamani-Miandashti, 2013). The measurement of the level of confidence differs across studies only in terms of the width of the scale used to measure it, be it a well-known 5-point Likert (e.g. Rezaei & Zamani-Miandashti, 2013), or 100-point scale (e.g. Greelay et al., 1989). The prescription of the "various research-related tasks" nevertheless substantively varies. Greenley et al. (1989) listed the research-related activities according to their order of happening

in the research process: preparation, data collection, experimental performance, and result generation. Uruna and Beck (2005), on the other hand, are more concerned with the dimensions of research engagement and thus mentioned library researching, reading, writing, and publication. Forester and colleagues (2004) considered both procedures and dimensions of conducting research and proposed research integration, data analysis, data collection, and technical writing. The current study chose to take the common ground among these listings and identified six groups of activities involved in the process of conducting a research project, namely research preparation, research integration, resources identification, research method selection, data analysis, reporting of research results, and research publication.

In short, the concept of self-efficacy in the present study is understood by one' confidence in performing research-related tasks, which is operationalised as comprising six groups of activities associated with different stages and dimensions of conducting a research project. Language teachers' research self-efficacy will be *quantitatively* measured as participants' reported level of confidence in each activity related to these prescribed task groups.

3.2.2.3 Context beliefs

While self-efficacy represents beliefs about oneself, context beliefs are concerned with what one thinks about the external environment. A combination of the *belief* and *environment* layers, which are supposed to influence the *behavioural* layer as suggested in the Onion model, the level of positiveness a teacher demonstrates about the context is expected to correlate with the extent to which teachers say they are engaged in research.

The concept of context belief is generally defined as a person's *beliefs* about *external factors* that may influence his/her achievement of a given goal (Ford, 1992). In terms of the *belief* component, Lumpe and Chambers (2001) proposed two types of beliefs included in the concept of context beliefs: (i) the beliefs about the ability of external factors in enabling a person to reach a goal and (ii) the beliefs that each factor is likely to occur (p.95).

The need to consider context beliefs in teacher behaviour research has actually been consistently supported in psychology literature in general and teacher education studies in particular. Ford's (1992) theorized in his motivation system theory that effective behaviour requires motivation, which depends largely on the combination of self-efficacy beliefs and context beliefs. In a similar respect, researchers concur that teachers' professional practice is in line with what they believe is possible given the immediate context and surrounding people (Haney, et al., 2002; Lumpe, Haney, & Czemiak, 2000). In an empirical study with pre-service teachers, Woolfolk and Hoy (1990) observed a higher level of attention paid to children among participants with less positive context beliefs about the impacts of the schools they were in. Significant correlations between teachers' context belief (how strongly they believe the influential contextual factors are available at their workplace) and how they utilize different teaching strategies were also reported with in-service teachers in the contexts of science teaching (Lucero, Valcke, & Schellens, 2013) and technology utilization (Abdelraheem, 2004; Lumpe & Chambers, 2001). In the study of teacher engagement in research, context beliefs must therefore be taken into consideration.

On this background, the present study measures language teachers' context beliefs about research engagement via two indicators: the extent to which they believe the relevant contextual factors can enable them to be research active AND their belief about the likelihood that each factor is available in the institution where they work. Regarding the *external factors* component, the current study chose Ford's (1992) conception of an educational context as the basis to specify the contextual factors relevant to teachers' context beliefs about doing research. Such a choice was made because as Boud & Walker (1998) noted, the specific components of a context vary depending on the type of activity under consideration, and insights into what comprises an educational context would best suit this study on teachers doing research as a means of professional development. Following Ford's (1992) suggestion, the context surrounding teacher engagement in research consists of three components: the *designated environment*, which comprises available infrastructure such as buildings and equipment's; the *humanenvironment*

including students, colleagues; and the *sociocultural environment,* which consists of the institution's research culture, research norms and policies.

Language teachers' context beliefs about doing research, in summary, will be *quantitatively* measured by their beliefs about (i) the extent to which the factors related to three context components mentioned above would enable them to be research active, and about (ii) the likelihood that each factor is available in their workplace. The availability of the contextual factors will also be *qualitatively* interpreted from relevant documents and voices of school managers to clarify, reinforce, and support the quantitative information.

3.2.2.4 Teacher attitude towards research

The concept of teacher attitude towards research is an integral part of the *competencies* layer of the Onion model as indicated earlier (see Section 3.1.). Attitudes in general can be defined as "the cognitive, affective, and behavioural predispositions towards a concept, a situation, or an object" (Papanastasiou, 2014, p.148). It is important and relevant to the study of human behaviour in general and teacher research engagement in particular. In relation to behaviour in general, a person's attitude towards an object or situation is acknowledged to exert directive or dynamic influence on his/her response to that object or situation (Allport, 1967), or as Richardson (1996) puts it, attitudes are "predispositions that consistently affect actions" (p.103). As regards to teacher research engagement in particular, teachers' attitudes have been examined by many authors seeking insights into teacher research engagement status in different contexts (Allison & Carrey, 2007; Borg & Liu, 2013; Everton, Galton, & Pell, 2000; MacNamara, 2002; Ratcliffe et al., 2004; Shkedi, 1998); and many of them suggested that teachers' negative attitudes can exert a powerful impact on the extent to which they are research active (e.g. MacNamara, 2002; Ratcliffe et al., 2004; Shkedi, 1998). From this background, this study assumes that the kind of attitude a teacher holds towards research per se. will interfere with or encourage their level of engagement in research. However, to determine the (positive/negative) kind of attitudes one holds towards research and whether they influence one's research activeness, the concept of attitude towards research needs operationalizing.

To operationalise the construct, this study followed Papanastasiou (2014), who specified three indicators with proven psychometric properties of the attitudes towards research, namely perceived research usefulness, research anxiety, positive research predisposition (p.159). To determine the (positive/negative) attitudes language teachers hold towards research, the present study will *quantitatively* measure all these three indicators.

3.2.2.5 Teacher's conceptions of research

The final cognitive concept to be considered in this study is teachers' conception of research, which is theoretically related to the *competencies* layer of the Onion model. The concept is of relevance to this study as on the one hand, the broad "conception of practice" is consistently recognized as an important cognitive construct in teacher cognition literature (see Borg, 2006b), and the specific "conception of research" held by language teachers has been acknowledged to deepen the understanding of "how language teaching professionals respond […] to calls for them to be research engaged" on the other (Borg, 2013, p.49).

The term "conceptions of research" can be operationalised based on the definition of "conceptions of practice" in language education literature in general and how a teacher's conception of practice has been elicited in studies targeted specifically at teachers supposed to do research. Following three definitions of teacher conceptions of practice given by Freeman (1993), Hewson, Kerby and Cook (1995), and Thompson (1992), and, the construct can be understood as encircling the "meanings", "mental images", "orientations", "understanding", "interpretations" a teacher holds of the practice under consideration. In the literature concerning language teacher research engagement in particular, the common ground in the ways different authors describe teachers conceptions of research was simply what they understand by "research" or what counts as "good research" from their point of view (Borg, 2006c, 2007a, 2007b, 2007c, 2009; Brown et al., 1992; Gao, Barkhuizen & Chow, 2011b; McDonough & McDonough; 1990; McNamara, 2002; Shkedi, 1998). To elicit language teachers' conception of research, the current study will take into account all the mentioned sub-components of the

construct, namely *meaning, understanding, orientations, interpretation, mental images* teachers associate with the term "research".

3.2.2.6 A summary of the operationalization of the five key concepts

To sum up, the present study chose to investigate five cognitive concepts, each of which is constituted by the relevant indicators. The operationalisation of these five concepts, which is guided by the Onion Model of Levels of change and supported by teacher cognition and language teacher research literature, is summarized in the table below:

Table3. 1. A summary of the operationalization of the five concepts chosen for the investigation of teacher cognition and teacher research engagement in the Study

Key chosen concepts	Operationalization of the concept in the present study
1. The Concept of teacher engagement in research	The Study defines *teacher engagement in research* as an activity in which teachers conduct the inquiry for professional development purposes. The current status of teacher research engagement in a specific context is quantitatively measured by the *level* of research engagement reflected in the frequency of doing research, the number of research projects completed, and the average number of hours a teacher spent per week on doing research in the last five years, and *qualitatively* elicited from their research experience, the kinds of research they do, and how they publish their research results.
2. The concept of self-efficacy belief	*Self-efficacybelief* in the present study is understood to mean one's confidence in performing research-related tasks. Language teachers' research self-efficacy will be *quantitatively* measured by participants' reported level of confidence in each activity related to these prescribed task groups.
3. The concept of context beliefs	*Context belief* about doing research is *quantitatively* measured and *qualitatively* elicited from one's beliefs about (i) the extent to which the factors (decided by the researcher based on review of relevant literature) related to three context components mentioned above would enable them to be research active AND (ii) the likelihood that each factor is available in their workplace.
4. The concept of teacher	Teacher attitude towards research in this study is

	attitude towards research	*quantitatively* measured and *qualitatively* interpreted from a teacher's view or perceived degree of (i) research usefulness, (ii) research anxiety, (iii) positive research predisposition
5.	Teacher conceptions of research	A teachers' *conception of research* in this study is *qualitatively* elicited from the *meaning,understanding, orientations, interpretation, mental images* teachers associate with the term "research".

As can be seen from the table, the operationalisation of the five main concepts has theoretically guided the study into a mixed method orientation. While the quantitative component empirically examined the four concepts of teacher research engagement, teacher attitudes, self-efficacy beliefs, context beliefs, the qualitative part empirically explored the concept of teacher conceptions of research and provided supplementary insights into the other four concepts. The conduct of both qualitative and quantitative enquiries of the present study will be presented in Chapter 5. Methodology.

3.2.3. Research questions redefined

In seeking to explore the current status of teacher research engagement from the perspective of teacher cognition, the present study started with two broad research questions: 1. What is the current status of research engagement among EFL teachers at Vietnamese public universities? and 2. How do cognitive factors correlate with teachers' level of research engagement in research?

Guided by the chosen conceptual framework, which "offers an orienting lens that shapes the types of research questions asks" (Creswell, 2009, p. 208), these two initial research questions were theoretically redefined with the corresponding reformulated or subsidiary question(s) as follows:

1. What is the current status of research engagement among EFL teachers at Vietnamese public universities?

   1a. How frequently do English language teachers at Vietnamese public universities say they conduct research?

   1b. What kinds of research do they say they do?

   1c. How do they publish their research results?

   1d. How do the demographic factors relate to the reported level of research engagement?

2. How do cognitive factors correlate with teachers' level of research engagement in research?

   2a. What conceptions of research do they hold?

   2b. Which kind of self-efficacy beliefs, attitudes, context beliefs about doing research do they have?

   2c. How do teachers' self-efficacy beliefs, attitudes, context beliefs about doing research *relate* to their reported level of engagement in research?

To answer these research questions, the study will (i) *quantitatively* score the level of research engagement reported by English language teachers at Vietnamese public universities; (ii) *quantitatively* and *qualitatively* interpret teachers' research experiences; (iii) *quantitatively* measure and *qualitatively* interpret teachers' attitudes, context beliefs, self-efficacy beliefs; (iv) *quantitatively* describe and *qualitatively* elicit teacher conceptions of research; and (v) *statistically* explore the *relationship* between one dependent variable, namely the reported level of research engagement and three independent variables concerning various cognitive factors, namely scored teachers' attitudes, context beliefs, and self-efficacy beliefs. The study of teacher research engagement and its relation to teacher cognitive factors, in this way, is descriptive, interpretive, and explanatory in nature.

3.3. The conceptual framework for studying teacher motivation

Along with teacher cognition, teacher motivation is another central concept of interest in this study. In reference to the Onion model, this concept represents the combination of the

environment and *mission* layers. While *mission* represents the personal drives, *environment* involves the external determinants of teachers' behaviour.

As indicated in the literature review, teacher motivation is a critical factor in shaping teachers' participation in professional development and therefore of great importance in this study on teacher research engagement. Its main features (i.e. being temporal, dynamic and content specific), however, have not been fully captured due to the lack of a holistic theoretical approach to understanding motivation in the available literature on teacher research engagement. To contribute to bridging this gap, the current study explicitly examines teacher motivation through the lenses of two motivation theories: the Self-determination theory (SDT) by Deci and Ryan (2000, 2002); and the process model of motivation by Dornyei and Otto (1998). The following sub-sections will in turns describe each theory, discuss the reasons why the combination of both makes a relevant conceptual framework for the current study on teacher motivation in teacher research engagement, and finally redefine the general research question introduced earlier in Chapter 1.

3.3.1. Self-Determination Theory

SDT is a contemporary motivation theory that particularly delineates the "nature" of motivation, or in other words, the "why" of behaviours. The underlying premise of the theory is that human beings are naturally inclined towards seeking to satisfy the need for autonomy (i.e. personal control and internal locus), competence, and relatedness (i.e. a sense of belonging or receiving support from others) thus susceptible to contextual conditions that either support or disrupt the propensities for these needs (Deci & Ryan, 2000, 2002). As a consequence, actions that are more volitionally chosen or "self-determined" (reflecting autonomy), are supported by others (reflecting a chance for relatedness), and help improve the action agents' ability (reflecting an opportunity for competence development) are argued to be more intrinsically motivating, satisfying, and concomitantly more sustainable (Deci & Ryan, 2000).

On this premise, SDT distinguishes between intrinsic and extrinsic motivation: the former one refers to performing an activity because of the inherent joy and satisfaction while the latter

denotes the instrumental and external reasons (e.g. fear of punishment or promise of rewards) for doing an activity (Deci & Ryan, 2000, 2002). The authors, however, do not simply view these types of motivation as two contrasting, mutually exclusive concepts but suggest they form two endpoints of a "continuum of motivation" on which four sub-types of extrinsic motivation are distributed according to the level of self-determination (i.e. the extent to which one's engagement in the behaviour is autonomously regulated) (Deci & Ryan, 2002; Ryan & Deci, 2009). Located nearest to intrinsic motivation at the optimal self-determination end is *integrated regulation,* which occurs when individuals find the target action so relevant to their personally pursued goals that it becomes part of their sense of self (e.g. a teacher is engaged in research to become a good teacher, the image she/he feels she/he was born to become). This can be considered the form of extrinsic motivation that has been fully internalised and thus become autonomous. Next along the continuum is *identified regulation,* namely engaging in an activity because individuals identify with its meaning and values (e.g. a university teacher does research to enhance her research profile, which then helps her/him to achieve an important personal goal of becoming a senior lecturer). Further to the other end and most similar to external motivation, is *introjected regulation*, the state in which individuals coerce themselves to do a particular activity as a contingency against loss of self-worth (e.g. a teacher prepares her lesson well before class to avoid feeling guilty as a teacher). This type of motivation is different from an extrinsic one because it still involves some degree of self-regulation (e.g. the sense of shame, guilt, anxiety, etc.). At the lowest self-regulation end lies *amotivation,* which means being neither extrinsically nor intrinsically motivated. One is amotivated when acting passively or totally lacking the intention to act (e.g. a teacher is engaged in a research project but does not know why she has to do so). Of these types of motivation, intrinsic, identification, integration are categorized as self-determined motivations, which are argued to foster engagement and effort for activities. To the contrary, introjection, external regulation, and amotivation represent the non-selfdetermined prototype, which may have a detrimental impact on action outcome and individuals' wellness (Deci & Ryan, 2002, Ryan & Deci, 2009).

Such insights into the motivation concept make SDT a potentially useful theoretical framework for the current study for two main reasons. *First*, SDT is distinct in the broad range of motivation it can depict. Specifically, its continuum of motivation names almost all the types of motivation subsumed in other theories. Identification regulation, intrinsic motivation, integration, extrinsic regulation, for instance, are respectively similar to the concept of utility value, intrinsic value, attainment value, and cost value in Expectancy-Value theory (Eccles, 2005); or the intrinsic/extrinsic distinction is associated with the mastery/performance goal-oriented motivation in the Achievement Goals theory (Elliot & Dweck, 1988). Also by introducing the new concept of amotivation, which has not been discussed elsewhere, SDT surely offers a comprehensive conceptual framework for investigating the reasons why teachers are engaged in research and how much they are motivated to do so. *Secondly*, in educational settings, while other motivation theories have commonly been used to examine student learning motivation, SDT has been proved a valid theoretical framework for investigating teachers' work task motivation and its relationship to work task engagement (see Fernet et al., 2008). Since motivation is a domain-specific construct, SDT as such provides a relevant theoretical lens for studying research engagement – a specific task teachers may do in their workplace. In short, with the broad distinction between intrinsic/extrinsic incentives and a proven utility in an educational workplace setting, Self -Determination Theory is a promising framework for this study to fill in the fragmented picture of motivation that the available literature on teacher research engagement has described.

One short-coming of SDT, however, lies in its inability to capture the "temporal" feature of the motivation concept. Although depicting an increasing level of self-determination, the motivation continuum introduced by SDT does not demonstrate a longitudinal development of motivation; i.e. the behavioural regulations on the continuum do not mark stages of a developmental process along which individuals' drive for a behaviour might progress. Rather, one's incentive for an activity may be internalised to reach any point of the continuum depending on the external factors such as environmental support, or lose its autonomous regulation as a result of changes in

personal goals or experiences (Trembley et al., 2009). To compensate for this drawback, the current study integrates an extra model into its theoretical framework: Dornyei & Otto's (1998) process model of motivation, which will be presented in the following subsection.

3.3.2. Dornyei & Otto's (1998) process model of motivation

The process model of motivation developed by Zoltan Dornyei and Istvan Otto in 1998 is a remarkable outcome of the process-oriented approach to describing motivation, which emerged at the turn of the 20th century in an attempt to capture the temporal characteristics of the motivation construct. Based on two main premises: (1) motivation is not static, but evolves and changes dynamically over time; and (2) in educational contexts, "executive" motivation (i.e. the motivational influences on action *implementation)* is no less important than "choice" motivation (i.e. the directive forces for action *initiation*), the model described learning motivation as proceeding over three stages under the motivational influences as follows:

- **The pre-actional stage** features *choice* motivation. Three typical activities happen at this stage: setting a goal, forming an intention to act, and finally initiating the enactment of the intention based on a manageable action plan. From the first sub-stage of goal setting to the last one of action plan development, the individual undergoes the following motivational influences: personal norms and attitudes, perceived values of the goals set, degree of self-determination, relevant past experience at the internal personal side; and external demands/expectations, and availability of opportunities/difficulties at the external environmental side.
- **The actional stage** is the result of sufficient cumulative instigation force of all the motivational influences in the pre-actional stage. Motivation at this stage, which is termed *executive* motivation, depends on three groups of factors: (i) The individual's *personalappraisal* of the environment, the task demands, the actual performance experience (e.g. whether a teacher doing research personally finds the school supporting, the research project challenging, and the actual implementation of the project enjoyable

or feasible); (ii) the *effectiveness* of the action control processes (e.g. whether a teacher researcher can effectively coordinate all the available resources to complete the research project), and (iii) the *external* influences (e.g. the actual research culture in the school, the support from the research participants where a teacher is conducting research).

- **The post-actional stage**, which happens when the action is completed or terminated, involves the individual's evaluation of the whole action engagement process. The prominent motivational force active at this phase is personal *attribution* of the action performance, the reasons to which individuals attribute the failure or success of the whole course of action. The stability (i.e. constant or temporal); the locus (personal, internal vs. environmental, external), and the control (volitionally controllable or not) dimensions of the found reasons are postulated to exert considerable impact on the individual's motivation for the action in the future.

The process model of motivation is a relevant theoretical framework for the current study on teacher motivation for research engagement for the following reasons. First, by capturing the temporal feature of the motivation construct, it has for the first time conceptually distinguished the motivations to *choose* to engage in an activity (e.g. reasons, goals, intentions), from the motivational sources that *sustain* such engagement (e.g. reactions to learning environments, assessment of actual performance) (Ushioda & Dörnyei, 2012). On so doing, the model is expected to "provide a sufficiently comprehensive and detailed summary of all the relevant motivational influences on […] behaviour" (Dornyei & Otto, 1998, p.43), which is also an important gap in the teacher research literature that the current study is seeking to fill. Second, the model is acknowledged as being especially applicable for examining complex educational activities where the influence of motivation on goal implementation are more important than the motivations that drive one to the initial decision on goal pursuit (Dornyei & Otto, 1998). Learning to be a fluent user of an L2, for example, does not proceed straightforwardly after the decision is made but depends on various motivational issues such as the learner's ability to maintain concentration, and to accomplish sub-goals. Teachers' engagement in research, the

activity of interest in this study is a similarly complex one, whereby the "choice" aspect of teacher motivation is even further mitigated by the fact that research engagement is not solely a teachers' own decision but also imposed on them by the system they work for. The process model, which focuses on executive motivation, is therefore well-suited framework for explaining the variability in teachers' persistence and engagement patterns in research, an interesting aspect of teacher motivation for research that the current literature is yet to address.

3.3.3. The combination of two theories as relevant theoretical framework for this study

The integration of SDT and the process model of motivation into a theoretical framework for studying teacher motivation for research engagement is supportable on three grounds. First, the use of two theories, in a broad sense, helps to close the theoretical gap in existing literature, which, as discussed in chapter 2, is dominated by studies which are either atheoretical or utilizing a single theoretical lens. The use of two theories is necessary because of its potential in providing a stronger analytical tool for portraying a more balanced and comprehensive picture of an abstract construct than does a single theory. Secondly, the explicit choice of SDT and the process model of motivation is valid for this particular study because their concepts are mutually reinforcing and can together capture all the essential features of the motivation construct – another gap yet to be filled in the literature on teacher research engagement. Both of them appear suitable for the examination of teacher research engagement activity (i.e. the content-specific feature of motivation); SDT details "choice" motivation, active mostly at the initiation of the activity; and the process model characterizes the "waxing and waning" of teacher motivation over time (i.e. the dynamic and temporal feature). In short, the combination of both theories in the analytical framework of this study may yield a rich and full description of why teachers are engaged in research and how they maintain their activity, from the perspective of teacher motivation.

3.3.4. Research questions redefined

Seeking to explore Vietnamese tertiary teachers' motivation for doing research, the study starts with two general research questions: 3. What is the relationship between teacher motivation and

their research experience? 4. What are teachers' motivations for doing research? Guided by the two theories presented above, these two research questions are redefined as follows:

3. What is the relationship between teacher's level of motivation and their research experience?

    3a. How much are Vietnamese tertiary teachers of English motivated to do research?

    3b. How do specific behavioural regulations *relate to* the reported level of research engagement?

4. What motivates teachers to do research and what factors affect teachers' motivation during the process of doing research?

    4a. What initially motivates Vietnamese tertiary teachers of English to do research?

    4b. What factors sustain/erode their motivation?

In other words, the study will empirically investigate teacher's motivation for research engagement by specifically (i) qualitatively interpreting the initial motivations that drive teachers to choose to do or not to do research and the on-going factors that may sustain or degrade their motivation during the process of conducting a research study; (ii) quantitatively assessing the level of teachers' motivation for doing research; and (iii) statistically exploring the correlation between the level of motivation and the reported degree of research engagement. As such, the nature of the inquiry on teacher motivation in this study is exploratory, explanatory, and interpretive.

Chapter 4: Context of the study

This chapter details the context of the study. The chapter begins with an overview of the Vietnam higher education system, then presents the current situation of EFL teaching at tertiary institutions in Vietnam, and finally critically reviews research on Vietnamese university EFL teacher research engagement. The aim of the chapter is to highlight the ways in which Vietnam higher education makes an interesting context to conduct the present study on language teacher research engagement.

4.1. An overview of the higher education system in Vietnam

This section will give an overview of Vietnam higher education that is relevant for the scope of the thesis, namely a brief history of the system, the role of research in Vietnam tertiary institutions and finally the quantity and quality of the academic staff.

4.1.1. A brief history of development and reforms

A long political history of the country has put higher education (HE) in Vietnam under myriads of development stages, each of which has left certain impact on its current shape today. Insights into this reform history, will serve as a backdrop to understanding the current situation of university research presented in the subsequent section.

Before 1975 when it gained complete independence, Vietnam had its HE strongly influenced by different colonial powers. The Chinese imposed its education system on Vietnam for nearly a thousand year from 938 to 1847. Because of the powerful influence of China, the Vietnamese education system resembled the Chinese one from the educational principles to the organization of the whole system, which featured private schools and stressed the importance of literature in all levels of study. After that, Vietnam followed the French model from 1858 to 1945. When the country was divided into halves in 1954, the North of Vietnam practiced the Soviet Union model while the South applied the USA one until 1975. Being affected by each colonial power in a unique way for its political purposes, Vietnam higher education developed immethodically over

all these periods and enjoyed almost no academic freedom or autonomy due to the strict central control exercised by the colonial government (Albach & Umakoshi, 2004).

For 11 years after 1975, the Vietnam HE system continued to employ the centrally planned model of the Soviet Union. Higher education during this period was exclusively provided, funded and managed by the state and comprised small, specialized and teaching-focused colleges established by individual ministries and provincial governments based on their specific needs for skilled labour in public sectors. It was not until the major economic reform in 1986 that the Vietnamese government began to autonomously structure its own HE system in response to the correspondingly diverse social demand for higher education.

The major educational reform that structured most of the current HE system in Vietnam, however, did not happen until 1993, when the government recognized the high importance of education in the social and economic development of the country, and pronounced the need for the renovation and expansion of the whole HE system. Ever since, Vietnam has moved from a Soviet model of higher education towards a western-styled system with a unified national network of large, multi-disciplinary and research-capable universities (Hayden & Thiep, 2010). The government has also gradually inserted an element of market demand into the HE service provision by allowing public institutions to levy tuition fees. More importantly, private ownership had for the first time been sanctioned within Vietnam's HE system with the introduction of two new HE sectors apart from the exclusive public one: the "semi-public" owned by the states but funded entirely from tuition fee income, and the "non-public" also funded entirely by tuition fee incomes but owned by private entities. The reform was an attempt to accommodate larger student enrolments and greater student diversity, and to extend the research role from restrictively specialized research institutes in the previous period to also universities, creating a stronger link between higher education and socio-economic development.

In 1998, Vietnam higher education made a further departure from the centrally-planned Soviet HE model. Post-graduate degrees including Masters' and Doctorates' were no longer exclusively provided by specialized research institutes but could also be obtained in all the universities that

satisfied certain criteria set by the government. A clear distinction was also drawn between "college" and "university", giving these two categories of HE institutions separate status: Universities could grant degrees while colleges awarded associate degrees.

In 2000, a further differentiation was made on the function of "colleges" and "universities". While colleges were expected to be mono-disciplinary and not to develop research capacity, universities were supposed to provide programmes of multiple disciplines and take strong research responsibility (Vietnam Government, 2000). In 2001, community (junior) colleges, responsible for providing vocational training programs, were added to this classification (The Prime Minister, 2001).

In 2005, the Cabinet resolved a new classification scheme for the higher education institutions. Following the resolution, a Vietnam HE institution would be either public or non-public, with the absence of a semi-public sector. Enrolments in the non-public sector were expected to markedly increase from 13% in 2003-2004 to 40% of the total enrolments by 2020. Non-public institutions were classified as either "for profit" or "not-for-profit" with the encouragement of the non-profit model via generous tax exemptions and land grants. Public institutions were also requested to be less bureaucratic and more client-cantered in service delivery.

Later in 2005, even more significant reform measures were adopted. The Higher Education Reform Agenda (HERA) was promulgated following a government resolution to implement a "substantial and comprehensive renewal of Vietnam's tertiary education in the 2006-2020 period" (Thủ tướng chính phủ, 2005). The HERA was expected to exert considerable impact on Vietnam higher education in all aspects, including from the system size, social composition of enrolment, quality assurance, tertiary education governance to the focus of university mission. It proposed, first, a significant expansion of the HE system coupled with an increase in the quantity and quality of HE academic staff. Second, HERA advocated the establishment of the research-oriented category of higher education institutions and expects the whole HE sector to generate at least a quarter of its revenue from science and technology development activities. In terms of

governance, it is suggested in the resolution that management of HE education be decentralized by eliminating line ministry control and granting HE institutions more autonomy.

The latest movement in the Vietnam HE system was marked by the newly passed Higher Education Law 2012 (Quốc hội, 2012). The Law, which is the first one dedicated to the tertiary education sector in Vietnam, aims to regulate HE more systematically in order to prepare adequate human resources for the country's move to a knowledge-based economy. Institution autonomy in terms of quality assurance, curricular and instruction management, development plans were for the first time articulated, making the whole system more entrepreneurial and responsive to market demands. An official legislative framework for university research was also provided under the Law, further stressing the importance of research in the HE system.

As a result of these restructuring efforts since 1993, Vietnamese higher education has expanded at a remarkable rate. In 1992-1993, it enrolled approximately 162,000 students with a gross enrolment rate of about 2 per cent. By 2006-2007, these numbers had both jumped nearly ten times to 1.54 million and 13 percent respectively. The system has also become more diverse in types and sizes of colleges and universities. In 1992-1993, nearly all of 103 running higher education institutions were small, specialized, teaching-only in focus, with only nine of them classified as universities, one of them non-public. The largest university of these held just over 3,000 students. By 2006-2007, there were 322 in totals, of which 139 were universities, 47 non-public and colleges, 6 exceeding an enrolment of 40,000 students; and the average size had reached 8,500 students. The latest statistics shows a total of 476 HE institutions, which include 76 research PhD-granting institutes, 163 universities and academies, 223 colleges, two national universities and three regional universities. Among them, public institutions still comprise an overwhelming proportion of 80% of the total number and enrol 1.847 million students (87%) out of 2.118 million HE students nationwide (General Statistics Office of Vietnam, 2016).

Challenges, however, abound in many areas of Vietnam's HE system. First, the legacy of the centrally planned Soviet model appears to remain intact. Although the government is working towards eliminating line-management from ministries and state, it is not easy for these bodies to

give up their power (Do & Do, 2014). In fact, government agencies such as provincial councils, the line ministry, and the Ministry of Education and Training (MOET) still exercise tight control over management and academic affairs of almost 80% of Vietnamese universities (Sheridan, 2010; Dao, 2015). This highly centralized governance mechanism leads to a low level of autonomy, academic freedom and accountability of the universities in reality, hindering the efficacy and reform progress of the whole HE system (Nghi, 2010). In addition, a rapid expansion coupled with a developing economy has put the quality assurance of Vietnam Higher Education at stake and the viability of its reform agenda under questions. During two decades of renovation from 1987 to 2008, while the number of enrolments grew over tenfold, the system only managed to triple its academic teaching staff due to poor financial incentives and limited funding resources (Nghi, 2010). In the absence of more funds, the long-time issues such as faculty's heavy teaching workload, poor engagement in research, and the consequently low ranking of the whole system among even ASEAN countries probably continue to prevail; and many goals in the HERA's ambitious plan such as achieving the student/lecturer ratio of 20:1 or raising the revenue generated by research activities/total income proportion to 25% by 2020 appears unachievable.

To summarize, although a truly "Vietnamese" higher education system in Vietnam was not established until more than 20 years ago, it has shown a strong commitment to continuous renovation, quality improvement and responsiveness to economic and social changes. Nevertheless, the legacy of the Soviet "centralism" ideologies, coupled with a developing economy has inevitably been posing considerable hindrance on the way the Vietnam HE system strives to reach regional and international standards, especially in terms of developing research capacity. The following sections will describe the academic staff and the role of research in Vietnamese universities to further explain why the research mission is a challenging undertaking for the Vietnam higher education system.

4.1.2. Academic staff

In general, both the quality and quantity of the academic staff in Vietnamese higher education is low and varies widely across different types of institutions.

The number of teachers currently satisfies only about 60% of demand in higher education (Nguyen, 2013a). Over nearly 30 years between 1987 and 2015, while the number of students has jumped 14 times from 0.133 million to 2.118 million, teaching staff have only more than quadrupled from 20,172 to 93,507 (The General Statistics Office of Vietnam, 2016). The student/staff ratio is consequently relatively high, at 30:1 in 2006; 28:1 in 2009, and 22:1 in 2015 (The General Statistics Office of Vietnam, 2016). Although these figures suggest progressive changes over time, Vietnam is still a long way to being comparable to the neighbouring countries such as Malaysia (12:1); Thailand (20:1), Cambodia (20:1), not to mention more advanced HE systems like those of Japan (9:1), Republic of Korea (12:1) (UNESCO, 2014). Also, the gap between the current student/staff ratio of 22:1 and the goal of 20:1 seems narrow, but closing it is really a challenge for the current Vietnam HE system given the continuing increase in student number, and the level of investment it receives. According to OECD/World Bank (2014), if the goal of curbing the staff/student ratio to 1:20 (coupled with reaching 450 HE students in every 10,000 population) by 2020 set in HERA is to be achieved, Vietnamese higher education will need 205,500 more academic teachers, a number considered unrealistic with existing levels of investments (Nghi, 2010). Such a shortage of staff has led to the common issues of heavy teaching workload, leaving academic staff insufficient time to invest in professional development activities including especially engagement in research in Vietnam higher education (Do & Do, 2014).

Low qualification of the academic staff overall and wide variations in its quality across regions and institution are also of great concern. The proportion of faculty members with advanced qualifications is still very low. By the end of 2012, a large proportion (45%) of the teaching staff at Vietnam HE institutions did not have a postgraduate degree; the percentage of staff with a PhD was only 11%, and professors and associate professors comprised a negligible proportion of

3.1% (Bộ giáo dục và đào tạo, 2012). The PhD and professorial staff are furthermore concentrated in institutions in Hanoi and Ho Chi Minh City, especially at two national universities; many of them are assuming management roles or approaching retirement age (Do, 2014; Hayden & Thiep, 2010; World Bank, 2008). Such a situation points to a lack of both research skills and experience among the Vietnam HE academic faculty in general and academic leadership in institutions that are short of senior academics in particular.

The lack of senior academics in Vietnam higher education is likely attributable to the unattractive working conditions and poor remuneration schemes for academic achievement. Many teachers do not have access to an office to work from; teaching workload is generally heavy due to the high student/staff ratio while official salaries for teaching staff at public universities, which follow the salary scale for civil servants, are unrealistically low, forcing many to augment their incomes by accepting after-hour employment and lose academic commitment (Hayden & Thiep, 2010; World Bank, 2008). The average monthly income of a university academic is estimated at USD 200 for an early-career academic, about USD 350 for one with a PhD and 15-year experience, and maximally USD 523 for a professorial appointment at retirement age, which are all considered almost impossible to support a family (Hanoi University of Culture, 2016).The procedures for promotions and appointments of senior positions are, moreover, said to be cumbersome, complicated and time consuming (Hayden & Thiep, 2010; World Bank, 2008). All these factors, together with the general practice of rewarding the length of service, rather than academic performance (Le & Hoang, 2012) may make the HE sector unappealing to able tertiary graduates and discourage current HE staff from investing into a higher research degree in their career path.

4.1.3. The role of research in Vietnam higher education

As mentioned before, higher education institutions in Vietnam did not historically undertake a research role. The research mission was only added to the Vietnam higher education portfolio in 1992 when the system discontinued the application of the Soviet model (which had assigned research responsibility exclusively to specialized institutes) and the government recognized the

important position that HE institutions may hold in the advancement of the Vietnamese economy. The research capacity enhancement has been placed a strong emphasis within the whole system since then.

The first effort taken by the government in designating research responsibility to universities was reflected in a decision by the Chair of Committee of Minister in 1992 that directed university teaching to be linked with research and thus university academic staff to "conduct all types of research from basic to applied, experimenting and applying research results into life and production" (Hội đồng bộ trưởng, 1992, p.2). Later, HERA 2005 set out an ambitious plan of developing an advanced research and development culture across the HE system with 14 key universities being assigned the leading role in research across a wide range of fields (Thủ tướng chính phủ, 2005). Income from the sale of research products is expected to reach 25% (from currently 4%) of the total higher education revenue by 2020 (Thủ tướng chính phủ, 2005). The Higher Education Law provided a legislative framework for university research, and specified three broad objectives for this activity: (i) to improve the quality of higher education, the capability of conducting research and applying science and technology of HE teachers, students, and officers (ii) to develop research capacities for learners, to discover and foster research talent, thus providing for the demands of highly skilled labour force and (iii) to create new knowledge, technology, solutions needed for science and education advancement, contributing to socio-economic development, defence and security assurance (Quốc hội, 2012). Research capacity is consistently mentioned as an important component of a higher education institution's, a manager's, and a lecturer's performance in the latest Vietnam "University Charters" (Thủ tướng chính phủ, 2014) and a regulation on the standards for evaluating the quality of universities (Bộ giáo dục và đào tạo, 2014b). In the Directive of the MOET regarding the major tasks of Vietnam education and training sector in the current academic year, higher education is requested to reinforce its research mission and performance by applying international standards, promoting cooperation with enterprises and foreign institutions, attracting Vietnamese academics from

overseas to contribute their research capacity to domestic universities in order to improve the overall quality of higher education (Bộ giáo dục và đào tạo, 2016).

Academic faculty at Vietnam higher education are therefore, required to do research. This responsibility is stated in Chapter 5 of the Higher Education Law (Quốc hội, 2012) and further quantified in Vietnam MOET's Circular 47/2014/TT-BGDDT which stipulates the conditions of labour for tertiary lecturers (Bộ giáo dục và đào tạo, 2014a). According to the Circular, a lecturer at any higher education institution in Vietnam must spend at least one third of their total 1760 working hours, i.e. roughly 600 hours annually for research activity. Completed research hours are calculated on the basis of final approved research products, which include at the minimum a completed research project judged as being satisfactory at department level or equivalent, an article published in a peer-reviewed scientific journal or a presentation of a research report at an academic conference (Bộ giáo dục và đào tạo, 2014a). A failure to complete the minimum research hours is recorded in a teacher's annual evaluation reports as unsatisfactory fulfilment of job requirements and affects the related bonus and benefits that a teacher is entitled to. On the basis of these general guidelines, universities may devise specific regulations on research responsibilities for their own academic staff. The annual research hours may be slightly more or less than 600 hours, and the list of activities considered "research" and the research credits awarded for each activity also vary across universities. Hanoi University of Transport and Communication, for instance, set the minimum base of 750 working hours annually for each lecturer to do research, and awards 1750 working hours for an article published in an international peered-reviewed academic journal (Decision number 2504/QĐ-KHCN, 2011). Ho Chi Minh University of Economics, on the other hand, required only 500 hours and awards from 3,000 to 6,000 hours for an equivalent publication (Quy định về hoạt động nghiên cứu khoa học đối với giảng viên trường Đại học Kinh Tế TP. Hồ Chí Minh, 2013). Most institutions also take a quite flexible approach to enforcing the research responsibilities on their academic staff by offering several "non-research" alternatives staff can take on to claim their research credits. Common alternative options include teaching material compilation, reading and appraising

textbooks, translating reference material, supervising student research (see for example Decision number 2504/QĐ-KHCN, 2011, p.4; Hướng dẫn thực hiện định mức thời gian về hoạt động nghiên cứu khoa học của giảng viên trường Đại học xây dựng miền Trung, 2012, p.2; Quy định về hoạt động nghiên cứu khoa học đối với giảng viên trường Đại học Kinh Tế TP. Hồ Chí Minh, 2013, p.7), or simply teaching more hours than the minimal number required.

To assist universities and academic staff in strengthening research capacity, not much has been done, however, in terms of government policies. First, government investment in university research is generally low. Despite a rise in state funding (Nguyen & Pham, 2011) and the increased availability of financial resources since the late 2000s (Nguyen, 2013b), the total public expenditure for tertiary research and development activities comprised only 9.4% of the total national spending on research and development (Ủy ban thường vụ Quốc hội, 2010). The figure was relatively modest compared to 13.4% in Japan, 22.5% in the European Union countries, and approximately 27% in Australia (OECD, 2007). Furthermore, only 4% of the tertiary research and development budget is allocated directly to research (Ca &Hung, 2011). The average funding assigned to each academic staff member for conducting research by 2013, as a result, was still below USD 500 per academic year, an amount clearly deemed unconducive to any kind of research (Nguyen, 2013a). Being limited as such, the assigned fund has been hardly been fully spent and has been frequently returned to the state due to complex and bureaucratic budget allocation procedures (Ly, 2013; Nguyen, 2014; Sheridan, 2010). In addition, relevant existing policy documents only express general expectations rather than provide specific guidelines or measures to augment university research. For instance, the government has designated 16 universities the "key" role in modernizing the HE system by developing a leading research culture across most disciplines (Thủ tướng chính phủ, 2008a, 2008b), but so far has not provided any clear policies that can assist them to be "key" institutions other than simply granting them increased autonomy and favourable state funding. At a lower level, while research production has officially been made a criterion for university ranking and teacher evaluation (Bộ giáo dục và đào tạo, 2014a, 2014b; Quốc hội, 2012; Thủ tướng chính phủ,

2014), there has not been any comprehensive and detailed framework that uniformly benchmarks research performance of academic staff or individual institutions like for example, the Excellence in Research for Australia (Australian Government, 2013). Research-related documents promulgated at both government and institutional levels are mostly concerned with merely naming the activities that can be considered "research", and the ways to convert each completed activity into standard research hours (see for example Bộ giáo dục và đào tạo (2014a); Đại học kinh tế tp. HCM (2013); Đại học Quốc gia TP. HCM, 2014) rather than what research is and which criteria are used to evaluate research quality.

In short, Vietnam higher education provides an interesting case of a young research culture developer. First, under prolonged influence of the Soviet model, Vietnamese universities were not assigned a research role until recently. Subsequent policies have then rectified the need for universities to enhance their research capacity and set specific requirements concerning research performance at different levels for the whole system, but are still largely silent with how such a new culture should be made welcome to an academic staff with a long tradition of focusing almost entirely on teaching and learning.

4.2. The EFL context at Vietnam universities

The previous section has provided some background information about Vietnam higher education and what is expected of tertiary academics in general in terms of research engagement. Because the focus of this study is specifically on EFL teachers at public universities, this part will describe the role of English and the EFL teaching staff in Vietnam tertiary context.

4.2.1. The role of English in Vietnam higher education

In the age of global integration, English has occupied an ascendant position in the Vietnamese formal education system in general and its higher education sector in particular. It is the key foreign language officially taught at primary school (from year 3) through senior high school all over the country (Le, 2015; Pham, 2014). At the tertiary level, English can be said to be a must for success for Vietnamese students. Apart from being one essential criterion for university entry and graduation, it is taught as a compulsory subject for over 90% of students across all non-

English specialized majors and all academic levels (nearly 99% of graduates at some institutions), taking almost absolute priority over other foreign languages (Hoang, 2010; Hoang, 2013; Le, 2015). The average learning load for English subject at non-English specialized programs ranges from 300 to 420 45-minute periods of in-class meetings for undergraduates (Hoang, 2010). Although Vietnam has not yet reached the level at which English is uniformly used as a medium of instruction in higher education (as in a few neighbouring countries such as Singapore, Malaysia or Myanmar (Hoang, 2010; Mok, 2007; Nguyen, 2014; Nunan, 2003), such a learning workload of the language is comparable to that of most other non-native English speaking education systems in Asia like China (400 periods); Thailand (400 periods); Indonesia (360-400 periods), including even advanced one like Korea (135-540 periods) (Hoang, 2010).

The teaching and learning of the English language in higher education is considered to play a pivotal role in enhancing Vietnamese graduate employability and further study opportunities; and in accelerating the process of internationalization of Vietnam higher education (Hoang, 2013; Tran, 2013). This is made explicit in HERA's emphasis on "organizing teaching and learning in foreign languages, especially for the immediate futures" as a "strategy on international integration, to raise the cooperation capacity, and competitiveness of Vietnamese tertiary education"[2] (Thủ tướng chính phủ, 2005, p.7). Recently, a major national project titled "Teaching and learning foreign languages in the National Education system, period 2008-2020" has been carried out is to help Vietnamese youth graduating from vocational schools, colleges and universities "be proficient in at least one foreign language" (primarily English) and "be able to use it independently and confidently in communication, workplace and further study" by the year 2020 (Thủ tướng chính phủ, 2008c, p.1).The desired minimum level English language proficiency for tertiary graduates as specified in the project is level 3 in the 6-level national framework for language proficiency (as adapted from the Common European Framework of Reference [CEFR]) (Bộ giáo dục và đào tạo, 2014c) for the non-English majors and level 5 for the English majors (Thủ tướng chính phủ, 2008c). Although Vietnamese is still the major

[2] Translated from the original document by the researcher

medium of instruction in Vietnam higher education, English has been proposed to take up this role in 20% of the intensive training programs at several and then all HE institutions by the year 2020 (Thủ tướng chính phủ, 2008c, p.8-9). The nation has then seen unprecedented efforts to support this goal, such as re-writing textbooks, restructuring undergraduate programmes, or standardising Curriculum for English-medium courses (Nguyen & Bui, 2016). This move is intended to enhance graduates' ability to use English as an effective means of communication in the 21st century, creating a significant advantage for them in the integrated and multicultural leaning and working environment after graduation (Le, 2012).

4.2.2. Vietnamese Tertiary EFL teachers

Shouldering the task of teaching such an important subject in Vietnam higher education are two groups of English language teachers, the English specialized group teaching students majoring in English and the non-English specialized group working with students of non-English major programs. Both groups are entitled "tertiary lecturer" and share the same academic responsibilities including research engagement, which is supposed to help them critically assess available language teaching approaches and generate the most appropriate practices for the immediate social, cultural contexts they work in (Pham, 2006) apart from the general purposes of tertiary research as outlined in 3.1.3. There exists, however, notable variation in the actual academic status, quality, quantity, and working conditions between the two groups. The English-specialised group is much smaller in number but normally has to satisfy higher requirements in terms of qualifications and professional advancement than the other group. While the non-English specialized group are expected to have achieved level 5 of English language proficiency in CEFR and hold at least Bachelor's degree in English language teaching or equivalent; the other group are required to have at least a Master's degree and encouraged to reach level 6 of English with a PhD in relevant disciplines (see for example Đại học Thái Nguyên, 2014; Thủ tướng chính phủ, 2014). EFL teachers at language-specialized institutions, moreover, normally enjoy more favourable working conditions such as smaller class size, better facilities and curriculum than those at non-specialized ones (Hoang, 2010; Pham, 2014; Tran, 2013). Finally,

although shouldering the task of enhancing both academic and career prospects of the majority of Vietnamese tertiary graduates, EFL teachers at non-English major programs are given lower academic status than those teaching English-specialized courses. The former are generally considered "instructors" of English rather than academics, have to carry a heavier teaching workload, and unlike the latter more-specialised group, they bear almost no pressure to obtain a PhD unless they are to be appointed to a managerial position.

Vietnamese university EFL staff can also be classified according to the type of employment contract they sign with the higher education institution, be it casual, continuing full-time, or tenured, each of which entails different working conditions and academic commitment. Casual teachers are not required to pursue a postgraduate degree, are encouraged but not required to do research and are paid purely on the basis of their actual teaching hours without any other remuneration package such as employer's insurance contribution or sick leave. Continuing full-time and tenured ELF teachers, on the other hand, must strictly fulfil the required minimum research hours, can enjoy more stable status and are provided with more opportunities for training and promotion.

Similar to the rest of the academic staff population in the Vietnam higher education system, tertiary EFL teachers also face the issues of being both poor in quality and inadequate in quantity. According to MOET's recent report on EFL teacher evaluation, as much as 44.6% of total tertiary EFL teachers and 55.5% of English specialized teachers did not meet the new national requirement of English language proficiency (Nguyen, 2013); some teachers' English levels were said to be even equal to the required level of pupils finishing primary schools (Nguyen, 2014 as cited in Tran, 2014). Most of the staff (over 80%) have never spent time studying the language in an English-speaking country (Hoang, 2013). Shouldering the task of teaching English to students of all majors, English teachers are also in seriously short supply at many institutions, especially the non-English specialized ones. In her research on the factors affecting English language learning and teaching at non-English major universities, Tran (2013) reported that most English teachers at these schools typically have to manage mixed-level and

big classes of 50, 70 or even 250 students with “only a textbook, a pen, and a board”, and are always “too busy” with the extra-hour jobs (Tran, 2013, p.142).In 2009, one of the two key national universities could only employ 184 staff to teach English to almost 54.000 students; and notably, one of its member institutions had only 9 English teachers in total (Thuy Vinh, 2012). To make the matter worse, a large number of EFL teachers at the tertiary level in Vietnam only hold casual positions. At the key national university mentioned earlier for instance, remarkably over 70% of its EFL teaching staff are working on a casual basis. The less favourable remuneration scheme, less demanding professional requirements, and limited opportunities for training attached to this type of contract may lead to academic inertia and lack of commitment among casual staff, affecting the general quality of the whole tertiary EFL teacher population (Le & Hoang, 2012).

It appears that the work of tertiary EFL teachers in Vietnam is imbued with tensions: despite teaching a compulsory subject across the whole HE system, which plays a strategic role in improving the quality of graduate workforce and economic development, most of them (i.e. teachers of non-English major programs) are not given equally high academic status as other lecturers and due incentives for professional advancement. At the same time, they are required to fulfil the same research responsibility as other academics. In a situation that, as Tran (2013) described, even expecting them to teach what they are assigned to teach is excessive, such tensions raise an interesting practical and theoretical concern of whether and how research should be encouraged among these teachers, and provide a basis for the current study into the nature of Vietnamese EFL lecturers’ engagement in research to be conducted. The next section will further review the available research on this matter before the scope of study and research questions are identified and described.

4.3. Current status of and barriers to research engagement among academic staff at Vietnam Universities

There is a dearth of literature examining Vietnamese university lecturer research performance, and even less exists focusing on Vietnamese EFL academics. Relevant information about the topic can only be generated and inferred from government reports, consultation papers of

international donors such as World Bank and Asian Development Bank, online news articles, recent books on Vietnam university research in general; and very few and sporadic empirical studies. This section discusses the two useful themes emerging from this body of literature: (i) description of the current state of Vietnamese university research performance and (ii) the identification of barriers to developing university research capacity. In each of the two sub-sections that follow, literature on both university lecturers in general and EFL tertiary teachers in particular are reviewed, but conclusions made are focused on depicting a picture of research engagement among the English instructing staff – the researched subjects of the current study.

4.3.1. Vietnamese tertiary academics' research engagement

It is consistently evident throughout the literature that research performance of Vietnamese tertiary academics, including the EFL teaching staff, is generally weak. Nguyen and Pham (2011), using bibliometric data to analyse 10-year scientific publication outputs of 10 ASEAN countries, found that between 1991 and 2010 Vietnam produced only 6.5% of the total original ISI-indexed journal articles published by all ten countries, lagging far behind Singapore (45%); Thailand (21%) and Malaysia (16%). Another case study comparing research productivity of 11 Southeast Asian countries on Thomson-Reuters database reported that the total number of peer-reviewed international publications (PRIP) that Vietnam produced in 2007 was 234, far less than that of a single university in Thailand (602) (Hien, 2010). Among the authors of these publications, Vietnamese first authors account for a modest proportion of 37%. Although the reported figures in these two studies also include the research output of the research agencies outside higher education system, it is very unlikely that publications by Vietnamese universities comprised a large proportion. In fact, only three Vietnamese universities in Vietnam produced 100 or more Scopus indexed PRIPs during the five-year period from 2007-2013 (Nguyen, 2013a). In the latest report by UNESCO (2014) on higher education in Asia, no Vietnamese universities were counted in either the list of Asian tertiary institutions with 50 or more publications in each of 251 niche subject areas or the top 200 with the highest total publication output between 2008-2012 (it should be noted that the two comparable neighbours, Malaysia and

Thailand appear in both lists). Vietnam higher education' compound annual growth rate of its publications was furthermore, 15.5%, falling far behind the neighbouring countries with similar economic backgrounds such as Lao (21.7%); Cambodia (21.5%) and Malaysia (21.5%) (UNESCO, 2014). The increase in the number of publications was also observed by Manh (2015) who investigated Vietnam's scientific publications in the Scopus database between 1996 and 2013; the study, however, sadly recorded an overwhelming 80%-90% of all the publications involves collaboration with international authors, many of whom actually led the whole projects. In another survey study conducted with 148 lecturers of various disciplines at a leading university in Vietnam (122 of whom are over 30 years of age) Pho and Tran (2016) reported a disconcerting number of 41 (about 28%) who said they had never published or even conducted any research. Since Vietnamese scientific output has furthermore been dominated by publications in basic sciences, it can be inferred from this general picture that the current state of research performance among Vietnamese tertiary EFL teaching staff in particular is at a very modest level.

Available studies focusing on EFL teachers confirm such inferences about the limited level of research engagement among Vietnamese tertiary English teachers. In a mixed-method study surveying 202 Vietnamese EFL teachers' attitudes towards classroom based research, 60% of the respondents reported that they had conducted some research before, but over half of them (53%) had done it only once and many admitted their research was a required part of a higher research degree, or was done because "they cannot avoid it" (Doan & Nguyen, 2006, p.4). Those who have completed a formal degree with a research component are, furthermore, "unlikely to do any more genuine research" but tend to switch to the "superficial" types to simply satisfy the institutional requirements (Doan & Nguyen, 2006, p.4). In a qualitative study using document analysis and interviews with 7 tertiary language educators, Pham (2006) observed that Vietnamese EFL teacher-researchers are well aware of their research responsibility and aspire to do so to improve their teaching practice, yet, encounter numerous obstacles in building a strong research culture. As T. B. N. Le (2005) noted, although a research culture is emerging in English

language education in Vietnam, it was generally agreed that frequent engagement in research is still not a feasible task for most EFL domestic teachers (Doan & Nguyen, 2006; T. B. N. Le, 2005; Pham, 2006). An unpublished qualitative study conducted by means of questionnaires and follow-up interviews with 35 university EFL teachers from Hanoi and Ho Chi Minh city nearly a decade afterwards by Moore (2014) still reported evidence of stagnation in research capacity development among the participants, despite an observed widespread acceptance of conducting research as an integral part of the tertiary academic job, an increase in the number of teachers with advanced qualifications and the proportion of those valuing the application of research in their teaching.

Although the literature reviewed above has, to some degree, depicted the current status of Vietnam university research and furthermore mapped its position in a regional context, it is limited in its fragmentary view of the real situation, and in relation to the purpose of this study, does not provide sufficient insight into the tertiary EFL population. First, as defined earlier (see Section 3.2.2., Chapter 3) "research" does not always result in a PRIP, which is also prescribed as one among several proofs of "research activities" by Vietnam MOET (Bộ giáo dục và đào tạo, 2014a). Therefore, the research output as demonstrated in the number of PRIPs on which most mentioned authors based on to assess the current state of research performance of Vietnam higher education do not necessarily reflect the actual level of research engagement among its academic staff. Second, most of the few studies focusing on EFL teachers are qualitative in nature, making any generalizations about Vietnamese tertiary EFL research engagement from their results impossible. The only research with a quantitative approach to surveying EFL teachers' research activities, Doan & Nguyen, 2006, was unfortunately conducted more than 10 years ago, so the results may no longer be applicable to the current context.

4.3.2. Barriers to university teacher research engagement

Existing literature also identified various reasons for the unsatisfying situation of Vietnam university research. In the literature that focuses on university research in general, the explanations lie mostly in research policies, or environmental factors external to the university

researchers. Harman and Ngoc (2010), in their review of the research role of Vietnam's universities based on secondary data, have pointed out four key barriers to developing research capacity in Vietnam higher education, including (1) the legacy of Soviet-style system that bifurcates universities and research institutes, leaving higher education a strong orientation to teaching and weak inclination to researching; (2) inadequacy of government policies as demonstrated, limited public funding for research activities, poor working conditions and low financial incentives for university staff to engage in research, and ineffective funding management (3) weak research personnel as shown in the limited proportion of staff holding advanced degrees and (4) a lack of strong research culture that sufficiently values and rewards research activities. These factors are also widely mentioned in other publications on Vietnam higher education, namely Hayden and Thiep's (2010) and Do and Do's (2014) overview of the Vietnamese higher education system; Hien's (2010) comparative study of research outputs of 11 Southeast Asian countries; Trung and Swierczek's (2009) study on the status quo of skills development in Vietnamese universities, Ca's (2006) policy research working paper for World Bank, and report on higher education in Vietnam (2008); Ca and Hung's (2011) discussion paper on the transformation of Vietnamese academic institutions; and Ly's (2013) Vietnamese case study as part of the OECD's project report on the effectiveness and innovation management at policy and institutional levels in four Asian countries; Bauer's (2011) study on research community at Mekong Delta area, and finally Nguyen and Klopper's (2014) qualitative research into the views of 18 lecturers at one Vietnamese university. Among the four factors, the second seems to be the most commonly stressed in the literature, as concluded in Hien (2010): "without questions, the most important factor explaining the weakness of applied science and engineering in Vietnam is the inadequacy of government policy and a lack of investment in research and training capacity" (p.622). It can be noticed, however, that all of the above-mentioned reasons are concerned with the political, cultural, or policy features of the Vietnam education system, and almost all papers (except for Bauer, 2011; and Nguyen & Klopper, 2014) derive from experts' opinions based on their understanding of and interpretations from existing research-

related policies of the system. Albeit the information given may be useful for policy making regarding research governance and organization at system level, it is yet to touch upon the core barriers inherent in the main agents of university research – the teachers, and therefore fails to imply any individual-level solution to improving the current situation.

The most recent and comprehensive study concerning university research in Vietnam may be the empirical PhD research by Nguyen (2013a), the subsets of which have subsequently been published in a series of internationally recognized journals (Nguyen, 2013b; Nguyen, 2015; Nguyen & Meek, 2015; Nguyen & Meek, 2016). In the major study, Nguyen synthesized five essentials for building research university research capacity, namely research resources (which includes human resources, infrastructure, and funding); research organization structure (which involves creating and running a system of research roles, authorities, responsibilities); research related human resource policies (concerned with hiring, developing and rewarding staff); research management plan (aimed at optimizing use of scarce resources); and research culture (referring to the shared underlying beliefs about the values of research among institution staff plus the concrete actions that show appreciation towards research engagement and outcomes). Qualitatively case-studying four leading Vietnamese universities using this rubric, the author concluded that there were flaws in all the cases in the way they embrace these essentials. Specifically, despite the top positions they hold in the Vietnam HE system, these four institutions still demonstrate insufficient investment in research resources, a serious lack of capable research personnel, highly centralized, rigid and ineffective funding allocation mechanism, ambiguity and limited authority attached to research roles; a total absence of a policy framework for ensuring research integrity; no standard, clear-cut quality-based evaluation scheme for completed research; little support to academics' research engagement and up-skilling; non-existence of plans for strategically managing research as understood and practiced in the Western context; and finally a research culture still in its infancy whereby research outputs and practices are far from receiving due recognition (Nguyen, 2013a). All these factors are then supposed to be the hindrances to research capacity building at the four studied Vietnamese universities in Nguyen's

study. The reasons underlying the modest degree of research engagement among the Vietnamese tertiary EFL teaching cohort can also be inferred from there.

The study is an excellent contribution to the literature on Vietnam university research because it has, for the first time, illuminated in a systematic, theoretically-informed, and evidence-based way all the research-related issues within Vietnam higher education, and therefore significantly advanced the understanding of the current situation of university research and the reasons behind it in the Vietnam context. Amongst the abundance of opinion papers on the same topic in the literature, Nguyen's (2013a) study is extremely worthwhile for the recommendations of realistic and detailed policies, processes, and policies for enhancing university research capacity.

Two limitations in Nguyen's (2013a) study, however, can be noticed. First, due to the qualitative nature of the study and the research experiences of four leading universities as the main source of data, the findings appear to be more applicable to the top-tier group of HE institutions in Vietnam and cannot be generalized to the whole Vietnam HE system; i.e. all facilitators and inhibitors to university research capacity building in the country may not have been well-covered. In addition, although the factors mentioned above are supposed to partly explain the current state of Vietnam tertiary research, no causal relationship has been statistically established and confirmed between each factor and the actual level of research engagement among the university academic staff. Whether and to what extent they actually affect university teachers' research engagement is therefore unknown from the results of Nguyen's studies (2013ab, 2015, 2016). Second, similar to other available publications contextualized in Vietnam, the research is restricted to factors at institutional level, which are mainly concerned with research-related policies, strategies and procedures. Teacher cognition were only briefly mentioned (e.g. shared underlying beliefs about the values of research among institution staff), but not treated as a separate factor and a focus of the study. The voices of the main agents of university research, the academics themselves, after all, have not been adequately investigated to explain their own behaviours, i.e. the extent at which they engage in research.

Studies in the field of English language teaching, on the other hand, tend to tackle environmental factors in greater detail and considered individual-different factors in more depth from the perspective of the agents of teacher research themselves. Apart from specifically naming poor research support, non-standard and cumbersome processes and evaluation; inadequate research training; shortage of reference materials; lack of opportunities to disseminate research results, time constraints, Pham (2006) also examined 12 EFL teachers' conceptions of and aspirations for research work and found that although most participants viewed research as essential part of the job as university teachers, the mismatch between what teachers expect and reality (e.g. while teachers valued qualitative research equally as other research designs, the evaluation committee did not accept or at least disfavoured it) was a significant source of discouragement for them to be research active. The "lack of time" was revisited in T. P. A. Le (2005) to the extent that it leaves EFL teachers "not enough time to do research or even think about it" (T. P. A. Le, 2005, p.12). Doan & Nguyen (2006), when examining 202 EFL teachers' attitudes towards research, discovered an interesting point that in the respondents' assumptions, "research is reserved for those considered experts or professional researchers" (p.4), is therefore "not accepted as a normal part of the teaching process" (p.4). However, when making conclusions about the obstacles to conducting research, the authors only listed "lack of time"; "lack of research experience" and "lack of theoretical knowledge" (Doan & Nguyen, 2006), and did not further analyse the interesting role that teachers' assumption about research may play in shaping their research practice. In the qualitative study by Moore (2014) as mentioned above, although teachers' conceptualization of research and research engagement were the foci, the author still did not attempt to establish a link between this cognitive factor and the reported level of research engagement among the participants. The latest study on the topic of EFL teacher research engagement was conducted by Le (2017), who interviewed 27 English teachers from the same university, and discovered one additional obstacle to teacher research engagement: the incompetence of the research administrative staff. The inadequate English language proficiency and poor understanding of research procedures demonstrated by those who are in charge of

auditing and approving teacher research, as participants in Le (2017) explained, caused extra workload, excessive stress, and unnecessary waste of time to the already-busy schedule of teachers, and thus discouraged them to do research. Having based its findings mostly on teachers' voices, the literature on Vietnamese EFL teacher research, in general, has been able to reach the individualized level in partly explaining the current situation of university research. The qualitative research approach that most authors employed, nevertheless, has left the causal relationship between the found individual-difference factors and teacher research engagement open to verification; and the time frame in which most studies were conducted (at least 10 years ago) indicates a need for more up-to-date research on the same topic.

Apart from the above publications, 16 other research projects of different types conducted by Vietnamese scholars and students on university research were also located. They fall into four research themes: evaluating the effectiveness of research (Đức, 2002; Đàm, Hà, & Thủy, 2002; Tích, 1993); developing a model of Vietnamese research university (Học, 2005a, 2005b; Thạch, 2005; Thi, 2006); research activity management (Dung, 2007, 2009a, 2009b, 2010; Đức, 2008; Hà, 2008; Trung, 2007; Tuyết, 2008); and research capacity building for Vietnam university lecturers (Đàm & Thạch, 2006). Among these publications, only three are journal articles; the remainders consist of six institutional research reports, four PhD theses, and three conference papers. While contributing to the general understanding of Vietnam university research by shedding more light on the poor working conditions of the academic staff for doing research, it is easily noticed that individual-difference factors were still largely neglected and the specific group of EFL teachers were neither a focus of any of them.

In brief, the literature on Vietnam university research in general and on EFL teacher research in particular have provided some useful insights in to the status quo of how actively EFL teachers in Vietnam are engaged in research and why this is the case at both system and individual levels. Despite a strong policy framework that mandates research activities, Vietnamese tertiary academics, including EFL teaching staff, have performed relatively poorly compared to the general expectation as well as to the regional and international colleagues. To explain such a

situation, most of the current scholars blame the HE system for not creating favourable conditions for academics to engage in research. While this may seem legitimate, little is known about how tertiary teachers, especially the EFL staff themselves, actually think about and how much they are actually motivated to undertake the research mission – the individually-different factors that also play a determinant role in teachers' behaviour. In fact, no up-to-date, large-scale studies could be found on the nature of Vietnamese EFL teachers' research engagement and the cognitive and motivational factors that shape such practice. Given the tensions attached to tertiary EFL teaching profession in Vietnam as discussed above; also given the proliferation of analysis and recommendations concerning research policies in the literature, such research will help institutions to approach the question of whether and how to promote the research role among their language teaching staff in an individualized and feasible manner. The current study, which examines the extent to which Vietnamese HE EFL teachers are engaged in research and explain the found situation from the perspective of teachers' motivation and cognition, is deemed a timely and necessary response to this gap.

4.4. Sub-conclusion and the scope of the study

The information given in three previous sections have reasonably established that Vietnam higher education is a worthwhile context for this study to take place. A latecomer in developing a university research culture, Vietnamese universities are practicing strong policies that proclaim research engagement among its academic staff. While it is reasonable for higher education to undertake a research mission, how this is to be achieved is a different story. Both the policy documents and the literature themselves are largely silent in regard to how to enhance research capacity among the tertiary academics, especially the EFL teaching staff, who are based in a system with a long tradition of focusing entirely on teaching and learning and surrounded by many unfavourable conditions for conducting research. There is thus a strong need to examine teacher cognition and motivation, two important individual-different factors that shape teachers' behaviours.

It should be noted at this point, however, that the current project restricted its scope to the EFL teaching staff at non-English major public institutions in Vietnam. The public sector was chosen because it comprises the major part of Vietnam higher education system and the strong research orientation they are supposed to undertake as presented in section 4.1.1. This will make the sample extracted for this study sufficiently large and findings applicable to the major sector of the Vietnamese HE system. Vietnamese private universities, on the other hand, account for a negligible part of the Vietnamese higher education system (see Section 4.1.1.) with different research-related policies as well as working conditions for the academic staff from the public sector; an inclusion of data on EFL academics in the private sector, which is significantly incomparable to that of public teachers, would therefore interfere with the reliability of findings. For the same reasons, the study focuses exclusively on EFL teachers of non-English major students because of the large proportion they comprise in the total Vietnamese tertiary EFL staff and the unique tension they face between the requirement to be research active and the distinct working conditions that tend to prevent them from doing so (see Section 4.2.1). Although a comparison between them and the English-major counterparts in terms of teacher research engagement might be interesting, the time constraint of the current study does not allow for the inclusive investigation of both categories.

Chapter 5: Methodological considerations

This chapter presents the methodological considerations for the study in light of the theoretical framework and the redefined research questions presented in the previous chapter.

The chapter consists of nine main sections. The *first* section presents the researcher's philosophical stance that underpins the choice of research methodology for the study. The *second* and the *third* sections discuss the research approach and the specific research design employed to answer the research questions. The *fourth* section provides information about the population and sample, which is followed by the *fifth* section presenting the three data collection instruments concurrently used in this study. The *sixth* and *seventh* sections report on the data collection procedures and data analysis techniques successively. The perceived limitations of the methodology are detailed in the *eighth* section. The chapter concludes with a summary of the focal points of the methodological considerations for the current study.

5.1. The researcher's philosophical worldview

As aptly argued by Creswell & Clark (2011), an inquirer's philosophical worldview "shapes the processes of research and the conduct of inquiry" (p. 38). This section therefore articulates the beliefs about ontology (what reality is) and epistemology (how researcher knows about reality) that constitutes the pragmatic worldview that the researcher holds and that guides the conduct of the current study.

Regarding ontology, the researcher tends to choose the middle ground between the positivists, who believe that reality is "out there", independent of the mind (Neuman, 2006, p.82) and the constructivists, who believe that social reality is created through the lens of individuals' subjective views and experiences (Mertens, 2010). In other words, from the researcher's point of view as a pragmatist, the reality consists of both an external world independent of the mind and a subjective one that is lodged within the mind and thus varies across individuals. Concerning epistemology, since the researcher assumes the existence of both subjective and objective knowledge, she believes that the pragmatic employment of "what works best at the time"

(Creswell, 2014, p.11) or diverse approaches, methods, and viewpoints would be the best way to gain knowledge.

These ontological and epistemological assumptions have led the researcher to choose the mixed methods approach for answering the research questions. Description of and further justification for the utilization of this research approach for the current study is presented in the following section.

5.2. Mixed methods research approach

Mixed methods research is generally defined as an approach to inquiry that persuasively combines both quantitative and qualitative methods in a single study (Brown, 2015; Creswell & Clark, 2011; Johnson and Christensen, 2017; Teddlie & Tashakkori, 2010). Quantitative (QUAN) research method normally focuses on *objectively measuring* a subject matter via *statistical* analysis of *numerical* data, whereas the qualitative (QUAL) method usually emphasizes *in-depth understanding* of *subjective* meanings in observed phenomena via *interpretive* analysis of (mostly) *textual* data. The mixture of these two forms of inquiry, i.e. mixed method research, is enlisted when the research problems are deemed insufficiently addressed by a single method; for instance, when one data source may be inadequate, when results need to be explained, or when a theoretical stance needs to be employed (Creswell & Clark, 2011). In other words, mixed methods research goes beyond the simple combination of QUAN and QUAL method to add up the strengths and cancel out the weaknesses of each other. It is, moreover, the purposeful selection of the best techniques available to answer the research questions (Brown, 2015; Teddlie & Tashakkori, 2010)

The research objectives of the study are well aligned with the above description of mixed methods research. *First of all*, the focus of the study is to provide (i) a broad description of teacher research engagement level and its relationship with cognitive and motivational factors as well as (ii) an in-depth understanding of different aspects of teachers' research engagement, cognition about and motivation for research. While the first aim is best gauged with quantitative techniques, the latter one suits well the qualitative approach of inquiry, leading the mixture of

both to be the best option to for the current study to fulfil its objectives. *Secondly,* the two central constructs of interest in the present study, namely teacher cognition and motivation, are both complex in nature and cannot be sufficiently delineated with the use of a single method. The exploration of language teacher cognition, as noted by Barnard and Burns (2012), is "an extremely complicated matter" (p.2); researchers are thus advised to adopt "a judicious blend of methods of data collection in order that the information […] can be compared, contrasted, and triangulated" (p.4). Concerning the investigation of teacher motivation, each method offers its unique advantages in capturing different facets of motivation and both the QUAL and QUAN methods have been widely advocated and used (Ushioda & Dörnyei, 2012). While quantitative psychometric measurement promises precision in the measurement of motivation intensity, qualitative inquiry is superior in its ability to capture the dynamic and temporal features of the construct via rich insights into the process of motivation (Kim, 2009; Patton & Cochran, 2012; Ushioda & Dörnyei, 2012;). Since motivation in the current study is theoretically viewed as a multifaceted construct, the combination of both methods is deemed most appropriate for depicting the full complexity of teacher motivation. In short, the mixed methods research approach was selected for the current study as it represents "the best techniques available" (Teddlie & Tashakkori, 2010, p.10) to both answer the research questions and to obtain a holistic understanding of the concepts of interest. The following sections will describe the specific type of mixed method design adopted for the actual conduct of the study.

5.3 The non-experimental and explanatory mixed method design

5.3.1. Descriptions and rationale

A research design, as Bryman (2004) stresses, serves as a "framework for the collection and analysis of data" (p.4). It ensures that the evidence obtained through research enables the research problems to be addressed in a convincing and unambiguous manner (de Vaus, 2001). Well-chosen research designs, furthermore, can provide logical foundations on which researchers can base interpretations at the end of studies (Creswell, 2008). In other words, the whole research process (from the collection of data to interpretations of results) is impossible

without a predetermined research design. With the importance of this decision in mind, the researcher carefully considered the available mixed methods designs to choose the most suitable one for the current study.

One broad and useful classification of research design is experimental research design and non-experimental research design (Creswell, 2015; Johnson & Christensen, 2017). An experimental research design is the one in which researchers manipulate one independent variable to see its effect on the dependent variable (s) of interest, whereas the non-experimental design does not involve any manipulations or interventions into the concepts or variables of interest (Creswell, 2015; Johnson & Christensen, 2017). Of these two designs, the non-experimental approach is more appropriate to the current study because the researcher did not attempt to manipulate or intervene in any of the variables or concept of interest but aimed to describe them as they naturally exist.

Concerning the specific types of mixed methods designs, Creswell and Clark (2011) lists six of them:

- The convergent parallel design
- The explanatory sequential design
- The exploratory sequential design
- The embedded design
- The transformative design
- The multiphase design

In order to identify the most suitable design, the current study followed Creswell's (2015) advice on three key decisions to consider: (i) the *intent* decision (what is the purpose of mixing quantitative and quantitative data?) (ii) *priority* decision (what weight or priority does the researcher give to each kind of data?), and (iii) the *timing* decision (what is the sequence of collecting the quantitative and qualitative data?). In this study, the researcher decided to give equal weight to both forms of data, use qualitative data to explain, elaborate on, extend and add more depth to the quantitative data, thereby collecting them sequentially with quantitative data to

be collected first. These decisions indicate a choice of *the sequential explanatory* design for the study, the details of which are presented below.

The explanatory sequential design mixed method design (also called a two-phase model; Creswell & Clark, 2011; explanatory design; Creswell, 2008), or the explanatory sequential design for short is described by Creswell (2014, p.224-25) as follows:

> It involves a two-phase project in which the researcher collects quantitative data in the first phase and gathers the qualitative data in the follow-up phase. The quantitative and qualitative databases are analysed separately; then a discussion should specify how the qualitative results help to explain or expand the quantitative results.

The present study strictly followed this framework by firstly dividing itself into two distinct, sequential phases: The first one gathered and analysed the quantitative data (collected via the survey questionnaire); and the second one collected and analysed the qualitative data (collected via follow-up interviews, documents) that followed up on the findings of the first phase. While the first provided a general picture of teacher engagement, and its relationships with different cognitive and motivational factors, the second phase added more depth to the findings via participants' insights into several aspects of the researched concepts. Second, to enable the subsequent qualitative data to add more depth to the quantitative findings, the researcher used the data from the first phase to inform the follow-up data collection phase with respect to participant selection, and the information to be asked from the participants. Specifically, the qualitative respondents are the same individuals in the quantitative sample; and the second phase focuses on the questionnaire items that need further explanation (e.g. a teacher's rating of a given scenario as being research), more depth (e.g. a teacher's attitudes towards the benefits of doing research); or delves into the aspects of the interested concepts that the survey is unable to capture (e.g. the temporal feature of teacher motivation). Finally, for data analysis, two datasets were analysed separately and only after the quantitative results were presented did the researcher make interpretations of the extent to which the qualitative results explained, extended, or added insights

to the quantitative results. The two databases were not merged or directly compared during data analysis since the primary intent of this design was to use one to explain and deepen the other (Creswell, 2014).

The explanatory sequential design adopted for the current study has the advantage of being straightforward, and capturing the best of both quantitative and qualitative data – to obtain a broad understanding of the research problems in the first phase and then elaborate on these findings through in-depth qualitative exploration in the second phase (Creswell, 2015). As Dörnyei (2007) further clarifies, while quantitative data is usually shallow and unable to explore deep meanings, the subsequent qualitative component can considerably remedy this weakness by freely delving into any patterns of the initial quantitative data, thereby "adding flesh to the bone" and making the explanatory sequential design a holistic approach to investigating almost any concepts (p.171). Additionally, the retrospective prompts used in the second phase to invite participants' open reflection on what they really meant in their previous survey responses can also be used as a way of validating the obtained quantitative data (Dörnyei, 2007). These unique merits collectively considered, the explanatory sequential design proves a perfect fit for the current study which seeks a comprehensive portrayal of teacher cognition and motivation constructs in their practice of research engagement.

There are, however, potential difficulties the explanatory sequential mixed method design poses for the inquirer. *First,* the whole procedure is time-consuming, resources-intensive due to the extensive amount of data to be collected, processed, and analysed, significantly more than the amount normally required for a single method study (Bryman, 1988; Ivankova et al., 2006). To cope with this challenge, the researcher planned for the field trip well in advance, making sure that the maximum number of participants could be approached per visit to each research site, and logistical support was provided at each university chosen for data collection (see section 3.5.2. for more information about the field trip). In addition, questionnaire data was entered and processed along the way with questionnaire distribution; that is, any questionnaire returned to the researcher was processed immediately so that a complete quantitative database was obtained and

ready for analysis at roughly the same time as the conclusion of questionnaire data collection. Follow-up communication with participants was then conducted mostly via phone and emails, which saved much more time and resources than organizing new field trips for face-to-face meetings. The *second* challenge of implementing the explanatory design is the high risk of making mistakes and the demanding requirement of diverse skills for a single researcher. As PREST (2014) noted, "there are at least twice as many opportunities to make mistakes and twice as many potential sources of criticism" (p.16). Mixed method researcher must therefore be familiar with both quantitative and qualitative forms of research to make informed choices and undertake critical reflection on their own work (Creswell, 2014, 2015; PREST, 2014). In this respect, strenuous efforts were invested by the researcher to master the theories of knowledge underlying the quantitative research and statistical analysis techniques (Cohen & Cohen, 1983; Creswell, 2015; DeVellis, 2012; Dörnyei, 2007; Hair, Black, Babin, Anderson, Tatham, 2010; Johnson & Christensen, 2017; Miller, Acton, Fullerton & John Maltby, 2002; Pallant, 2016; Tabchnick & Fidell, 2012), as well as qualitative research methods and techniques of analysing qualitative data (Crocker & Heigham, 2009; Johnson & Christensen, 2017; Merriam, 1998; Miles & Huberman, 1994; Patton, 2002; Silverman, 2013). In addition, the researcher also developed strong skills of using relevant computer software programmes to facilitate the management and analysis of mixed data (SPSS 21 for quantitative data and Nvivo 10 for qualitative data). Such combined efforts assisted the researcher well in coping with the mentioned challenges while taking the best advantages of the strengths of the mixed methods design when conducting the present research study.

5.3.2. Triangulation strategy in the implementation of the explanatory approach

Triangulation was originally adopted in the research method framework by Denzin (1978) to refer to the inclusion of multiple perspectives on a researched phenomenon by using a variety of data sources, investigators, theories, or research methods for an overall purpose of corroborating interpretations. Under this "umbrella" original meaning, the term has since been used to denote (i) a *general* strategy to effectively enhance research validity (i.e. the trustworthiness, accuracy,

and usability of the research results and conclusions) (Dörnyei, 2007); (ii) a *mixed method research* design that simultaneously collects QUAN and QUAL data and merges them to corroborate findings (Creswell, 2008), or (iii) "the process of corroborating evidence from different individuals (e.g. principals and students), types of data (e.g, interview transcripts, observational field notes), and data collection methods (e.g. observation and interviews) to ensure accuracy of findings in *qualitative* research (Creswell, 2008, 2014, 2015).

In this study, "triangulation" is employed as a *general* strategy to enhance research validity. As such, not only were multiple methods (both QUAN and QUAL) utilized in this study, but evidence from multiple data sources, several data types, and various data collection instruments were also generated to corroborate research findings. Three sources of data consisted of teachers (the targeted population of the study), the heads of English departments at Vietnamese public universities, and two types of documents (both public and private). Four instruments were used (survey questionnaire, interviews, documents (public regulations and personal diaries) to collect both quantitative and qualitative types of data, which all contributed towards the interpretations of findings at the end of the study. While information gathered from teacher participants via questionnaire, interviews and private documents (diaries) comprised the primary data source, information provided by public documents and heads of English departments constitutes the secondary or supplementary source of data. The underlying rationale of this "triangulation" strategy is that, if a finding can survive a series of tests with different perspectives, it can be considered more valid than one generated with the help from a single method/source of data/type of data (Dörnyei, 2007).

5.3.2. Operationalisation of the research design

The research design which incorporated the triangulation strategy is operationalised into a detailed framework that guided the conduct of the present study as illustrated in Figure 5.1.

Figure 5. 1 Operationalisation of the research design and strategies

* **Research questions:**

1. What is the current status of research engagement among EFL teachers at Vietnamese public universities?

1a. How often do they say they do research?
1b. What kinds of research do they do?
1c. How do they publish their research results?
1d. How do the demographic factors relate to the reported level of research engagement?

2. How do cognitive factors correlate with teachers' level of engagement in research?

2a. What conceptions of research do they have?
2b. Which kind of self-efficacy beliefs, attitudes, context beliefs about doing research do they have?
2c. How do teachers' self-efficacy beliefs, attitudes, and context beliefs about doing research *correlate* with their reported level of engagement in research?

3. What is the relationship between teacher motivation and their research experience?

3a. How much are teachers motivated to do research?
3b. How do specific behavior regulations correlate with the reported level of research engagement?

4. What initially motivates teachers to do research and what factors affect their motivation for research?

4a. What initially motivated Vietnamese tertiary teachers of English to do research?
4b. What factors sustain/erode their motivation in the process of doing research?

As can be seen from Figure 5.1, the study consists of two distinct, sequential phases. Phase 1 – the quantitative phase involves collecting and analysing quantitative data from teachers via the survey questionnaire to answer the research questions 1, 2, and 3. Phase 2 – the qualitative phase has twofold aims: (i) to provide deeper insights into the broad quantitative answers to research questions 1, 2a, 2b obtained in Phase 1, and (ii) to explore the temporal feature of the teacher motivational construct, which phase 1 data was unable to capture, or in other words, to seek answers to question 4. The first aim of Phase 2 was pursued by conducting follow-up interviews with selected survey participants in Phase 1 while the second aim of Phase 2 was fulfilled by conducting a longitudinal data collection with three teachers via interviews and guided diary entries. The longitudinal data collection in the second sub-set of Phase 2 is suitable to achieve its aim of describing the factors that affected the temporal changes of the motivational construct. Findings from the survey in Phase 1 and the follow-up interviews in Phase 1 were triangulated with the supplementary data from public documents and interviews with the department head to enhance the overall validity. As can also be seen from the figure, the study put equal weight on the QUAN and QUAL data in the final stage of integrating them to corroborate interpretations at the end of the study.

The following sections will provide further details about the multiple data sources, data collection instruments, and mixed data analysis techniques mentioned in the above framework.

5.4. Population and sample

5.4.1. The population

As indicated earlier in the context of the study, the population for the current study centred on full-time English teachers of non-English major students at Vietnam's public universities. To be considered full-time, one must either be a tenured member of staff or on a "full-time" contract with the university. As such, the academic responsibilities of this cohort encompass both teaching and researching as stipulated in Vietnam's Higher Education Law (See Section 4.1.3, Chapter 4). Since Vietnam has over 130 public universities nationwide (see Section 4.1, Chapter 4), each of which has its own full-time ESL teaching staff of about 10-60 teachers for students of

non-English majors, the whole population can be estimated at roughly 3,000. To "triangulate" the information provided about this population, relevant public documents, and the heads of the English divisions in charge of non-English major students at Vietnam public universities were also involved.

The following sections will specify how participants for each data collection phase of the study were selected from the population.

5.4.2. The research participants and sampling strategies

5.4.2.1 Research participants sampling for the questionnaire survey

When selecting EFL teacher participants for the questionnaire survey, the researcher puts no further inclusion/exclusion criteria on the population mentioned above. Participants were chosen regardless of their gender, age, experience, level of qualification, or geographical location, as long as they taught English for non-English major students on a full-time basis at any of the public universities in Vietnam. The objective was to achieve as holistic a sample as possible (i.e. a sample covering as many characteristics of the population as possible) and to gain the advantage of large sample size, both of which are essential in minimizing the potential sampling error (i.e. the difference between the sample estimates and the actual scores of the population) (Vogt, 2007; Creswell, 2015). The sample size is also of great importance because most statistical procedures used to analyse data require a sufficient number of cases to yield valid results (Pallant, 2016; Creswell, 2015); or as Cohen (1992) similarly puts it, sample size is one primary ingredient to power analysis.

There are several suggestions in the research methodology literature on how to determine the sufficient sample size for a quantitative survey study. Three common ways employed by educational researchers include (i) simply taking 10% of the population, (ii) looking at the minimum number of cases required for the statistical procedures the researcher plans to use in the study, for instance, 30 for correlational analysis, or $N>50+8m$ for multiple regression (where N is the sufficient number of cases and m is the number of independent variables) or (iii) using

the sampling error formula – a systematic calculation of sample size based on the tolerated amount of sampling error, confidence interval, and the chances that the sample is evenly split on their answer to a given question (Creswell, 2015; Dörnyei, 2007; Fowler, 1988; Hatch & Lazaraton, 1991; Pallant, 2016).

Among the above, the researcher chose the last approach, which is acknowledged as the most rigorous sampling method and furthermore suitable for a survey study that intends to generalize findings from the sample to the population as the current one (Creswell, 2015). Using Fowler's (1988, p.42) sample size table as a guide, the researcher set the maximal 50/50 (equally split chance) for the proportion of sample choosing/not choosing one option in the questionnaire, the rigorous 95% as the confidence interval (i.e. 95 out of 100 times the sample mean will fall between the upper and lower limits of the population mean), and low sampling error of 5% (5 out of 100 times the sample mean will differ from the population mean), and obtained the suggested sample size of roughly 400. Being aware, however, that a larger sample may demonstrate better representativeness of the population (Bryman, 2004; Creswell, 2015; Fraenkel & Wallen, 2000), the researcher made all possible efforts to attain as large a sample of Vietnamese EFL tertiary teachers as practical. As a result of these efforts (details of which are provided in section 3.5. data collection procedure below), a total of 587 teachers responded to the survey, and 568 cases were finally used for data analysis after data cleaning. This number goes well beyond the suggested sample size calculated by the sampling error formula, 10% of the population, and the required minimum case number for all the statistical procedures employed for data analysis.

Concerning the sampling method, the current study employed the probabilistic sampling approach, which refers to the selection of research participants that are representative of the population (as opposed to non-probabilistic sampling, which selects non-representative participants on the basis of their availability, convenience, and characteristics) (Creswell, 2015). The approach was chosen because it is "the most rigorous form of sampling" and can allow generalization claims from the research findings (Creswell, 2015, p. 142). Among four available

sampling procedures in the probabilistic sampling approach (simple random sampling, systematic sampling, stratified sampling, and cluster sampling), the researcher opted for simple random sampling (selection is based entirely on chance) and the cluster sampling (randomly selecting larger units or groupings of the population, for example, a school, then examine all the sample in the targeted units). While the former is claimed the "most popular and rigorous" strategy in probabilistic sampling, (Creswell, 2015, p.142), the latter is said to be more practical and especially suitable for population that is widely distributed (Dörnyei, 2007). The combination of these two strategies helped to ensure the rigor and representativeness of the sample selected, while boosting the chance of obtaining a large number of participants.

To carry out simple random sampling, the researcher created an online version of the questionnaire using Qualtric product provided by Macquarie University, which then randomly selected the volunteer EFL teachers as participants. This method yielded 90 participants for the study. With cluster sampling, the researcher contacted the department heads of 41 public universities, which were randomly pulled from the list of public Vietnamese universities (obtained from the official website of Vietnam MOET), for their permission to collect data from their EFL staff before inviting the English teachers (via emails) to participate in the current study. Twenty-seven leaders responded with permission, and only those teachers who voluntarily agreed to participate in the study were counted as participants. The field trip to the 27 universities that the researcher was able to obtain permission to access yielded a total of 478 usable returned questionnaires for the study. This, added to the 90 questionnaires returned online, explained the grand total of 568 teacher participants for the study.

5.4.2.2. Participants sampling for departmental leader interviews, teachers' follow-up interviews and written emails

To supplement the survey questionnaire data on teacher research engagement and teacher cognition, heads of the English department in charge of non-English major students at Vietnamese public universities were interviewed; and a number of questionnaire respondents were also followed up on their questionnaire answers via phone and emails. The contents of the

questionnaires and the interviews will be presented in Section 5.5.; how these participants were selected is detailed below.

The department leaders interviewed were those working at the universities the researcher physically visited to distribute the paper questionnaires. Such criterion sampling strategy (selection of participants because they meet a predetermined criterion) (Patton, 2002) was the best option with this participant cohort because it ensured that the information they provided would be relevant for triangulation with the teachers' questionnaire responses. To recruit the department heads for interviews, the researcher had already invited them to participate in one-on-one interviews in the email requesting for permission to conduct the survey with their EFL staff before the field trip. It was fortunate that all the department heads who granted permission for the researcher to access their staff also agreed to be interviewed. As previously mentioned, a total of 27 department heads participated in the interviews, which were conducted during the researchers' visits to their universities to conduct the questionnaire survey with the EFL staff.

Survey respondents who participated in follow-up interviews and written emails were chosen on a voluntary basis, i.e. via voluntary sampling. Teachers who expressed their willingness to be followed up by ticking the designated box and providing their contact details at the end of the questionnaire were contacted by phone to arrange a time and date for the interviews or emailed with relevant follow-up questions on their questionnaire responses (The contacted teachers, nevertheless, reserved the right to withdraw their interest at any time). Of 252 teachers who registered their interest, 41 were phoned and 99 were emailed. The researcher was unable to contact all the 252 teachers who left their contact details because of logistical constraints, and a subset of the available teachers was randomly picked to maintain the rigor of the collected data. Among these teachers who were contacted, 25 agreed to proceed and completed phone interviews (response rate 60%), and only 21 teachers replied with completed answers to the follow-up emails (response rate of 20%). Since there is no methodological requirement about the minimum number of participants in the follow-up phase of an explanatory sequential method, the

sample of 46 teachers joining the post-survey phase of the study is therefore considered an acceptable number.

5.4.2.3 Research participant sampling for the interview and diary studies on teacher research motivation

To qualitatively explore teachers' research motivation, the researcher employed the purposive sampling strategy with the combination of homogenous sampling, criterion sampling and convenience sampling technique to recruit research participants for the longitudinal data collection phase. This phase involved one initial interview, six subsequent diary entries every successive two of which were a fortnight apart in time, and one final interview two weeks after the final diary report. A purposive sampling strategy refers to the selection of participants on purpose, not by random; the specific criterion sampling technique means the study chose the participants on the basis of predetermined criteria; and convenience sampling involves selecting research participants on the basis of their willingness and availability to be studied (Dörnyei, 2007; Creswell, 2015). In the current part of the study that focuses on teachers' research motivation, the predetermined criteria for selecting participants included that: (i) the selected teacher must be conducting research, and (ii) their research project had not been carried out for more than 1 month at the time of the initial interview. Such purposive criterion sampling technique met the aim of this study, which was to seek in-depth understanding of teachers' motivational processes while they were conducting research. It sought data on teachers' initial motivation to start a research project, and the on-going factors that may affect or fuel their engagement with the project. Active teacher researchers were selected because their on-going experience of conducting a research study would provide lively insights into the longitudinal changes of their research motivation. Plus, a less-than-one-month gap between the beginning of their research project and the initial interview would allow participants to recall their initial motivations for the project in a more accurate and in-depth manner than those who had progressed too far in their project.

With these purposes and criteria in mind, the researcher targeted her colleagues at Hanoi University who had also helped her to complete the initial questionnaire survey. The reasons are simply because these teachers, with whom the researcher had established certain rapport, would be more willing to contribute to the study than those from other universities.

As a result of the participant recruitment process (more details of which can be seen in section 3.5.2. below), three teachers actually fully completed the required interviews and diary reports. Although this sample size appears small, what counts most in qualitative research, however, is not the number of cases but the richness or *saturation* of data – the point at which the researcher becomes confident that the available data is sufficient to answer the research questions (Glaser & Strauss, 1967). Dörnyei (2007) also supports the superior importance of data quality over sample size in qualitative research by emphasizing that "a well-designed qualitative study usually requires a relatively small number of respondents to yield the saturated and rich data that is needed to understand even subtle meanings in the phenomenon under focus" (p.127). Given the longitudinal design with multiple data collection instruments and the volume of data generated, the number of three participants was deemed adequate for the current study in investigating teachers' research motivation. Two participants were former colleagues of the author, and the third one, who was working at a nearby university, was a friend of the researcher's colleague. They were selected because they satisfied all the requirements of the current study (i.e. being a public university teacher of English who had been doing a research project for no more than two weeks since they started it), and they consented to commit to the three-month data collection period of the Study. Detailed description of these three participants can be found in Chapter 5. The following section will elaborate on the specific instruments used to elicit data from the participants.

5.5. Data collection instruments

The current study utilized three instruments to collect data: survey questionnaire to collect quantitative data, and documents and semi-structured interviews to collect qualitative data. Rationale for and description of each instrument are discussed in turn below.

5.3.1. Questionnaire survey

5.3.1.1 Rationale for utilising questionnaire

Questionnaires are defined by Brown (2001, p.6) as "any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers". In terms of questionnaire uses, Cohen, Manion, and Morrison (2011) listed three of them: (i) to describe "the nature of existing conditions", (ii) to identify "standards against which existing conditions can be compared" and (iii) to determine "the relationships that exist between specific events" (p.256). The objectives of the study fit well into these purposes: to describe the current situation of teacher research engagement, and to explore the existence of potential associations and the degree of impacts the cognitive and motivational factors may exert on the dependent variable of research engagement level. Questionnaire survey was therefore chosen as a suitable research instrument to achieve the purposes of the study.

Regarding questionnaire data recording procedures, data can be self-reported (i.e. participants provide the data on paper-based or web-based questionnaires) or elicited by the researcher via phone or in-person interviews or observations (Creswell, 2015). Given a large sample of more than 500 teachers and limited financial and time conditions, the current study used the self-report paper-based questionnaires administered in person to teachers during a field trip, and a complementary web-based version to boost the number of participants.

5.3.1.2. Questionnaire contents

For the purposes of the study, the questionnaire is designed to: (1) measure five variables: 1 x dependent variable (DV) (teachers' research engagement level) and 4x independent variables (IV) (IV1-teachers' research self-efficacy; IV2-context beliefs; IV3-teachers' attitudes towards research and IV4-level of motivation, and (2) to explore one concept (teachers' conception of research), and (3) to elicit other factual information about the participants' research practice and demographic profiles.

To obtain the content for each section, the study followed three options suggested by Creswell (2015, p.156): (i) Locating and using the exact items in an existing instrument; (ii) Locating one and modifying it; and (iii) Self-developing new items for use. Options 1 and 2 applied to the measures of IV3, IV4, whereby relevant instruments were found in the literature while option 3 applied to the rest of the questionnaire where no relevant instrument in the literature could be located.

Either adopting an existing instrument or developing a new one, the researcher extensively consulted the methodology literature on the criteria, principles and skills required in each approach to obtain good instruments. For adopted and adapted content, the current study applied the criteria of a good instrument recommended by Creswell (2015): (a) being current (the latest version of the instrument should be used) (b) being used, reviewed or cited by other authors (c) accompanying sufficient evidence of reliability and validity in past uses and (d) having the content, the level of measurement, and the procedure for recording data relevant to the purposes of the current study. In writing new contents, the researcher closely aligned the procedure with the steps recommended by de Vellis (2003), namely (1) determining clearly what to measure (2) developing an item pool; (3) deciding the level of measurement (4) enlisting expert advice on the item pool (5) considering including validation items, (6) piloting the items and (7) revising the questionnaire (of which, steps (6) and (7) were done with the inclusion of the borrowed content).

The final result of this process was a 79-item, 7-section questionnaire (see Appendices 6 and 7 for both English and Vietnamese versions of the questionnaire), an overview of which is given in Figure 5.2 below:

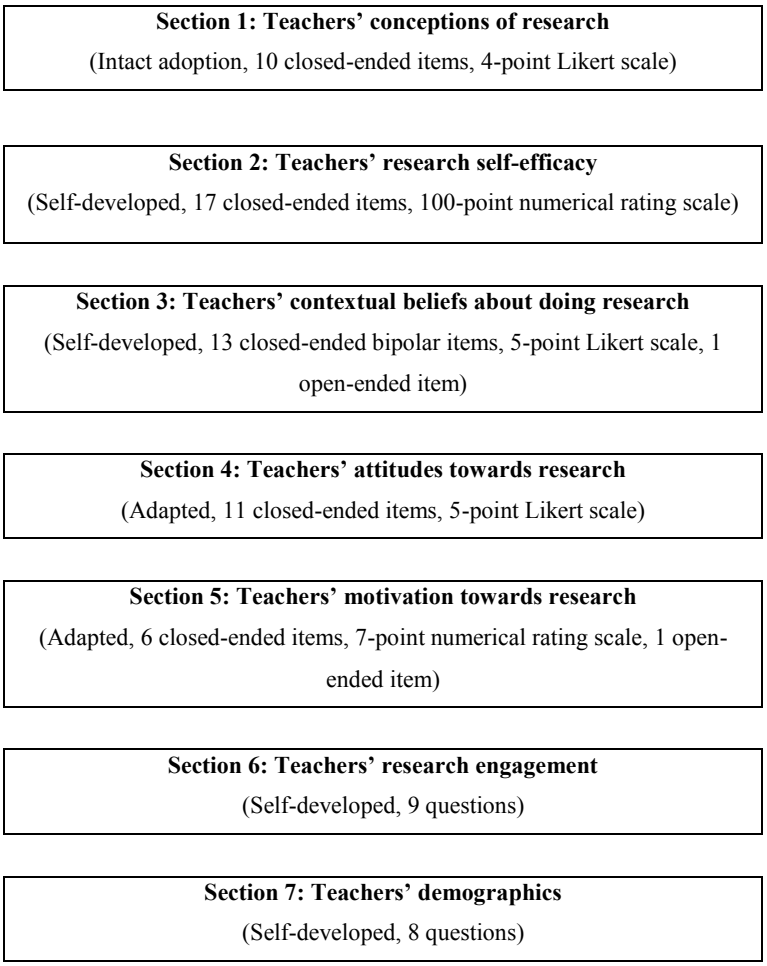

Figure 5. 2. An overview of the survey questionnaire contents

As can be seen from Figure 5.2, the contents of the questionnaire were organized according to their themes and level of content complexity, flowing from teacher cognition, to teacher motivation, then teachers' research practice and demographics. It can be easily noticed that the demographic questions, which are the most straightforward and easy to answer, are located at the end of the questionnaire to avoid the fatigue effect on the validity of the responses given the length of the questionnaire.

Section 1 explores teachers' conception of research by asking participants to rate 10 scenarios on a 4-point scale, with 1 being definitely not research, and 4 being definitely research. The 10 items were an intact adoption of the survey Borg developed and used to examine the same construct in his series of studies on language teacher research engagement (Borg, 2006, 2007a, 2007b, 2007c, 2009, Borg & Alshumaimeri, 2012). In these past studies, the items consistently passed the reliability threshold (0.7) with a high reliability coefficient of 0.82 (Borg, 2009; Borg & Alshumaimeri, 2012). The items were also adopted in other studies with the same purpose (see Bai & Millwater, 2011; Gao, Barkhuizen & Chow, 2011a). The latest version of the items, which the study actually adopted, was the one in Borg and Alshumaimeri (2012).

Section 2 (Teachers' research self-efficacy) comprises 17 items and was designed to measure teachers' perceived ability to perform various research-related activities, ranging chronologically from research planning to reporting research results. Respondents were asked to rate their perceived level of confidence in each activity by rendering a numerical mark from 0-100, with 0 being "cannot do at all", 50 being "moderately certain can do", and 100 being "definitely certain can do. Scores for 17 items were then summed to produce a total score of research self-efficacy. To design the items, the researcher drew on the operationalization of the research self-efficacy concept (see Theoretical Framework), the educational research methodology texts (e.g. Creswell, 2014; 2015; Johnson & Christensen, 2017), as well as empirical studies on research self-efficacy (e.g. Bieschke et al., 1996; Bishop & Bieschke, 1993; Holden et al., 1999; Rezaei, 2013; Vaccaro, 2005) to develop a pool of research activities relevant to the participants of the study. The initial pool of 19 items were then refined to 17 based on experts' advice, and the feedback of

participants in the pilot study. The reliability and validity of these official items were established through factor analysis, Cronbach's alpha score, item-total correlations and was found to be of adequate level (details and results of these processes can be found at section 3.3.1.4 and the result chapter respectively).

Section 3 aims to capture teachers' contextual beliefs as indicated in 13 factors which were identified based on the operationalization of the concepts of context (see theoretical framework), and the empirical studies on teachers' context beliefs (Abdelraheem, 2004; Lucero, Valcke & Schellens, 2013; Lumpe & Chambers, 2001; Lumpe, Haney, & Czerniak, 2000). For each factor, bipolar items were designed. The first, called the "enable" item, asked teachers to rate their level of agreement on the extent to which the factor would enable them to be research active; the second, called the "likelihood" item, asked teachers to rate their belief about the possibility that each factor would occur at their institutions. Both "enable" and "likelihood" beliefs are measured by on a 5-point Likert scale, with 1 corresponding to "strongly disagree" and "very unlikely to occur", and 5 meaning "strongly agree" and "very likely to occur" respectively. Scores for Enable item and Likelihood item belonging to one sub-scale were summed to produce a total Context Beliefs score (which has the score range of 2-10) for that sub-scale. The reliability and validity of the Context Beliefs about Doing Research scale was confirmed via adequate scores on Cronbach alpha, item-total correlations, and factor analysis (details can be found in 3.3.1.4 and the Results chapters)

Section 4 consists of 11 items adapted from the Revised-Attitudes Towards Research Scale (R-ATR) developed by Papanastasious (2014). The original R-ATR scale comprised 13 items, measuring attitudes towards research three latent variables: Research Usefulness (4 items); Research Anxiety (5 items); and Research Positive Predisposition (4 items). The scale is the 5-point Likert type with scores ranging from 1 (strongly disagree) to 5 (strongly agree). The psychometric properties of the four sub-scales was established via Cronbach's coefficient alpha, which fell within medium to high range (α=0.86-0.92), and sufficient divergent and discriminant validity evidence (see Papanastasious, 2014). In use in the present study, only 11 items of the

scale were adopted and adapted to suit the purposes of the study. Two omitted items include one Research Anxiety item and one Positive Research Predisposition item. The reliability and validity of the modified sub-scales and scales were assessed and found adequate via factor analysis, item-total correlations and Cronbach Alpha within each sub-scale (details of results can be found in Results chapter).

Section 5 measures teachers' motivation towards research via 7 items, reflecting 6 latent motivational constructs: Intrinsic Motivation (1 item), Integration (1 item), Identification (1 item), Introjection (1 item), External regulation (2 item), and Amotivation (1 item). This 7-item motivation scale is an adaptation from the self-report 18-item Work Extrinsic and Intrinsic Motivation Scale (WEIMS) developed by Tremblay and colleagues (2009) to measure motivation in a workplace setting. The reliability and validity of the original scale was evidenced through a satisfactory model fit index (factor loadings of all items ranged from .30-.90), high internal consistency value (α ranged from .64 – 0.83), and sufficient test scores for content validity and criterion validity. Due to the length of the questionnaire in the present study, the researcher chose to use only 1 most relevant and representative item from the original 3 items for each latent motivational construct, and kept the original 7-point Likert scale for each item (with 1 being "does not correspond at all" and 7 being "corresponds exactly"). Since the modified instrument has only 1 item in each sub-scale (only the external motivation sub-scale has 2 items), estimates of internal consistency coefficients for each sub-scale are not applicable. The reliability and validity of the whole scale was assessed via the inspection of the correlation matrix of the 6 latent variables instead. The results (which can be found in the Result chapters) showed evidence of adequate reliability and validity of the whole scale.

Section 6, including 10 questions, aims to examine the current situation of teacher engagement in research. The questions focus on different aspects of teacher research practice (e.g. the frequency of doing research, the average number of hours spent weekly on doing research, the scale, purpose, and publication methods of the last research) and were designed based on the operationalisation of the concept of "teacher engagement in research" (see the Theoretical

Framework). In this part, the DV - teachers' reported level of research engagement is measured by their self-assessed level of frequency of doing research on a scale of 5 with 1 being "never" and 5 being "very frequently". The definition of the *types* of research that the current study limited its scope to (e.g. it does not count research conducted as part of a formal degree) was provided at the beginning of this section of the questionnaire to assure that participants would provide the right kind of data.

Section 7, the final one, consists of 8 questions, eliciting respondents' demographic information, such as age, gender, experience, highest relevant qualification. Questions about the name of the university where they work, the current employment status (tenured, full-time, part-time, casual), and the type of students they teach, are intentionally included in this part to screen unqualified respondents (part-time or casual, from non-public university, or teaching English major students) from the dataset.

5.3.1.3. Pilot testing the questionnaire

As reported earlier, the questionnaire was pilot tested before the official use. A pilot questionnaire survey, or a pre-test, is a small scale trial implementation of a draft questionnaire, which allows for practical feedback on crucial factors such as question clarity (Is the wording of the questions sufficiently understandable to the targeted population to generate desired information? Do the participants understand the items in a consistent way?); question acceptability (Is the questionnaire too long for respondents? Is any question sensitive or threatening?); and question comprehensiveness (Are all necessary questions included?) (Johnson & Christensen, 2017). This is a cardinal step before the actual data collection phase in a research study as it helps the researcher to determine whether the questionnaire (the data collection tool) operates properly, measures the intended constructs, and ultimately yields reliable data (Rudner, 1993)

In this study, the pilot test was conducted on a small group of 30 teachers from Hanoi University, Vietnam. Although small, this size of 30 participants still falls within the acceptable range of a standard sample size for a pilot test of generally from twenty to forty, according to Rea and

Parker (2005). The reason for choosing participants from Hanoi University for the pilot study was simply because the researcher is a staff member there, so the participants, also her colleagues, would be more willing to spend time sharing their feedback on the questionnaire content with the researcher. In addition, as ESL teachers at tertiary level who are required to do research as a compulsory part of their professionalism, these participants are representative of this research's targeted population, which is recommended for questionnaire pilot testing (Johnson & Christensen, 2017). Given the primary purpose of a pre-test as indicated earlier, this pilot test did not aim to obtain statistical accuracy but rather to gain feedback on the overall quality of the questionnaire content and construction. Therefore, during and after the pilot test, all respondents were asked to provide their feedback by giving (1) their overall thoughts about the questionnaire (2) the identification of any problematic or confusing items (and the reasons why) (3) the degree to which the questionnaire was interesting to read; and (4) any other specific ideas to improve the questionnaires. In addition, the researchers also applied the "think aloud" technique, in which respondents are requested to voice all their thoughts, including why they choose a particular response option, during the whole time they read and answer the questionnaire, whilst the researcher records these spoken-aloud thoughts. Commonly used in cognitive interviews to record the thinking process of a tested person (Johnson & Christensen, 2017), "think aloud" technique is useful for the current study in helping the researcher to identify difficulties in item comprehensions (therefore problematic wording of such items), misunderstanding of a question instruction (which might not be reported in the post-test feedback session), identifying sensitive content through respondents' on-spot reactions. Due to the time-consuming nature of the process, and its heavy dependence on participants' willingness to articulate their thoughts while doing the questionnaire, only two participants were asked and actually agreed to carry out the think-aloud technique.

Following the pilot test, the questionnaire was revised as needed. Changes resulting from the feedback included reordering of questions, rewording some items to make them clearer and less sensitive, redesigning some items to make more concise, adding new items, and deleting

unnecessary ones. Some examples of the modifications of the questionnaires are as follows. Questions on demographic information were moved from the beginning of the questionnaire to the end as they are the plainest and easiest, thus the least likely to be affected by respondents' increasing fatigue towards the end of the survey. The complex questions such as ones on teachers' conceptions of research, on the other hand, were rearranged to appear early in the list to make use of the readers' initial fresh energy. The multiple choices under the questions on age range, the number of research projects completed in the past five years, the average number of hours spent on the last research project, are all replaced by a blank space on which respondents can provide their own number to make the appearance of the page less dense with text, and reduce the confusion of the readers in finding the exact place between for instance 25-30 and 31-35 for their actual age of 30.5 years. Important words in each item or question were made **bold** to assist readers' understanding of the key information required. Examples were added to the two options under the question on the types of students following the feedback that the distinction between "English major students" and "Non-English language majored students" were not clear enough. As suggested by most participants, the researcher decided to translate the questionnaire into Vietnamese. Although all research participants are ESL tertiary teachers with high English proficiency and should not have any difficulty answering the English questions, a version in Vietnamese, their mother tongue, would clearly minimise respondents' fatigue and potential misunderstanding. In the background information section, one more question about the type of subject participants often teach was added to further screen out the questionnaire accidentally completed by academic lecturers at English language majored universities.

The final outcome of the pilot test is the official version of the questionnaire in both English and Vietnamese, which was approved by Macquarie University Ethics Committee in February 2016 and used for collecting data in Vietnam between March and May 2016.

5.3.1.5. Reliability and validity of the questionnaire

In this study, both the reliability and validity of the employed survey questionnaire were given special attention since the quality of data analysis and conclusions of a research study depends

on the data collection instrument being both valid and reliable (Creswell & Clark, 2011). Validity indicates content accuracy of an instrument (what is measured), that is, the degree to which the instrument really measures the construct it is supposed to measure, while reliability refers to consistency of that instrument in measuring the construct across a variety of samples, contexts, and probably over time (Cresswell, 2008). Before the official use of the survey questionnaire and the analysis of data, the researcher carefully assessed its validity (what is measured) and reliability (how it is measured).

To assure the reliability of the questionnaire, the researcher worked to both minimize the factors that may result in unreliable data, and adopted statistical procedures to evaluate the actual reliability of the measurement scales. Following Rudner's (1993) advice, question ambiguity and potential of participants' fatigue were detected and addressed through careful piloting of the questionnaire (see section 3.3.1.3). Concerning the evaluation of the reliability of the measurement scales, the research methodology literature suggests a range of procedures: the test-retest correlation (administering the same test to the same participants at two different times, positively high correlation between test-retest scores indicates a reliable scale), alternative forms use (giving two tests measuring the same attribute to the same groups of individuals, the equivalence of the scores from two tests signals reliability), internal consistency estimation (evaluating the degree to which different items in a single scale are measuring the same underlying concept), interrater reliability and Panel of Judges (generating multiple feedback on the same observational data) (de Vaus, 2002; Creswell, 2015, Johnson & Christensen, 2017). Among these solutions, the current study opted for the internal consistency reliability assessment via Cronbach's coefficient alpha (a Cronbach alpha value of .7 or higher means the items within the scale are measuring an underlying construct, indicating a good level of reliability), which has been acknowledged as the most commonly used scale reliability measurement (Vogt, 2007; Pallant, 2016; de Vaus, 2002) and has actually been widely adopted by the educational and psychological researchers to assess the psychometrics property of their constructed scales (e.g. Deslandes & Bertrand, 2010; Fernet et al., 2008; Lumpe, Haney, & Czerniak, 2000; Martin,

2006; Tremblay et al., 2009; Weiss, 2016). The Cronbach's coefficient alpha values calculated for the scales and subscales can be found in the result chapter.

In addition to reliability, the issue of validity is concerned with making sure that a scale is "measuring what is intended to measure […]" and that "the interpretations made on the basis of the scores it generates are correct" (Johnson & Christensen, 2014, p.144). To establish validity of the scores collected from an instrument, Johnson and Christensen (2014, 2017), and Creswell (2015) recommend obtaining sound evidence for a unitary validity rather than establishing different types of validity (content validity, construct validity and criterion validity) as traditionally done. According to the Standards for Educational and Psychological Testing by the American Educational Research Association (AERA), American Psychological Association (APA), and National Council on Measurement in Education (NCME) (1999, as cited in Johnson & Christensen, 2014, 2017), validity evidence includes: evidence based on content (judgements from experts on the extent to which the measure adequately covers different aspects of the construct), evidence based on the internal structure (statistics reflecting the homogeneity of the items of a scale or a sub-scale measuring one dimension of a construct), and evidence based on the relations to other variables (statistics reflecting high correlation between the test scores with measures of the similar construct [convergent evidence] or different constructs [discriminant evidence]).

Since "the best rule is to collect multiple sources of evidence" (Johnson & Christensen, 2014, p.144), this study sought the combination of all these types of evidence. For *content-based* evidence, the researcher consulted academic work by renowned authors in relevant fields to obtain working operationalization of each concept of interest. The completed questionnaire, which was developed based on the operationalization of the key concepts (see Section 3.2.2., Chapter 3), was submitted to experts and scholars for feedback on the relevance and fitness of each item vis-à-vis the construct's conceptualization, its conciseness and clarity, and any important items that may have been overlooked. Based on the experts' evaluation, the researcher made an informed decision on the final version of the questionnaire, maximising its content

representativeness and appropriateness. In terms of the validity evidence based on the *internal structure* of the measuring scales, factor analysis, item-total correlations were performed to discriminate the items that are measuring a different concept than the scale/subscale as a whole and should be discarded from the final data analysis. According to Pallant (2016), such items normally demonstrate low factor loadings (below .3) in factor analysis and weak item-total correlation (between -.3 and .3). Finally, *convergent and discriminant evidence* was obtained through the correlation matrix of the variables; any illogical relationships if detected, would be scrutinized for identification of invalid data. Results of validity tests for the quantitative data can be found at the beginning of each relevant Results chapter.

5.3.2. Documents

The study used documents as a source of qualitative data, beside the quantitative dataset generated by the questionnaire survey described above. According to Creswell (2015), documents include both public and private records, ranging from State laws, government decrees, and newspapers to personal notes and diaries, that researcher obtains about the research site or participants. Demonstrating several important merits, this research instrument has been strongly advocated by a number of educational and social scientists. Creswell (2008) argues that documents represent "valuable information" about the researched phenomena because they contain the words of the insiders, who usually have given careful thoughts to them (p.231). Compared to other types of data such as observations or interviews that require transcription, documents also exist by themselves and are ready for analysis (Creswell, 2015). Several researchers call documents "windows on to social […] realities" (Bryman, 2012, p.554), "a distinct level of realities" (Atkinson & Coffey, 2011) and comment on the method of documentation as being unobtrusive, stable, and offering a broad coverage (Lincoln & Guba, 1985). In mixed-methods research, documents are most useful in supplementing and backing up other sources of empirical evidence (Yin, 2014). In this study, documents were used to develop general understanding of the tertiary teacher research situation at the national level, and to explore the factors impacting teachers' motivation for research at the individual level.

To achieve these two purposes, the current study collected and analysed both public and private documents. At the wider level, documents needed comprised government's regulations and laws concerning university research, and tertiary institutions' official papers containing teacher research responsibility such as academic job descriptions, academic staff recruitment, requirements and assessment. Most of the documents were downloadable from relevant websites or obtainable during the field trip in Vietnam. When an English version of a document was not available, the Vietnamese original was translated into English before analysis. Information from these documents provided the researcher with relevant background information for finalizing the research questions, and also helped to put the participants' responses into context.

At the individual level, the researcher gathered 17 diary entries from three English teachers over three months to seek answers to the research question of what factors sustained/eroded their motivation for research. Collecting diaries, as Bolger et al. (2003) summarises, means asking research participants to record regular accounts of relevant aspects of their daily lives. This method "allows researchers to capture the particulars of experience in a way that is not possible using other methods" (ibid. as cited in Dörnyei, 2007, p.156). Specifically, diaries let people "be heard by their own terms" (Bell, 1999, p.266) and maximize the accuracy of data because diary keepers tend to record recent rather than distant events at the time of writing their entries (van Eerde et al., 2005). According to Dörnyei (2007), diary studies are furthermore particularly sensitive to investigations into "temporal variation in dynamic processes" (p.157) because they involve more frequent recordings of data and thus can encapsulate fluctuations with higher fidelity than many other longitudinal designs. With such multiple benefits, diaries warrant a suitable data collection instrument for the current study which aims specifically at capturing how teachers' motivation longitudinal changes.

In terms of categories, Bolger et al. (2003) name three types of diaries according to when participants are expected to make the entries: the interval-contingent (requiring respondent to write on a regular basis, say every Sunday for example), the signal-contingent (using signals to prompt participants such as a phone call to complete a diary entry), and the event-contingent

type (asking for self-report at every occurrence of a specific event). Interested in the whole motivation process, the current study chose the first design with the interval time between two diary entries being two weeks, which resulted in six entries to be completed by each participating English teacher over the three-month data collection period. Given the tentative length of the research projects conducted by the participants at the time of data collection ranging from three to six months, such time intervals and number of entries were deemed sufficient to capture the major part of the participants' motivation processes.

It is also important to note that, the diaries collected for the current study were not strictly personal diaries, but "solicited" ones, that is, the accounts were produced by informants as per the researcher's request and guidance based on the research objectives (Bell, 1999). Participants of the current study were not only well-informed about the purposes of the study, the data collection protocol before joining the study, but also provided with a structured entry format with key questions concerning (i) their general description about the research experience in the previous fortnight (progress, negative aspects, positive aspects) (ii) their motivation for the project at the time of writing and (iii) their intention to continue/terminate the project (iv) the reasons for their motivation, intention, and research progress (The detailed guided diary entry format can be found in the Appendix 11). In addition, the researcher also sent gentle reminder check-ups to participants to make sure they did not miss any interval. Such measures, according to Dörnyei (2007), would ease the diary writing process for the participants, facilitate their commitment, and ultimately increase the quality of the data collected. Finally, to enhance the usability of diary entries for research purposes, the researcher followed McKay's (2009) advice to regularly request participants to revise their completed self-reports for meaning clarifications (e.g. elaborations and explanations on their recorded feelings) and for a public version of the diary (e.g, the use of full sentences so that excepts of the diaries can be included in the thesis).

5.3.3. Semi-structured interviews

Like documentation, interviews represent an effective means of data collection (Creswell, 2015; Dörnyei, 2007; Johnson & Christensen, 2017; Silverman, 2013). An interview (as a research

instrument) is a "professional conversation" in which an interviewer (usually the researcher) asks questions of an interviewee (the research participant) (Johnson & Christensen, 2012, p.198) with the purpose of obtaining the interpretations and descriptions of the researched phenomena from the viewpoints of the persons asked (Kvale, 1996). As Dörnyei (2007) points out, interviewing comprises a frequent part of the social life of most people, the shared cultural knowledge, a "known communication routine", and therefore works well in yielding rich data on diverse research topics in a variety of contexts. The presence of the interviewers also allows for immediate probing for response clarification or additional information, which is not possible in many other data collection methods (Creswell, 2015; Dörnyei, 2007; Johnson & Christensen, 2017). In fact, interviews allow researchers to enter the respondents' perspectives by exploring their hearts and minds (Patton, 2002). In motivation and cognition research in particular, interviews have been strongly supported. Kim (2009) and Ushioda and Dörnyei (2012) maintain that qualitative research with especially interview techniques is superior to its quantitative counterpart in capturing the dynamic and temporal feature of motivation. On reviewing 24 recent studies, Borg (2012) reported a prominent use of interviews to "productively deepen" the quantitative analysis of language teacher cognition (p.18).

In this study, interviews helped the researcher obtain in-depth information about teacher motivation and provide an additional source of data on teacher cognition to triangulate with and add depth to the questionnaire survey responses. Regarding teacher motivation, two interviews were conducted with each of the three teachers participating in the sub-set of the study that focuses on their research motivation. The initial interview was done two weeks before their first diary entry to examine their initial motivations for conducting their own research, and the other one two weeks after their last diary report, to elicit teachers' overall reflections on the factors that had longitudinally sustained or eroded their research motivation. As supplementary data for the questionnaire survey, follow-up interviews were conducted with selected survey respondents on four matters: (i) their explanation for rating an activity as research or not research (ii) examples of research they had done (if any), (iii) their attitudes towards research and (iv) the

difficulties facing them while doing research, which were to augment the quantitative analysis of teachers' conceptualization of research, teachers' attitudes towards research, and teachers' context beliefs about doing research successively. English department heads of 27 universities where the paper questionnaires were distributed were also interviewed about their general attitudes towards teacher research engagement, their evaluation of the level of research engagement among EFL staffs, their reflection on the factors contributing to the reported levels of teacher research engagement, and the current and future research regulations and policies in the department and the institution. Insights from the department leaders were compared with teachers' questionnaire responses to enrich interpretations of results on teachers' reported research involvement and context beliefs about doing research.

Regarding the types of interviews, the present study utilized multiple approaches to maximize the amount of data gathered in the allowed cost and time (Creswell, 2015). First, open ended items ("Others…") were added to the "context beliefs about doing research" scale, and "research engagement self-report" part of the questionnaire to identify any options that participants may have but lay beyond the existing closed-ended items. One-on-one interviews were conducted with all 27 department heads and three teacher participants of the motivation study during the field trips, while phone and email interviews were used to follow up with the survey participants due to their large number and wide dispersion in locations.

For one-on-one department head and follow-up teacher interviews, the researcher chose the semi-structured format, which means that the questions are partly based on a general pre-determined framework, but interviewees are still encouraged to extend or elaborate their responses to allow for new topics to emerge (Richard, 2009). This design was selected because it is able to probe the researched topics in-depth while still flexibly allowing unexpected important issues to open up (Richard, 2009). In other words, it "offers a compromise between the two extremes": the structured interview that is strictly standardized and might limit both the depth and breadth of the informants' story on one hand, and the unstructured one that is open-ended, informal, and may produce too much unfocused data on the other (Dörnyei, 2007, p.136).

Besides, for cases when the researcher has developed sufficient overview of the researched domain and formulated the research questions in advance of the data collection phase as in the present study, the semi-structured design is deemed the most suitable (Dörnyei, 2007).

To assist the conduct of one-on-one and phone interviews, an interview guide, or an interview protocol for asking questions and recording answers was prepared as recommended by Meriam (1998), Dörnyei, (2007), and Creswell (2014). Three protocols in total for interviews with (i) the department heads, (ii) the follow-up questionnaire respondents, and (iii) the teachers participating in the motivation research, were designed in both English and Vietnamese (see Appendices). Each protocol contained the main purposes of the interview; the key topics to be investigated in the interview; the main questions used to elicit information for the topics; the probes for each main question to invite further details, elaboration, explanations, and clarifications (if needed) from the respondents; and finally, spaces to take notes of the responses between questions (Creswell, 2014). As the major component of the interview guide, the question types and probes were paid special attention. Patton (2002) suggests that a rounded picture of the participant's view or experience of any given topic can be obtained by asking *content* questions that tap into six main dimensions, namely experiences and behaviours (e.g. What have you been doing as a department head to promote teacher research in your department?), opinions and values (In your opinion, how important is doing research for professional development of tertiary ESL teachers?); feelings (e.g. Are you satisfied with the current level of teacher research engagement in your department?); knowledge (What are the current policies of your institution and department that encourage ESL teachers to do research?); sensory information (i.e. what participants have seen, heard, tasted, smelled, etc.); and demographic or background information (i.e. what is your highest level of education?). Patton (2002) also mentions two useful probing techniques to increase the depth and richness of responses to the content questions: the detail-oriented probes asking respondents to elaborate on a salient content words used in their previous answers (e.g. you mentioned the word "rigid" twice when describing the research regulations in your university, could you elaborate?), and the

contrasting probe asking respondents to compare a particular experience/action/term/ to other, similar concept. Meriam (1998), on the other hand, classified interview questions according to their *purposes* and include both main questions and probes in the classification: hypothetical questions to open ways for descriptive information, ideal position questions for judgmental and attitudinal answers, the interesting "devil's advocate" questions to help interviewees divulge their thoughts on sensitive issues, and finally interpretive questions to confirm information and to bid for elaboration where necessary. Besides these, Dörnyei (2007) added that the final closing questions, even as simple as "Is there anything you would like to add?" can possibly add extra richness to the data. The researcher included all of these suggested types of questions and probes where possible for each interview protocol and piloted all the three interview guides with a department head and a tertiary ESL teacher before conducting the official "live interviews" with the research participants.

Throughout the official interviews, the researcher employed several strategies to ensure the quality of the obtained data. To encourage interviewees' open sharing, the researcher tried to establish rapport with them at the beginning of the interviews by clearly explaining the reasons for the interviews, the purposes of questions, how the data would be treated and used, and asking them for permission for their answers to be recorded. Vietnamese was used in all interviews so that participants could easily communicate their personal meanings. To avoid bias in the interviewees' response, the researcher took a neutral stance during the conversation. For example, she let the interviewees pace the talk without being rushed or interrupted. The "climate" of the interviews was also made as comfortable and "pressure-free" as possible. Finally, to fully catch the details and nuances of the data obtained, all the interviews were audio-recorded with participants' consent. Each interview, which lasted for about 30 to 45 minutes was then transcribed verbatim, and translated into English for analysis.

5.6. Data collection

The data collection procedures were given special attention in this study because the quality of the data collection procedures or a systematic collection of data can have significant impact on

the research quality (Bereday, 1964; Bryman, 2012; Dörnyei, 2007). In all stages of data collection, the researcher maintained a standard procedure in administering each data collection instrument, be it the questionnaire, interviews, or diary reports. Such standardization is crucial in minimizing the potential bias introduced to the study due to varying procedures (Creswell, 2015). In addition, to assure systematic and quality data collection, this study considers ethics approval attainment and procedures to collect data using each of the instruments described in the previous section. The information concerning ethics approval and specific data collection procedures is presented in the following sub-sections.

5.5.1. Ethics approval attainment

In the conduct of empirical research, it is generally suggested that ethics be treated as "a *primary* consideration rather than an afterthought and should be at the forefront of the researchers' agenda" (Creswell, 2015, p.23). Since the current study furthermore involves human participants, the researcher thus contemplated ethical issues before, during, and after the study. Ethics applications were carefully planned and submitted for approval to the Human Ethics Research Committee, Macquarie University where the researcher was based before any data was collected.

In the applications, all potential ethical issues in data collection and data reporting and data storage were well addressed. For instance, the researcher assured guarantee of participants' voluntariness, information privacy and confidentiality. All participants were provided with a participation information and consent form (see Appendices) which clearly states the purpose of the study, its potential risks, what is required of the participants, and how their information is used and kept. This form was designed in accordance with the standards stipulated by the Human Research Ethics Committee, Macquarie University. Respect to the data collection sites (the universities where the researcher visited) and the participants (teachers and the department heads) was assured at all stages of the data collection. These included for example, gaining permission to access the research sites prior to collecting the data, minimizing the disturbance to the normal working schedule while collecting the data, and leaving the complete freedom to the

individuals to opt out of the study at any time even when they had already signed the consent form. All in all, the study carefully consulted and strictly followed relevant literature and guidelines for the ethical conduct of empirical research, especially the standards set by Macquarie University where the researcher was based. As a result of meeting all the ethics requirements, two ethics applications that cover two major sub-sets of the study on teacher cognition and teacher motivation were granted approvals (numbered 5201500833 and 5201600169) by the Human Research Ethics Committee, Macquarie University on 19 November 2015 and 23 March, 2016 respectively. Upon the attainment of ethics approval, the researcher officially started to collect data for the study. The data collection procedures that followed the ethics approval are reported below.

5.5.2. The procedures of mixed data collection

3.5.2.1. Phase 1: Quantitative data and supplementary data collection

Upon the attainment of ethics approval, the researcher arranged a field trip to Vietnam to collect the quantitative data (survey data) and the supplementary data (department heads interviews and public documents) for the study. To save time and maximize the amount of data gathered in a data collection time period, the researcher decided to *concurrently* collect these two types of data. During the field trip, department heads were interviewed, teachers were surveyed, and public documents were collected.

Prior to the field trip, the researcher established contact with the English department heads of the targeted universities via an email letter of introduction (see Appendices). The letter introduced the researcher herself, the purpose of the study, asked for the leaders' permission and support for her data collection field trip to their universities, and also invited them to answer several interview questions. The questionnaire, participation information and consent form, and the list of interview questions for the leaders were also attached to the email for consideration. Successful communication with 27 department heads allowed the researcher to officially commence data collection at the respective universities during the field trip, which last for two months, from March 30 to May 31, 2016.

The order of visits to the universities and the tentative schedule to collect data at each site was planned based on the consent of the leaders, their availability for face-to-face interviews, the time of the EFL staff meeting at each campus (if any), and the location of the universities. Eleven universities in the South of Vietnam were visited first because they were located around Ho Chi Minh City, the first stop in the researcher's flight route between Australia and Vietnam. The researcher then flew to Hanoi to visit 13 Northern Vietnam universities located around this city before travelling to her hometown in Central Vietnam to conclude the field trip with three universities there. At each region, universities with earlier consent from department head and earlier staff meetings were prioritized for visits. The researcher interviewed the department heads at their convenience and conducted the questionnaire survey with the teachers at the staff meeting with the introduction and coordination of the department heads. At universities where no EFL staff meeting were held during the data collection time period, the researcher made several attempts to distribute the questionnaires to the teacher participants in their staff room during their break time until all teachers with prior consent received the questionnaire. In this case, the teachers could choose to return the completed questionnaire in person on the same day to the researcher or leave them (in sealed envelopes provided by the researcher) to the department assistant, who would pass them on to the researcher in her following visit. Concurrently with the paper-based questionnaire distribution, the researcher posted the online version of the questionnaire on the social network groups that subscribe tertiary EFL teacher membership to invite for voluntary participation from eligible teachers. While it is impossible to decide the response rate of the online questionnaire, the paper-based version yielded a response return rate of 95.3 % (469 out of 492 teachers who received the paper questionnaire returned them to the researchers).

Phase 2: Qualitative data collection

As indicated in section 3.3.2., Phase 2 followed the analysis of the quantitative data collection in Phase 1, and consisted of two main parts: the follow-up interviews and written emails with the survey respondents who registered their willingness to participates in Phase 2, and the

longitudinal data collection via two interviews and 6 diary entries for the sub-study on teacher motivation.

Regarding the first part, the researcher identified the participants for follow-up phone interviews and written emails by the information that survey informants left at the end of the questionnaire (by ticking the relevant box and noting their email addresses and/or phone number). Being aware that phone interviews would yield a higher response rate and allow for immediate probing of further details, the researcher made phone calls to follow up with the participants whenever possible; written emails were only used with those teachers who did not give their phone numbers. As indicated earlier, the researcher managed to conduct 25 phone interviews out of 41 teachers contacted by phones (response rate 60%), and collected 21 complete responses to 99 follow-up emails sent (response rate of 20%).

In respect to the longitudinal collection of interviews and guided diaries for the sub-study on teacher motivation, the researcher sent out research participant recruitment advertisements (via email) to her colleagues at Hanoi University as soon as the ethics application was approved and the instruments were piloted and finely revised. The invitation email described the research, the criteria for participant selection, a further request to introduce the research to other interested teachers, was attached with the participant information and consent form. The researcher then conducted a screening interview by phone with 10 teachers who replied with interest and willingness to participate in the study (9 of them were Hanoi University staff, and one was from another university and was introduced to the researcher by a colleague). In these screening interviews, the participant selection criteria (e.g. the participating teacher must be doing a research project, which had not progressed for more than a month), and what were required from the participants (e.g. longitudinal commitment for over 3 months) were focused on to ensure that the right teachers were selected. As the researcher expected, only five of them actually fitted the predetermined criteria for selecting participants of the study and were then invited to proceed to the official data collection phase. While the schedules for the initial interview had been successfully arranged with these five selected teachers, only four of them were actually

interviewed according to the schedule. The other one was busy at the scheduled interview time, and withdrew from the study at the researcher's following attempt to conduct the interview. Of the four teachers who finished the initial interviews, three of them fulfilled the whole course of data collection and were therefore included as official participants in the study. In total, the collection of the qualitative data on teachers' motivation took about 5 months to be fully collected, beginning from the conduct of the first initial interview on June 6, 2016 to the completion of the last final interview on November 2, 2016. Due to geographical distance (the researcher was in Australia during Phase 2), the researcher conducted most interviews by phone, and collected the diary entries by means of emails.

During phase 2, all interviews were conducted by the researcher herself and the language in use was Vietnamese to allow for easy communication and free expressions of feelings. The conversations were all audio-recorded, transcribed verbatim before being translated into English for data analysis. The translation was performed by the researcher and a sample of translated data was audited and confirmed for accuracy by a professional translator before the researcher commenced the data analysis.

5.7. Data analysis

The previous sections presented how and what mixed data was collected. This section detailed how the gathered data were analysed. Because "ultimately, everything will depend on the quality of […] data analysis" (Silverman, 2010, p.64), proper contemplation was invested into the assurance of data analysis quality for this study. The section firstly provides an overview of the purposes and sequence in the mixed data analysis process of the study, then describes the specific procedures and techniques employed for the analysis of quantitative data and qualitative data respectively. The final part of the section presents the strategies for connecting quantitative and qualitative results to answer the research questions and the measures for assuring validity of mixed data and results.

5.7.1. Overview of purposes and sequence in mixed data analysis

As in almost all other kinds of research, the sole purpose of data analysis in this study is to address the research questions (Berg & Lune, 2012; Creswell & Clark, 2011). The procedure of data analysis in this study, however, followed three distinct steps suggested by Creswell and Clark (2011) for the research of the particularly explanatory sequential mixed methods design: (i) analysing the quantitative data using quantitative techniques, (ii) analysing qualitative data using qualitative techniques and (iii) connecting the mixed data and results using connected data analysis strategies. The quantitative data analysis focused on addressing the research questions which are of quantitative inquiries by nature (1a, 1d, 2c, 3a, 3b, 1d), the qualitative data analysis aimed to answer the research questions which are of qualitative inquiries by nature (4a, 4b) and the mixed data analysis was to respond to the research questions which are of mixed methods inquiries (1b, 1c, 2a, 2b, 3a, 3b). An indicated earlier (Section 5.3.2.), these three distinct steps were performed in a sequential, linear manner. The quantitative data was analysed first, then came the analysis of the qualitative data. The third, and last phase analysed and made interpretations of the connected results.

The four following sub-sections will elaborate on each of the above three steps respectively, and the strategies employed to validate the mixed data and results.

5.7.2. Quantitative data analysis

The analysis of the quantitative data collected via the questionnaire survey was undertaken with the aid of SPSS 21 (the Software Package for Statistical Analysis in Social Science) and proceeded through three steps: (i) screening and cleaning the data (ii) preparing the variables for analysis, and (iii) choosing and using the statistical techniques for analysis. These will be clarified below.

5.7.2.1. Cleaning and screening the data

To prepare the quantitative data for analysis, the researcher first converted the raw data collected from the returned questionnaires into numeric values usable for quantitative analysis. Once all the responses, each with an assigned numeric value, had been entered into an SPSS data sheet,

the dataset was screened and cleaned for any data entry errors. One important consideration for this step is concerned with how to treat missing data, i.e. incomplete responses. Since it is rare to obtain complete data in research with human beings (Pallant, 2016), it is not surprising that there were 110 questionnaires (19.2%) returned to the researcher with one or more missing values. Since discarding all incomplete responses would severely and unnecessarily limit the sample size (Pallant, 2016; Miller et al., 2002) (which is the case with the current study), plus SPSS does include several options for handling missing values during data analysis, the researcher decided to include all the incomplete responses in the dataset and subsequently chose the best missing value handling strategy for each statistical technique in use (details are given in 3.7.2.3 below).

5.7.3.2. Preparing the variables for analysis

The final task in the data preparation step is to prepare the variables for analysis. As indicated earlier, one important aim of the questionnaire was to measure five variables of interest: four independent variables (IV1--teachers' research efficacy; IV2--teachers' context beliefs about doing research; IV3-- teachers' attitudes towards research, and IV4--teachers' research motivation) and one dependent variable (1DV—teachers' level of engagement in research). While the dependent variable had only one indicator and thus can be used directly for analysis as it was, each of the four independent variables had a large number of indicators and thus needed the calculation of total scale/sub-scale scores.

For IV1, 2, 3, this was undertaken through two steps as suggested by Pallant (2016): (i) reversing any negatively worded items (scores for items 46, 47, 48, 49, 54) then (ii) adding together scores from all the items that make up the subscale or scale (items 11 through 26 for self-efficacy scale – IV1; items 28 through 41 for context belief scale – IV2; items 42 through 45 for "usefulness" subscale of attitudes; items 46 through 49 for the "anxiety" subscale of attitudes; items 50 through 52 for the "positive proposition" subscale of attitude; and items 42 through 52 for attitude towards research scale – IV3).

The total score for the teacher motivation scale (IV4), was calculated using the formula in Tremblay et al. (2009): IV4 = (3*IM) + (2*INTEG) + (1*IDEN) + (-1*INTRO) + (-2*EXT) + (-

3*AMO) whereby: IM stands for intrinsic motivation; INTEG - integration; IDEN – identification; INTRO - introjection; EXT - extrinsic motivation; and AMO – amotivation. Since External motivation variable has two items, a single score for EXT to be used in the formula was obtained by calculating the mean of scores for these two items. In addition to the total scale score, two sub-scale scores for Research Self-Determined motivation (R-SDM) and Research Non-self determined Motivation (R-NSDM) were also calculated. A score for R-SDM can be obtained by adding up the means of each of three self-determination motivation items (i.e. IM, ITEG, IDEN); similarly, a score for R-NSDM can be obtained by summing the means of each of three non-self determined items (i.e. INTRO; EXT, and AMO). The whole process produced four total scale scores for the four IVs; three total subscale scores for three latent indicators of teachers' attitudes towards research scale; two sub-scale scores for two latent indicators of teachers' research motivation.

5.7.2.3. Choosing and using statistical techniques for analysis

In choosing the right statistical techniques for analysis, the present study carefully considered three key factors as suggested in several renowned statistics texts (Hair et al., 2010; Pallant, 2016; Bryman, 2012): (i) the types of the research questions that the analysis aims to address (to describe, to relate, or to compare variables); (ii) the nature of the variables (metric or non-parametric; categorical, ordinal or continuous); and (iii) the sample size and the prerequisite assumptions that must be met for each of different statistical techniques. With these factors taken into account, the analysis of the quantitative data in this study was undertaken at two levels with the respective statistical techniques as follows.

At the preliminary level, *descriptive statistics techniques* were used to explore the general trends in the data. The descriptive results (mean, standard deviations, frequency, range of scores, skewness and kurtosis, Kolmogorov-Smirnov) were used for three purposes: (i) to develop the profile of the sample (ii) to address "descriptive" research questions (RQs 1a,b,c; 2a,b; and 3a); and (iii) to check for any violation of assumptions underlying the techniques to be used in the

second stage. Procedures to assess the reliability and validity of the questionnaire (factor analysis, correlation matrix of variable, Cronbach's α) were also undertaken at this stage.

At the second stage, *Pearson product-momentcorrelation,* and *standard multiple regression techniques* were the main techniques used to address the "relationship" researcher questions (RQ1d, 2c, 3b). Correlation and multiple regression analysis was chosen because they both are powerful techniques that were designed and have been widely used to explore relationships among variables. While correlation is used to investigate the strengths and direction of the relationship between two variables, multiple regression technique advanced the analysis to investigating the predictability of a set of independent variables on one dependent variable. In the current study, Pearson correlation was used to explore the relationship between teacher motivation (IV3), three demographic factors (age, experience, and qualification) AND teachers level of engagement in research (1DV), while standard multiple regression (which allows all independent variables were assessed simultaneously) was used to explore the composite effects of three cognitive factors as three independent variables (attitudes towards research-IV1; research efficacy-IV2; and context beliefs about doing research-IV3) on teachers' level of research engagement as one dependent variable. However, unlike descriptive statistics, which is straightforward and applies to almost all types of quantitative data, t-test, ANOVA, Pearson correlation, and standard multiple regression techniques used in this second stage carry with them certain assumptions about the data, and their use when the assumptions are violated may seriously invalidate findings (Mertler & Vannatta, 2004; Pallant, 2016). Thorough consideration was therefore invested into the assumptions underlying these four techniques and the extent to which they are met by the current dataset. Details of such consideration and the justification for the final choice of t-test, ANOVA, Pearson correlation and standard multiple regression for data analysis in this study are discussed below.

First of all, parametric techniques requires an adequately large sample size, at least 30 for correlation (Creswell, 2015), 100 for ANOVA and t-test (Pallant, 2016) and over 50+8m (whereby m = the number of independent variables) for multiple regression (Pallant, 2016;

Tabchnick & Fidell, 2007, p.123). Given a sample size of 568 and 3 independent variables used for multiple regression, the current study did not violate the sample size requirements for all the chosen statistical techniques.

Second, since Pearson correlation, standard multiple regression, t-test, and ANOVA are parametric statistical techniques, they assume that at least the dependent variable is continuous (correlation and multiple regression requires all variables to be continuous), i.e. measured at interval or ratio levels whereby infinite possible values exist and the distance between two values are meaningful (Pallant, 2016; Miller et al., 2002: Laerd Statistics, 2017). The dependent variable in the current study, teachers' level of research engagement as reflected in the ratings on the five-point Likert scale of frequency, and one demographic factor, teachers' qualifications, however, is not continuous in the strict sense, but of ordinal (or ranked) level of measurement (where distance between two values are not meaningful). Although non-parametric alternatives for ordinal data are available (Spearman correlation instead of Pearson correlation, and Ordinal Regression instead and standard multiple regression; Mann-Whitney U Test for t-test, and Kruskal-Wallis Test for ANOVA), this study decided to stick to the parametric techniques for four reasons. Firstly, parametric techniques are more robust and have been advised to be prioritised over non-parametric equivalents wherever deemed acceptable (Cone & Foster, 2006; Pallant, 2016, Miller, 2002; Dörnyei, 2007). Pallant (2016) for instance, explained that non-parametric techniques, despite being less demanding in terms of data assumptions, are "less sensitive" and may fail to detect actual differences between groups or correlations between variables (p.213). Parametric tests, on the other hand, "utilize the most information", "are more likely to produce significant results", thus "more powerful than the non-parametric counterparts" (Dörnyei, 2007, p.228). Because of this "robust" nature, parametric statistics can furthermore perform reasonably well with ordinal data, especially in the case of a good sample size (Miller et al., 2002; Pallant, 2016). In fact, the use of these parametric techniques with ordinal variable measured by Likert scale of frequency is not uncommon in comparable studies (e.g. Deslandes & Bertrand, 2010; Ngo, 2014; Ren, 2016; Weiss, 2016), while very few authors are found to opt for

the safe non-parametric tests for ordinal data (e.g. Borg, 2006, 2009; Borg & Alshumaimeri, 2012). All these, together with a significantly large sample size considered, the current study maintained Pearson correlations, independent-sample t-test, ANOVA, and standard multiple regression, as suitable statistical techniques for its data analysis.

One more common concern in t-test, ANOVA, correlation and multiple regression is handling missing data. In this respect, the study chose "exclude case pairwise" option on SPSS for both procedures. This option excludes only the cases that are missing the data required for the specific procedure in use and is strongly recommended for correlation and multiple regression techniques because it makes the best use of what is available in the dataset without severely limiting the sample size (IBM, 2013; Miller et al., 2002; Pallant, 2016).

Other common assumptions underlying Pearson correlation and multiple regression were also tested when the techniques were performed on the dataset. These include (a) non-existence of outliers, i.e. extreme scores in each variables (as shown in the boxplot for each variable in descriptive statistics, Scatterplot of two variables in correlation, and the Scatterplot of the standardized residuals, MAH-1 and Cook's distance value in multiple regression); (b) linearity, i.e. variables relate to each other in a linear manner (as shown in the scatterplot in correlation, and residual plots in multiple regression); (c) normality, i.e. the data conforms to a reasonably normal distribution (by checking skewness and kurtosis, Kolmogorov-Smirnov test scores, and the histograms of scores on each variable for correlation, checking residual plots in multiple regression); (d) and homoscedasticity, i.e. the variance of variable X is similar at all values of variable Y (as shown in the scatterplot for correlation, and residual plots in multiple regression) (Laerd Statistics, 2017; Osborne & Waters, 2002; Hair et al., 2010; Pallant, 2016). The testing of these assumptions allows for the detection of any specific variables that violate the assumption so that respective remedies (e.g. removal of outliers, data transformation to obtain better normality in the distribution of value) could be applied before the actual analysis. Application of remedies in this regard is believed to "increase confidence in interpretation and predictions from multiple regression" (Hair et al., 2010, p.186). The results of assumption testing fortunately

showed only the existence of outliers in two variables (4 outliers in total research efficacy, and 5 outliers in total attitudes towards research), and the remedy applied was deleting these outliers from the dataset before actual analysis (Pallant, 2016). Other assumptions were not violated.

The final statistical assumption, which only pertains to multiple regression, concerns the problem of multicollinearity. Multicollinearity exists (and is not tolerated by multiple regression) when the independent variables are extensively correlated (Laerd Statistics, 2017; Pallant, 2016). This issue can be detected via (a) the Pearson correlation coefficient matrix of the independent variables, (Rumsey, 2009) (b) tolerance statistics, and the variable inflation factor (VIF). Correlations of less than -.7 or more than .7 in the correlation matrix, tolerance value of less than .1, and VIF scores of greater than 10 all demonstrate the existence of multi-collinearity (Laerd Statistics, 2017; Pallant, 2016; Rumsey, 2009). The values calculated for the data in this study (more details can be found in Chapter 8) bypassed all these guidelines, indicating no issue of multi-collinearity.

5.7.3. Qualitative data analysis

This section provides details about the qualitative data analysis that followed the quantitative data analysis described above. The process of analysing qualitative data comprises two main steps which are specified in turn below.

3.7.3.1. Preparing qualitative data for analysis

Initial preparation of the qualitative data for analysis, as advised by Creswell (2015), involves organizing the vast amount of data, transferring them to textual files, and deciding whether manual or computer assisted analysis is more suitable. Following this advice, the study organized its qualitative data according to its types: all public documents, all diary entries, all interviews, and all follow-up written emails. Next, the interviews were transcribed verbatim and translated into English and, together with the documents and email responses, saved as Word files, which were then imported onto NVivo, ready for analysis. Since the amount of data was huge and the financial resource for the whole project was limited, the translation of all the transcripts from Vietnamese into English were conducted by the chief investigator herself, who is proficient in

both languages. The accuracy of the translation, was, however, still ensured by the involvement of a professional translators during the translation process. The chief investigator invited a professional translator to audit the quality of the translation of a data sample and to comment on any imprecise translated texts and how to avoid them (if any). Once the quality of the translation was decided to be adequate by the professional translator, the chief investigator continue to translate the rest of the database, keeping in mind the comments of the professional translator to avoid translation imprecision. The use of a computer assisted analysis (NVivo) was helpful for the current study because the amount of data was extensive, and NVivo, which is freely available at the university where the researcher was based, is a widely used qualitative software program that efficiently facilitates the process of storing, coding, indexing, tracking, and even visualizing unstructured and non-numerical data.

3.7.3.3. Thematic analysis with coding technique

The qualitative data was analysed using thematic analysis, "a method for identifying, analysing and reporting patterns (themes) within data" (Braun & Clarke, 2006, p.79). The method was chosen for the study because it represents a generic, foundational method across qualitative approaches (Holloway & Todres, 2003; Ryan & Bernard, 2000), is widely used, and can describe the data in rich yet complex details, which then allows for interpretations of various aspects of the researched topic (Braun & Clarke, 2006).

The conduct of thematic analysis involves looking for patterns of meaning within data, classification of data extracts, and constant comparison between the data being produced with the original dataset (Braun & Clarke, 2006; Murray, 2009). Although detailed guidelines to performing thematic analysis vary, it is generally agreed that the whole process includes three main steps with *coding* being the focal technique (Braun & Clarke, 2006; Creswell, 2015; Miles & Huberman, 1994; Murray, 2009). In the first step, the researcher identified segments of data and decided a code to "tag" to each identified segment. A segment (also called a text segment) is a data extract (which can be phrases, sentences, or paragraphs) that carries a unit of meaning relevant to the phenomenon under investigation; and a code is a label (normally in words or

phrases) that describes accurately the feature and meaning of the segment it is tagged to (Braun & Clarke, 2006; Creswell, 2015; Murray, 2009). Codes can be stated in the participants' words (in vivo codes), phrased in educational terms or written in the researcher's own words (Creswell, 2015). Segments of data conveying the same meaning are given the same code, and a new code is created and assigned to any new segment whose meaning does not fit in the codes previously created. When the whole data set was coded, the second step called "categorization" or "thematization" of codes began. In this stage, the full list of codes created in the first steps were compared and contrasted so that redundant codes were collapsed, similar and related codes were pulled together to form categories or themes. The researcher also went back and forth several times between the code lists and the original data to see whether any new codes were emerging. The outcome of this stage was a small and manageable number (from five to seven) of themes, each of which consists of "related codes aggregated together to form a major idea" (Creswell, 2015, p.244). The final step is reviewing the set of "candidate" themes obtained in step 2. This was when the researcher identified the themes that were actually not really themes (e.g. when a theme is not supported by sufficient data), the themes that are too specific and may need collapsing into one, or the themes that are too general and may need breaking down into separate ones. These was judged based on dual criteria suggested by Patton (1990): internal homogeneity (codes within a theme should cohere meaningfully together), and external heterogeneity (different themes should be clearly and identifiably distinguished). The outcome of the final stage was a list of revised themes to be reported in the results chapter of the dissertation.

5.7.4. Connecting the qualitative and quantitative results

When two databases had been separately and sequentially analysed, the results were connected to answer the mixed-methods research questions. According to Creswell and Clark (2011), the key decision to be made at this point pertains to how the qualitative results help explain the quantitative results, or add more depth to the broad quantitative description of the researched constructs. In this regard, the study drew overall inferences concerning the explanatory connection between the results and inferences made in each of the previous phases (qualitative

and quantitative) and displayed these "meta-inferences" after the presentation of both quantitative and qualitative findings (Creswell & Clark, 2011).

5.7.5. Validity of mixed data and results

The validity of the data and results in the present study was paid special attention since validity is one "component of all good research" (Creswell & Clark, 2011, p.2010). This section reports on the procedures undertaken to ensure the validity of data, results, and conclusions of the current study.

As with other mixed methods research, the validity for this study is established with the combined evidence of (i) the validity and reliability of the quantitative data and results (*quantitative validity* and *reliability*) (ii) the validity of the qualitative data and results (*qualitative validity*) and (iii) the accuracy and appropriateness of steps and decisions in the process of connecting the two forms of data and results (*the additional validity* pertaining to the particular type of mixed methods design) (Creswell, 2014, 2015; Teddlie & Tashakkori, 2010, Onwuegbuzie & Johnson, 2006). The meanings and the measures to ensure each of these three validity "elements" are discussed below.

Firstly, quantitative reliability refers to the ability of the research instruments to generate consistent and stable scores from participants over time; and quantitative validity means the data meaningfully indicates the construct being measured (Creswell & Clark, 2014). In the present study, quantitative reliability was centred on the research instrument's (questionnaire) design and administration, and was assured by considering the past-use reliability of adapted scales, assessing internal consistency of all scales, and minimizing the factors that may result in unreliable data (details of these measures have been reported in section 3.3.1.5). Quantitative validity, on the other hand, was addressed not only at the instrument level but also at the conclusion drawing level. Validity assurance at the instrument level involves collecting three types of validity evidence: content-based evidence (judgements from experts on the extent to which the measure adequately covers different aspects of the construct), the internal-structure-based evidences (obtained via factor analysis, item-total correlations), and evidence based on the

relations to other variables (obtained via correlation matrix between variable). At the conclusion drawing level, the study considered the sample selection process before making any generalization inferences.

Secondly, qualitative validity refers to the trustworthiness, accuracy, or authenticity of the data provided by the participants; and the accuracy of the accounts of data (as expressed in codes and themes) reported by the researcher (Creswell & Clark, 2011; Lincoln & Guba, 1985). The current study employed as many measures as practical to ensure the validity of qualitative data at data collection through data analysis processes. At data collection level, the researcher was well aware of the fact that "researchers are participants in the creations of data" (p.543); that is, the questions asked, the context chosen, and the way they lead each interview all affect the kind of data obtained. Therefore, the study followed a standardized procedure in collecting the qualitative data, which included for instance, taking a completely neutral stance in all interviews, allowing the participants to pace the interviews, using the same diary template for all participants (details can be found in section 3.5 and 3.6). In addition, prolonged observation technique was also applied to the collection of the data on teachers' research motivations to gain extra trustworthiness of the data collected. In fact, the data was gathered via 6 diary reports with similar guidelines on the content entries over a period of three months. At the data analysis level, the researcher took care not to move beyond the actual meanings implied by the data to the extent of making personalized, invalid inferences (Meriam, 1998). In this respect, the current study avoided by all means "ethnocentrism", the negative tendency in qualitative data analysis whereby researchers imposed personal attitudes towards a particular group of people when inferring their experiences, leading to tainted and biased findings (Hujala & Puroila, 1998). In addition to this, the present study also employed two most popular techniques to validate its collected data: member checking and triangulation (Creswell, 2015). With member checking, the researcher asked several participants from the sample to check whether the data they gave was what they really meant, and the findings of the report fairly and accurately reflected the participants' meanings and intentions in about two months after the data collection. On so doing,

participants were given an opportunity to engage with the provided data with a fresh mind and therefore be able to confirm or correct them, helping to increase the overall trustworthiness of the data. With triangulation, the study corroborated evidence of different types (documents and interviews), from different sources (public and private, teachers and department heads), and by different processes (interviews, document collection) when analysing and "thematizing" the qualitative data. The findings, which drew on multiple sources, individual, and process as such, were expected to be both accurate and credible (Creswell, 2015). The research methodology literature also suggest two other techniques including, peer-debriefing (i.e the process whereby an external dis-interested peer was invited to probe the researchers' thoughts on all or parts of the research process) (Birt et al., 2016), or auditing (i.e. a technique that calls for the involvement of an external researcher to assess all the stages of the research process) (Carcary, 2009). The current study, however, was unable to apply them because of the time-consuming and labour-intensive nature of the two techniques and the consequent shortage of qualified researchers who were willing to help. With the implementation of multiple validation measures and techniques at different stages of the research process though, it is expected that the trustworthiness of the qualitative data of the current study was secured at an adequate level.

Finally, as mixed methods research, the present study has to address the additional validity issue pertaining to its particular design. According to Creswell (2014), validity of findings in studies following explanatory sequential approach may be compromised by (i) the wrong choice of aspect of questionnaires to be followed upon and (ii) drawing on different samples for each phase of the study (p.225). The present study minimized these threats by (a) conducting preliminary quantitative data analysis to identify important aspects in the data that needs further explanation and conduct the qualitative phase based on this finding; and (b) using the same individuals for both phases of the study (details of population and sampling has been discussed in section 3.4 above).

5.8. Perceived limitations

Despite all serious efforts to address the validity and reliabilities issues as presented in the previous section, several limitations regarding the methodology of the present study still pertained and worth acknowledging. Like other studies of mixed methods design, the limitations of this study fall within the concerns inherent in both quantitative and qualitative research.

On the quantitative part, the study is limited by the use of the self-report, cross-sectional survey. One potential issue with using self-report instrument at one point of time is common method bias, which refers to the contamination of data caused by applying a single data collection method to informants with (usually) diverse preferences of data provision methods (Chang, Witteloostuijn, & Eden, 2010). In the present study, although participation of the respondents had been made completely voluntary, some influences may still have happened to the responses provided by those who felt less comfortable with paper-based self-report questionnaires than others. As a result, the measures may have been somehow affected. Such common method bias issue is furthermore compounded by the so-called "social desirability" inherent in the self-report instrument (Tremplay et al., 2009, p.223). This is concerned with individuals who underreport certain behaviours (usually deviant ones) due to their natural inclination to deny engagement in socially undesirable actions (Tremplay et al., 2009). In this regard, scores that participants of the present study provided on negative attributes such as the research anxiety (questionnaire items 46 through 49) or research amotivation (item 63) may contain some measurement error due to this issue. Regarding the cross-sectional nature of the questionnaire, the present study is unable to make firm conclusions that the cognitive and motivational factors of interest are causal to teachers' level of research engagement (Creswell, 2008).

On the qualitative part, the limitation of study may result from the use of interviews to collect data. The first issue with interviews is the observer effect, which occurs when interviewees change their behaviours due to the presence of the researcher and accordingly report what the interviewer wants to hear, or hide useful information for the fear that the whole truth may bring them negative consequences (Murray, 2009; Bogdan & Biklen, 2003). To minimize this

limitation, the researcher had given participants the full freedom to participate in the interviews or opt out at any time of the interviews, and assured participants of the strict confidentiality of the data collected. Another issue with the interview is the likelihood that informants may not fully recall or simply were not aware of some patterns in their lives that are useful for the research. The researcher tried to reduce this weakness by sending the list of interview questions to the participants (department heads) for their consideration before conducting the interviews. In so doing, participants have extra time thinking about the questions, possibly recalling more ideas than being asked and answered at once on the spot.

5.9. Chapter summary

The chapter has provided the description and rationale for the research approach, methods, and strategies in use, as well as the perceived limitations concerning the methodology for the current study. The next chapters will report the empirical findings related to the constructs and phenomenon of interest.

PART II: THE EMPIRICAL CONDUCT OF THE STUDY

The previous part of the thesis (Part I) has explicated the background of the current study, which includes the research aims, the context, theoretical framework, the redefined research questions and the methods considered to address the research questions. This part (Part II) focuses on reporting and interpreting the results of data analysis as guided by the research aims set in Chapter 1 (Introduction), the research gaps revealed in Chapter 2 (Literature review), the specific research questions redefined in Chapter 3 (Theoretical Framework); the objective realities of Vietnamese higher education set in Chapter 4 (Context of the Study), and the selected methodology described in Chapter 5 (Methodological consideration). Comprising another five chapters (chapter 6 through 10), part II aims to analyse, report, and interpret the empirical data in order to answer in turn all the research questions. Chapter 6 addresses research question (RQ) 1, concerning teacher research engagement. Chapter 7 then deals with Question 2a, which investigates teacher conceptions of research. The next two chapters, 8 and 9, addresse respectively questions 2b and 2c, which concern teachers' research self-efficacy, context beliefs, attitudes towards research, and the impacts of these cognitive factors on teachers' engagement in research. The final chapter, 10, addresses two research questions (3, 4) centred on teachers' motivation towards research and its influence on teacher's research engagement.

Each chapter in part II follows the common flow from the presentation of the quantitative results and findings from teachers' survey, then the presentation of follow-up qualitative results and findings from teachers' interviews or structured diaries, and finally the display of the "meta-inferences" from the connected mixed data and results. In chapters 6 and 8, findings about teachers' research engagement and teachers' context beliefs were further triangulated with themes emerging from the interviews with department leaders. Information from the collected public documents were utilized where relevant to contextualise the empirical data. Demographic profile of the sample is described in the earliest chapter of part II (chapter 6); results of statistical

assumption testings are reported in chapter 6, 9, and 10; and the psychometric properties of all the scales in use can be found in four relevant chapters (6, 7, 8, and 10).

Chapter 6: Teacher engagement in research

This chapter aims to address Primary Research Question 1 and its subsidiary questions:

RQ1: What is the current status of English language teacher research engagement at Vietnamese public universities?

1a. How frequently do teachers report they do research?

1b. What kinds of research do they say they do?

1c. How do they say they published their research results?

1d. How do the demographic factors (age, experience, qualification, location, and formal research training background) relate to the degree of engagement in research teachers reported?

To meet this aim, the chapter will present the findings from section 6 and 7 of the questionnaire, follow-up interviews and written emails with teachers. The chapter starts with the description of the demographic profile of the participants obtained from section 7 of the questionnaire, then the quantitative results concerning the current situation of Vietnamese teachers' research engagement derived from survey section 6. This is followed by the presentation of relevant findings from department leader interviews for triangulation purposes. The final section of the chapter connects the results reported in the three preceding sections.

6.1. Quantitative results from teachers' surveys

6.1.1. Demographic profile of the sample – Questionnaire Section 7

As introduced in the previous chapter, the questionnaire survey of the current study was returned by a total of 568 eligible teachers, who were selected via probabilistic sampling from the population of roughly 3000 Vietnamese EFL teachers who instructed non-English major students on a full-time basis at Vietnamese public universities. Table 6.1 presents the demographic profile of these 568 research participants.

Table 6.1. Survey participant demographics

Demographics	Value	n	%	Valid %
Gender	Male	95	16.7	17.5
	Female	449	79.1	82.5
	Missing	24	4.2	-
Age (years old)	23-30	180	31.7	33.3
	31-40	255	44.9	47.2
	41-50	75	13.2	13.9
	50 and above	30	5.3	5.6
	Missing	28	4.9	-
Experience (years)	Up to 5	112	19.7	20.8
	>5-10	202	35.6	37.5
	>10-20	167	29.4	31.0
	>20-30	47	8.3	8.7
	More than 30	11	1.9	2.0
	Missing	29	5.1	-
Qualification	Bachelor's	84	14.8	15.2
	Master's	381	67.1	68.9
	Doctorate	83	14.8	15.2
	Other	4	.7	.7
	Missing	15	2.6	-
Formal research training	Yes	444	78.2	92.5
	No	36	6.3	7.5
	Missing	88	15.5	-
Location	North	317	55.8	56.7
	Central	39	6.9	7.0
	South	203	35.7	36.3
	Missing	9	1.6	-

Note: N=568

As expected, the majority of the participants (82.5%) are female, only 17.5% are male. Most of the participants (92.5%) have received formal research training while the remaining (7.5%) have not. Master's degree was the most commonly reported highest level of qualification (68.9%); at either end, the teachers with Bachelor's degree and Doctoral degree represented the same percentage of 15.2 % of the total participants. More than half of the respondents (56.7%) were located in the North of Vietnam, 36.3% in the South, and central-region teachers comprised the smallest percentage (7.0%). Teachers between 31- 40 made up the largest age group (47.2%) of the sample, the remaining 33.3% and 19.5% are made up of those under 31 or over 40 respectively. Finally, participants with 5-10 years of teaching experience constituted the largest proportion of the sample (37.5%); then came the 10-20 years-of-experience group (31%), and up-to-five years group (20.8); only 8.7% of the total respondents had taught for over 20 years.

These figures portrayed a typical respondent of the study as a female teacher, who is in her thirties, has been in the EFL teaching profession for around 10 years, was equipped with formal research training, located in the North of Vietnam, and had reached a Master degree in English language teaching or related fields. Such an image corresponds quite closely to the objective EFL context at Vietnamese public university as described in Chapter 3, testifying to the expected representativeness of the sample to the whole population as a result of using the probabilistic sampling approach.

6.1.2. Teachers' engagement in research

In the survey, teachers' research engagement is reflected in the items requiring participants to self-report on their frequency of doing research, the number of projects in the previous 5 years, and several aspects of their last research projects. Results from participants' responses are presented below under three sub-sections: the frequency of doing research, and the practices of research engagement, and the future orientation.

6.1.2.1. Frequencies of doing research

Regarding the frequencies of doing research, Table 6.2 displays a summary of 513 responses from teachers choosing from a five-point scale, with 1[3] being "never", 2 being "rarely", 3 being "sometimes, 4 – "frequently", and 5 "very frequently". As can be seen from the table, a majority of participants (81.9%) indicated that they had previously done research, compared to the remaining 18.1% saying they "never" had. Among those who had done research, most (243 teachers, and equivalent to nearly half of the total participants) said they were engaged in research "sometimes". This number is followed by that of teachers who reported doing research "frequently" (98 teachers, equivalent to 19.1% of the total respondents), and "rarely" (65 teachers, 12.8% of the total respondents). Only 14 teachers out of 514 respondents (2.7%) self-assessed their research engagement as "very frequently". Overall, as large as 78.2% of the participants belonged to the "less frequent" research engagement group (i.e. never, rarely, or sometimes doing research), while only 21.8% considered themselves as "frequent" researchers

[3]This value is interpreted from item 6.1. "Have you ever conducted research before"? A "No" response to this item correspond to a "0" value on the frequency of doing research scale.

(i.e. those who do research frequently or very frequently). Such a moderate level of engagement in research is also reflected in the below-average mean score of 2.7 on the 5-point frequency scale of the whole sample. The true meanings behind these figures, however, depend on teachers' conceptions of what is counted as a research activity. This item is therefore explored in more depth in the follow-up interviews; for instance, when a teacher said s/he did research "very frequently", what is an example of the "research" activity did s/he do? The level of research engagement reported by teachers will also be triangulated with the assessment from department leaders in their interviews.

Table 6. 2. Reported levels of frequency of doing research by individual responses

Levels of frequency of doing research		Frequency	Percent	Valid Percent
Valid	Never	93*	16.4	18.1
	Rarely	65	11.4	12.7
	Sometimes	243	42.8	47.4
	Frequently	98	17.3	19.1
	Very frequently	14	2.5	2.7
Missing	System	55	9.7	-
Total		568	100.0	100

Note: Valid N=513; Mean: 2.75; Std Deviation: 1.04; * This value is interpreted from item 6.1. "Have you ever conducted research before?" A "no" response to this item corresponds to the "0" value on the frequency of doing research.

Teachers' frequencies of doing research are also reflected in the validation item that asks teachers to indicate the number of projects they had completed in the past five years. Table 6.3 summarises teachers' responses to this item. As the table shows, 18.2% of 521 respondents had never done any projects, and the majority (57.6%) had conducted from 1-3 projects. These two groups together form the "less frequent" research-engaged teachers, which makes up 76% of the total respondents. At the other end, 19.3% had done 4 to 6 projects, and very few (4.7%) said they had done more than 6; these two groups together represent the "more frequent' teacher researchers which constitutes 24% of the total respondents. This figures proportionally corresponds to the 78.2% "less frequent" research-engaged teachers and 21.8% "more frequent" teacher researchers reflected in Table 6.1, confirming the validity of the overall modest level of research engagement the participants reported.

Table 6. 3. The number of projects completed in the previous five years

		Frequency	Percent	Valid Percent
Valid	0 projects	93*	16.4	18.2
	1-3 projects	296	52.1	57.8
	4-6 projects	99	17.4	19.3
	More than 6 projects	24	4.2	4.7
	Total	512	90.1	100
Missing	System	56	9.9	-
Total		568	100.0	

Note: Valid N= 512; * This value is interpreted from item 6.1. "Have you ever conducted research before"? A "No" response to this item correspond to a "0" value in the number of projects completed in the past five years.

6.1.2.2. The research teachers do

In addition to the frequencies of doing research, several aspects of the last research project teachers do were also examined to shed more light on the current situation of Vietnamese tertiary EFL teachers' engagement in research. Responses to the relevant questionnaire items from 472 participants with reported research experience are displayed in Tables 6.4 through 6.6, and Figure 6.1, which summarised in turn five aspects of the last research project teachers did: the length, the scale, the aim, the average number of hours teachers spent a week on the project, and the publication method.

First, Table 6.4 (the **length** of the last project) shows that most of 406 projects reported (70.7%) were of the short-term type, lasting for up to 1 year; as compared to only 23.9% taking more than 1 year to complete. The average length of the last projects teachers did was about 1.3 years (±.52 years).

Table 6. 4. The length of the last project

		Frequency	Percent	Valid Percent
Valid	up to 1 year	287	50.5	70.7
	more than 1 year	119	21.0	29.3
	Total	406	71.5	100
Missing	System	162*	28.5	
Total		568	100.0	

Note: Mean = 1.3 (year), Std. Deviation = 0.52. * This number includes 93 teachers who chose "No" for question 64 and was therefore asked to skip this item.

Teachers, however, did not spend an equal **amount of time on a weekly basis** on their last research projects. Table 6.5 reveals that the majority of 394 respondents (62.4%) devoted no more than 5 hours per week to research, while 21.6% reported from 5 to 10 hours. Only 16% of the respondents spent more than 10 hours on their last research project. Once again, these figures proportionally correspond to the 73.4% who reported doing research "rarely" and "sometimes", and 26.6% who chose "frequently" and "very frequently" for item 6.3. (see Table 6.2), substantiating the validity of the data collected. On average, the research work occupied 6.5 hours of the weekly working schedule of 394 respondents who reported previous engagement in research. If compared to the minimum requirement of about 12 research hours per week as stipulated in Decision 64/2008/QĐ-BGDĐT (Bộ Giáo Dục và Đào tạo, 2008), the number once again demonstrate an overall modest level of research activeness among Vietnamese tertiary EFL teachers.

Table 6. 5. The average hours per week spent on the last research project

		Frequency	Percent	Valid Percent
Valid	Up to 5h/week	246	43.3	62.4
	>5-10hs/week	85	15.0	21.6
	>10h/week	63	11.1	16.0
Missing	System	174*	30.6	
Total		568	100.0	

Valid N = 394; Mean = 6.5; Min = 1; Max = 24; Std. Deviation: 5.75; * This number includes 93 teachers who chose "No" for question 64 and was therefore asked to skip this item.

In terms of the **scale of the research**, Table 6.6 summarises the frequencies of the four levels at which 432 respondents conducted their last research studies: personal, departmental, institutional to ministerial. Unsurprisingly, most research conducted was within the institutional scale (37% at the departmental and a similar 36.2% at the university level). Very few projects were conducted beyond this scale, reaching the Ministerial level (only 21 projects, equivalent to 4.9% of 432 projects reported). It is interesting though to notice that as much as 21.8% of the last projects were conducted informally for personal benefits, i.e. teachers as the main investigators of those projects did not gain any financial benefits from their institution as a result of doing them.

Table 6. 6. The scale of the last projects teachers conducted

		Frequency	Percent	Valid Percent
Valid	Personal and informal	94	16.5	21.8
	Faculty/Department level	160	28.2	37.0
	Institutional	157	27.6	36.3
	Ministerial	21	3.7	4.9
Missing	System	136*	23.9	
Total		568	100.0	

Note: Valid N = 432; * This number includes 93 teachers who chose "No" for question 64 and was therefore asked to skip this item.

As regards the **purposes** of the last projects teachers conducted, Figure 6.1 illustrates the frequencies of four categories as chosen by 435 teachers who responded to question 6.7 in the questionnaire. The most common aim as can be seen from the figure was "to evaluate" an aspect of their teaching practice, which was chosen by 254 out of 435 respondents in total. "Discovery" purpose came in the second place (185 counts), then "problem-solving" (172 counts), and finally "teaching material production or compilation" (129 counts). It should be noted here though, that some teaching material compilation projects that Vietnamese tertiary EFL teachers actually did may not be research at all in a strict sense (for instance, when teachers do not produce new materials on a basis of rigorous needs analysis and experimentation). This point will be clarified in the follow-up interviews.

Figure 6. 1. The frequency of the aims of the last research projects teachers conducted.

Note: Valid N=435; Respondents can choose more than one options.

Finally, the ways teachers **published** the results of their last projects also widely varied. As can be seen from Figure 6.2, while there is a balanced mix between written and verbal forms of publication, teachers tend to choose a formal and academic approach rather than an informal way to report research results. “Oral presentation” methods (e.g. Presenting the research to the evaluation committee) were chosen 408 times in total as compared to a proportionally similar 448 times “Written” means (e.g. published in a journal) were reported; “formal” methods (e.g. Presenting the research at department formal meetings), however, were chosen 735 times, over six times more often than “informal methods” (e.g. Sharing the research with other teachers in informal meetings) (121 mentions). In addition, the sharing of research results was also more confined to within-institution (rather than outside-institution) boundary and accordingly to domestic rather than beyond-institution and international publication outlets. “Within institution” methods were chosen for a total of 420 times while “outside institution” methods were mentioned 283 times; and only 40 teachers managed to publish the research results of their last project in an international journal, magazine or forum. Notably, 16 teachers said that they did not publish their last research in any way.

Figure 6. 2. Publication methods of the last projects

Note: Valid N=427; Respondents can choose more than one options.

6.1.2.3. Future orientation for engagement in research

At the end of section 6 of the survey, all participants regardless of their research engagement experience, were asked whether they intended to conduct research in the future. Among 554 teachers who responded to this question, almost all of them (92.4%) said yes, of which 62.6% with absolute certainty ("definitely will"), and 29.8% with less assurance ("probably will"). Of the remaining 7.6% who said no or unsure, only 6 participants (1.1%) reported a total lack of intention to do research. Compared to the percentages of teachers who reported doing research before and those who reported never doing research (81.9% and 19.1% respective) as reported in table 6.2, these numbers make it reasonable to believe that research will become a more popular activity among the population of Vietnamese tertiary EFL teachers.

6.1.3. The relationship between demographic factors and reported level of research engagement

This section statistically explores the association between teacher research engagement level as reflected in their reported frequency of doing research and five demographic variables, namely age, experience, qualifications, locations, and previous background of formal research training. In other words, it aims to provide answers to research question 1d. How do demographic factors relate to the level of research engagement teachers reported?

Pearson product-moment correlation coefficient was used to determine the association between the extent to which teachers are engaged in research (as measured by the reported frequencies of doing research) and three demographic factors: teachers' age (in exact number of years), experience (in exact number of years), and the level of the highest qualification. In addition, multiple sets of one-way analyses of variance (ANOVAs) were conducted with four demographic factors as independent variables (age as recoded groups, experience as recoded groups, qualifications, locations) and research engagement frequency as one dependent variable to explore how teachers differ in the level of research engagement according to these factors. Both Pearson correlation and ANOVA were performed on age, experience (recoded into groups), and qualifications since these variables suit both statistical approaches, and the results from two different tests would help complement each other in the findings about the impact of these three

factors on teachers' research engagement. Finally, an independent-sample t-test was conducted to compare the level of research engagement reported by teachers with previous formal research training and those without previous formal research training. Results of these analyses are reported in table 6.7 through 6.9.

Table 6.7 displays the results of the Pearson correlation analysis. Preliminary analyses show no violations of the assumptions of normality, linearity, and homoscedasticity. The results as can be seen from Table 6.7 show a small but statistically significant positive correlation between how often teachers reported doing research and each of the three demographic variables including age (r=.216; N=492, p<.0001), experience (r=.227; N=491, p<.0001), and highest qualifications (r=.215, N=505, p<.0001). This means that teachers of older age, longer experience, and higher qualification tend to do more research, although such associations are not very strong.

Table 6. 7. Results of Pearson Correlations between reported frequencies of doing research and three demographic variables: age, experience, and qualifications.

		Age	Experience	Highest relevant qualification
Reported Frequency of doing research	Pearson Correlation	**.216***	**.227***	**.214***
	Sig. (2-tailed)	.000	.000	.000
	N	492	491	501**

Note: *Correlation is significant at the 0.01 level (2-tailed).

**Four cases reporting "Other" as their highest qualification were excluded from the analysis.

Concerning the one-way ANOVAs between-group comparison conducted to compare the reported levels of research engagement among teachers of different ages, levels of experience, locations, and qualifications, preliminary analyses were done to test the assumptions of non-existence of outliers (as assessed by box plots), normal distribution of dependent variable values in each group (as assessed by Shapiro-Wilk's test), and homogeneity of variances (as assessed by Levene's test). Results of assumptions testing showed no outliers, normal distribution of data for all groups, but there was heterogeneity of variances in all the four demographic variables (significance value of Levene's test is less than .05). Therefore, one-way Welch ANOVAs were conducted and reported instead of the standard one-way ANOVAs. Table 6.8 summarises the results of four sets of one-way Welch ANOVAs performed on each of the four demographic

variables mentioned above as independent variable (or factor) and reported frequencies of research engagement as dependent variable. The results as can be seen from the table are elaborated on below.

By **age**, participants with valid responses (N=492) were divided into four age groups: the 20s (n=169); the 30s (n=223); the 40s (n=71); and the 50s-and-over (n=29). The results of a one-way Welch ANOVA as can be seen from Table 6.8 indicates a significant age group difference at the $p<.05$ level in the reported frequencies of doing research: Welch's $F(3, 114.386)=7.311$, $p<.0005$. The "frequency of doing research" score increased from the 20s group (M=1.53, SD=1.05) to the 30s (M=1.83; SD=1.05), to the 40s (M=2.06; SD=0.98); and to the 50s-and-over (M=2.17; SD=0.80) in that order. Although reaching a significance level, the mean differences between groups as can be seen from these figures, were very small. Games-Howell post-hoc analysis revealed that only the increase from the 20s group to the 30s group (0.3, 95% CI[0.02,0.56]) was statistically significant ($p=.028$), so was the increase from the 20s group to the 40s group (0.5, 95% CI [0.15, 0.9], $p=.002$) and the increase from the 20s group to the 50s-and-over groups (0.64; 95% CI [0.11-1.17], $p=.011$). Differences detected between other pairs of groups (30s and 40s; 40s and over-50s) in how often they reported doing research were not statistically significant. That is, although teachers tend to do research more often at older age, the increase ceased to reach statistical significance from the 30s age group onwards.

By **experience**, 491 valid cases were classified into five groups: Up-to-five-years (Group 1, n=103); from 5 to 10 years (Group 2, n=175); from 10 to 20 years (Group 3, n=156); from 20 to 30 years (Group 4, n=46); and 30 years or above (Group 5, n=11). One-way Welch ANOVA results showed a statistically significant difference at the $p<.05$ level in the research engagement frequency scores for the five experience groups: Welch's $F(4, 65.446)=8.969$, $p<.0005$. Despite reaching statistical significance, the actual difference in means between the groups are not remarkable. Scores for frequency of doing research increased from Group 1 (M=1.42; SD=1.12) to Group 2 (M=1.63; SD=0.99), to Group 3 (M=2.01; SD=1.03), to Group 4 (M=2.07; SD=0.88), to Group 5 (M=2.27; SD=0.79), in that order. Post-hoc comparisons using Games-Howell test

reveal statistical significance in the increase from G1 to G3 (0.6; 95% CI [0.22, 0.98], p<0.0005); G1 to G4 (0.6, 95%CI [0.18, 1.12], p=0.002), G1 to G5 (0.86; 95%CI[0.05, 1.66], p=0.040; G2 to G3 (0.38, 95%CI [0.08-0.69[, p=0.005); G2 to G4 (0.43, 95% CI[0.01, 0.85], p=0.0390. The increase in the reported frequency of doing research between other pairs of groups (G1 and G2; G3 and G4; G4 and G5) did not reach statistical significance. That is, teachers tend to do research more frequently when they advanced further in their teaching career, but the increase starts to be statistically significant only when teachers reached the 10th year milestones in their teaching careers.

By the **highest relevant qualifications**, 505 valid cases were categorized into four groups: Bachelors (n=79), Masters (n=350), Doctors (n=72), and Others (n=4). The majority of participants were found in the Masters group, while the Bachelors and Doctors share proportionately similar smaller numbers. One-way Welch ANOVA results indicate a statistically significant difference at the p<.05 level in the reported level of research engagement according to their highest qualifications: Welch's F(3, 14.204)=6.439, p=0.006. The score for frequency of doing research increased from the Bachelor group (M=1.26; SD=1.15) to the Master group (M=1.8, SD=0.97); to the Doctorate group (M=2.07, SD=1.12); to Other group (M=2.25; SD=1.5), in that order. Games-Howell post-hoc test indicate statistical significance in the differences between only two pair of groups: between Bachelor and Master (0.5, 95% CI[0.17, 0.9], p=0.001); and between Bachelor and Doctors (0.8; 95% CI [0.32, 1.28], p<.0005). Other pairs of groups did not differ statistically significantly in their reported level of research engagement. That is, teachers with higher qualifications tend to do research more frequently, although the difference is not statistically significant among teachers with post-graduate degrees (Masters' and Doctorate).

Table 6. 8: Results of one-way Welch ANOVAs between-group: Age, experience, location, and highest qualification.

Reported frequency of doing research	Welch's *F*	df1	df2	*Sig.*
Age (N=492)	7.311	3	114.386	.000*
Experience (N=491)	8.969	4	65.446	.000*
Qualifications (N=505)	6.439	3	14.204	.006*
Locations (N=511)	5.993	2	102.379	.003*

* Significant at .05 level

By **locations**, 511 valid cases are distributed in three groups: the North (n=279), the Central (n=38), and the South (n=194). One-way Welch ANOVA results illustrate a statistically significant difference at the $p<.05$ level in the reported frequency of doing research among teachers from three regions: Welch's $F(2, 102.379)=5.993$, $p=.003$. Central teachers reported doing research the most frequently (M=2.26, SD=1.03); and of the remaining two groups, the North teachers demonstrate higher level of research engagement (M=1.79; SD=0.59) than the South teachers (M=1.63, SD=1.63). Post-hoc analysis using Game's Howell test showed statistical significance in the means scores for the Central and the North groups (.47, 95% CI[0.04, 0.9], p=0.027), and the Central and the South group (.63, 95% CI [0.19, 1.08], $p=.003$). However, the scores for frequency of doing research scores were not statistically significantly different between the North and the South group.

Finally, the difference in the mean scores for the frequencies of doing research between 410 teachers with **previous formal researching training** and 34 teachers lacking thereof were determined via an independent-sample t-test. Assumptions testing did not detect outliers, showed normal distribution of research engagement scores for each group, and homogeneity of variances (Levene's test $p=.53$). The result of the independent-sample t-test when equal variances assumed exhibited a statistically significance difference in mean scores for research engagement between teachers receiving previous formal research training (M=1.81; SD=0.99) and teachers who did not (M=1.2, SD=1.07), $t(442)= 3.388$, $p=.001$ (2-tailed). Teachers who were formally trained to

do research were found to report doing research significantly more often than those who were not, M=0.6, 95% CI[0.25, 0.95]). The magnitude of the difference was found at a medium level, eta squared = .025, effect size d=.61. Three more independent-samples t-tests was performed to explore the difference each of three types of formal research training (dissertation [Yes=415; No=121], non-credited student research project [Yes=132; No=365], and research methodology courses [Yes=303; No=212]) made to teachers' reported frequency of doing research.

The results surprisingly show that completing a dissertation is the only type of formal research training that did not entail a statistically significant difference in how often teachers reported doing research, $t(416.001)=3.476$, $p=.292$ (two-tailed). On the other hand, teachers who reported doing non-credited student research (M=2; SD=1.03) also had a higher mean score for frequency of doing teacher research than those who did not, (M=1.68, SD=1), a statistically significant difference of .32, 95% CI[.11, .53], $t(201.607)=2.965$, $p=.003$ (two tailed). In the same vein, teachers who reported having attended a formal training course on research methodology also had a higher mean score for frequencies of doing research than those who did not, a statistically significant difference of .33, 95%CI [.14, .51], $t(416001)=3.467$, $p=.001$ (two-tailed).

6.1.4. Summary of quantitative findings

The quantitative analysis of data collected from sections 6 and 7 of the survey has helped to capture the demographic profile of 568 participants, described their research practice, and determine the variations in the frequencies of research engagement reported by teachers according to five demographic factors. To summarize, the results reveal the representativeness of the sample to the population of Vietnamese public-university EFL teachers, who featured the predominance of female, middle-aged, Masters' degree qualified, and formally research trained professionals. In terms of research practice, responses from teachers concerning their frequency of doing research and the number of weekly research hours spent on the last projects consistently show an overall moderate level of research engagement among the participating teachers. Among teachers who did report their previous engagement in research, details about their last projects demonstrate an apparent preference for research of "evaluation" purpose, "institution"

scale (personal, departmental, faculty, and institutional), "medium" length (up to 1 year), and domestically and formally published. In the responses to the question about their intention to be engaged in research, almost all teachers indicated that they would do research in the future.

Five demographic factors, including age, teaching experience, qualifications, locations, and previous formal research training background were all found to have significant associations with teachers' research practice. Specifically, teachers' frequencies of doing research tended to increase with age, years of teaching, the highest relevant degrees they had been awarded; and the increase reached statistical significance when teachers passed their 30s, obtained a Master degree, or advanced to the 10^{th} year in their teaching career. By location, Central universities, although having the least number of teachers, exhibits significantly higher levels of research engagement reported than the South and the North institutions, where teachers share roughly similar frequencies of doing research. Finally, teachers with previous formal researching training said they did research significantly more frequently than those without formal research training. The magnitude of difference was found the most pronounced (of medium level) between groups defined by previous research training. When specific formal research training types were looked at, teachers who attended formal courses on research methodology and conducted non-compulsory student research in the past were found to be significantly more research engaged than those without these backgrounds; dissertations, on the other hand, did not make significant difference in how often teachers were engaged in research as educational professionals.

6.2. Qualitative results from teachers' follow-up interviews and written emails.

To explain, to add more depth to, and to provide extra validation of the research findings quantitatively generated via the survey as described above, 46 teachers were followed up on an exemplary "research" activity they had done before, and the obstacles they face when engaging in or trying to engage in research. This part will present the relevant themes emerging from the post-survey interviews and written emails with selected excerpts accompanying and illustrating each theme. The key phrases related to the themes will be put in **bold** for the convenience of the

readers. Participating teachers will be referred to by their name codes, ranging from T1 to T46, corresponding respectively to 46 participating teachers in the follow-up phase.

6.2.1. The research teachers do

A total of 30 teachers who reported doing research at least "sometimes" in the survey were asked to provide examples of research they engaged in. The kind of work teachers reported can be categorized into four groups: action research, academic research, partial contribution to a research project, and non-research activity, each of which will be elaborated on in turn below.

The predominant type of research reported in teachers' accounts fall within the first category of **action research** (n=24). Research of this type shares the underlying characteristic of being practice-driven, meaning that teachers do the research to tackle specific practical issues they encounter in their professional practice, and aiming ultimately to improve teaching and learning quality. Although varying in details, action research undertakings as chronicled by the participants all involved teachers reflecting on their own work, collecting and analysing data following conventional methods (qualitative, quantitative, or mixed methods), and taking or planning specific actions to improve the situation. It is not clear, nevertheless, as to whether teachers had made their research experience public; only one teacher (T7, shown below) stated clearly that she shared her research findings with others (the evaluation committee). Below are several examples of the action research teachers did:

> T2: It was one about how **the use of manga anime** may **facilitate my students' learning of new words**. I remember I was very keen on the topic because it is new, interesting, and I was struggling in finding an effective way to help my students absorb the huge amount of new words they had to study every week. It was a **mixed methods study** because I used questionnaire, observation for students and keep personal diaries at the same time to collect data about students' perceptions of and reactions to this new technique. I thought that was the first research I did on my own.
>
> T7: I did a research on **the application of "Tell me more" softwareto improve English speaking skills** of my students. I first researched about the software to know what it is, and how it functions. Then, I carried out **experimental teaching**. I had two classes, one taught with the software, and the other following the traditional teaching method.

> During 10 weeks of teaching, I used questionnaire, interviews to collect data. After 10 weeks, I evaluated students using end-of-term tests, and found that the course which incorporated the software was more motivating to students than the traditional one because of many offline functions, i.e. students do not need internet connection to use it. My project was evaluated as "Excellent" by the **evaluation committee.**
>
> T8: I did a research study about **the difficulties of learning new words** among my students. I used **questionnaires** to collect data. Based on the information I get from the data, I **propose practical ways** to help students learn new words better.
>
> T10: It (the research) was about **the benefits of using portfolio** in teaching writing for the first year students at my university. I used **students' portfolio** as the main source of data, and also **interviewed** them about the advantages and disadvantages of portfolio compared to the traditional method. The results suggest **the suitability** of using portfolio for my students and **how to use it effectively**.
>
> T18: I have recently done a research project that aims **to design new teaching materials** that are suitable for the course, students, and time frame of the course. The currently used materials are supposed to be used for the whole academic year, but now, the courses are credit-based and students are required to spend more time self-study at home. We therefore have to design the new materials so that students can manage to self-study besides class hours and class meetings can be effective. We **surveyed** students first, used the results as a reference to design the materials, **trial-taught** the new materials, and **surveyed** students again about it.

Academic research was embodied in one example given in the teacher interviews (n=1). As distinct from the action research type described above, this instance of academic research is theory-oriented, deriving the research problems from the literature, or theories, and aiming to contribute to the existing literature or theories besides the practical application to classroom teaching and learning. It was the following one:

> T13: What I did was to design a syllabus for an English language course for IT students […]. I based my research on **a theoretical framework**. I designed the course, tried it out, and conducted questionnaire surveys and interviews to collect students and teachers' feedback to see what worked and what didn't. The results help me to **improve the course** I designed, and **propose a modified course model**, which is more context specific context than the one in the theoretical framework, and which can be applied in the contexts similar to my university.

In another case (n=1), one teacher self-assessed her engagement in research experience as **partial contribution in research project**, i.e. the teacher did not participate in the whole

process but only performed one among several tasks involved in the conduct of the research. This teacher noted:

> T9: I was actually a **research assistant**. I **collected data** for the project. I have not been a chief investigator of any project before, but I participated in different **parts** of research studies to pick up some experience of how to conduct research.

The rest of the reported items (n=3) were those knowingly characterised as **"non-research"** activities by the teachers who reported them. The key features of these activities that teachers based on to distinguish them from "real" research are "small scale", "not […] formally", "informal", "only interviewed", "informal". These can be found in the following excerpts:

> T14: Given the **small scale** of the project, I know it is **not really research**. What we did is to compile teaching materials because there are new subjects every year or because we are not satisfied with a textbook of a certain academic year and feel the need to renovate it to make it more suitable for students […] I did collect data about the effectiveness of the book, but did not do it formally. I **only interviewed** students about their opinion about the existing materials, observed how students are doing with the materials every day, and also based our decisions on the results of the tests they do.
>
> T23: I am **not sure** what I did **was a "real" research**. It was just a **small-scale** investigation. The aim was to explore students' attitudes towards writing in groups. The participants are nine first year students and I interviewed them to collect data. I used the findings to inform my application of group work in my writing lessons.
>
> T26: To be honest, except for the Bachelor and Master thesis, I **haven't done any formal** research. What I did may be called **informal** action research to support my teaching. […] Whenever I find anything ineffective in my teaching, I think about it, note it down in my reflective journal, and tried to do something different in the next class, and continue to evaluate its effectiveness.

It is surprising though to notice that the first two among the three above activities that teachers considered "non-research" can actually fit in the broad sense of what "teacher research" really is (see chapter 1 for definitions); that is, they comprise basic elements of a systematic inquiry such as collecting data to identify the problem of the current situation, implementing a change to address the problem, and observing the effects of the changes. Only the last one, which was individual, private, and thoughtful reflections on teaching and did not involve formal "data" collection and analysis, can be non-synonymized with "research" as systematic inquiries.

Overall, teachers' accounts of the research activity they engaged in has added one more aspect to the current situation of teacher research engagement: action research as the dominant type of research teachers tend to conduct. Besides, the follow-up interview also added extra validity to the quantitative findings since most instances teachers described, including those aiming at compiling teaching materials, exhibit the features of "real" research. This means that the frequencies of engagement in "research" they reported in the survey are credible and probably not excessively inflated. The following sub-section will continue to report on the obstacles teachers said they faced when doing/considering doing research.

6.2.2. The obstacles to teachers' engagement in research

In the post-survey follow-up phase, 46 participating teachers (regardless of their reported frequencies of doing research) were also asked to recount the difficulties facing them when doing research or trying to do research. Overall, both contextual and personal barriers were reported in teachers' responses with more emphasis being put on the contextual ones. Although numerous, the obstacles can be categorized into six broad themes: research resources constraints, an inefficient research organizational structure, ineffective research policies, a young research culture, the challenges inherent in the research conducting process, and personal limitations. Each of them will be presented with illustrating extracts from teachers' interviews below.

The first theme, the **research resource constraints**, comprises five sub-themes: *time*, *funding*, *reference material*, *infrastructure*, and *human resource*. Among these five, *limited research funding* emerged as the most prevalent. According to the interviewed teachers, not only is the financial support restricted to large-scale projects (from institutional level), it is also disproportionate, if not negligible compared to the volume of time and effort required of teachers in a research study. The stories told below portrayed vividly such a situation:

> T1: In my university, **only** when teachers do a project at **the university levelor above** can they get access to funding, which is counted in millions of Vietnam Dongs (VND). […] Concerning the budget, **8-10 million VNDs** (about 360-460 USD) would normally be **the maximum amount** they would allocate for a project at the university level; this is not to mention they always find **every possible way to cut down** our proposed budget. For example, for my project, which investigated how facebook is used to teach

> B1 vocabulary to non-English major master students, I planned to pay each participant 30,000VND (about 1.4 USD), which is supposed to cover their internet usage cost, because they must have internet connection to use facebook; but the University rejected this item and commented on my proposal: "The campus internet is freely available for them to use"; they meant the free wifi on campus. But you know, the participants, who are master students, are not always on campus to use that free wifi to study; they can study anywhere they want. That's the benefit of using facebook, the flexibility in terms of learning time and places. But they (the University) just cut it, in every possible way. My planned budget is 10 million but I ended up having **only over 7 million (about 318 USD) approved**. That's all I got for the whole project that took me about **500 workings hours** to complete. What do you think this amount could help me financially?
>
> T7: […] the funding provided by the university is **not reasonable**. You know, it takes **a lot of time and effort**, usually a year to complete a research project, but when it comes to the reimbursement of the research expenses, the total amount I receive is **hardly ever above 10 million VND** (about 460USD), which is way below the actual research costs. What's more, this amount is **further divided** among team members if we do a team project. The team leader, or the chief investigator got 60% of the total funding, and the rest 40% was given to the co-authors, depending on their contribution. If a team has four teachers, each teacher ended up receiving 15% of the total funding. Teachers were also rewarded paid hours for doing research but **not much**, 60 paid hours for the chief investigator, and from 10 to 35 paid hours at the maximum for team member for a one-year project. You see, the financial support is **negligible.**

Next to funding, **time constraint** is another pressing issue that was reported to have thwarted teachers' research engagement. Almost all the interviewed teachers mentioned that their *teaching-heavy schedule* has left them too limited time to conduct any kind of research. Some teachers added *family commitments* and *financial burdens* as additional causes of their time constraints. Below is one illustrating excerpt:

> T6: I have **two kids** who are quite close in age, so just taking care of them have made me **crazily busy**. Regarding the university, I have to **teach quite a lot**, usually **20 hours a week**. And I also have to take **some extra classes** too to **earn my livings**, you know university salary. If I do research, I can have the teaching hours reduced, that's the policy. But in fact, even when my teaching hours has been reduced because of my research engagement, my actual teaching hours are **still many**, above 10 hours for sure. And as a university teacher yourself, you know, 10 hours of teaching means more than 30 hours of working per week. Then **where is the time for the research**?

Another resource constraint- **reference materials and infrastructure**- was also reported to be a hindrance to teachers' research endeavour, especially to those working in regional universities. While infrastructure is briefly described as "not good" by one participant (T8), the dearth of research materials was complained by three teachers, two working at

provincial universities with generally limited library capacity, and one working in a "city" university with supposedly bigger reference catalogue for staff but still a shortfall of English language materials. Below are relevant excerpts from these teachers' interviews:

> T7: My **biggest difficulty** is finding **reference materials**. In (the province name), the library **does not stock many books** and materials written in foreign languages, and neither does (the University name) library.
>
> T17: Well, the first **difficulty** is **reference materials**. English language materials in my university are **very limited**. What I want for doing research is **almost impossible** to be found. I normally have to go to big universities in Hanoi to search for materials. But even this **cannot always help** because access to libraries in other universities are impossible if I am not a staff member of that university. So I must say, reference material is **my biggest difficulty**.
>
> T20: I have **difficulty** finding the reference materials, because at the Academy, English is considered a foundational object, not a major one. Therefore, although the main library offers a huge catalogue, **very few books and journals** deal with English teaching and learning areas.

The final research resource that is reported as inadequate and thus causing difficulty for teachers to engage in research is the **human resource**. According to three teachers, staff members with experience in conducting research are not only few in number but also "always very busy", which limited the opportunities for young teachers to learn via team research or academic consultation. In addition, no other channels were available at the university level to facilitate teacher research. Such research human resource deficiency was said to undermine teachers' effort in engagement in research. One teacher described this situation:

> T10: Those who are **experienced** in doing research are **not many**, and always **too busy**. They are enthusiastic of course, but **too busy to consult**. […] I mean teachers with a PhD degree from overseas. **Very few** of them are **keen on leading** a real research project that young teacher like me can join and **learn from**. In addition, when I need some advice on how to do research, the university does **not have a regular committee** who **can help** me either. I mean a kind of **academic advisers** who are available at least a certain time so I can go to for research guidance. Sometimes I **really want** to do research, **but I have to do it all by myself**, without any idea of whether I am going in the right direction.

The issue of research resource constraints as described above is further compounded by an **inefficient research organizational structure**. In the interviewed teachers' recounts, each stage of a research project, from proposal assessment, funding application, to research outcome

evaluation and request for reimbursement of research expenditures, was subject to multiple levels of appraisal and countless paperwork. The whole administrative process that teacher researchers have to undergo was furthermore described as bureaucratic, extremely complex, unprofessional, and "painful". One teacher even reported an instance of "bribery" involved in the process. These are clearly reflected in the continued story that T1 told about doing research at her university:

> T1: The procedure starts with the **submission of proposal**; they then **assess the application** and **decide** based on the maximum number of projects one Department can do in that year. The process is **so difficult** that not many teachers are really interested. After the submission round, short-listed groups have to **defend their projects** at **Department level**, then **Institution level**. The projects are **assessed** and **approved** in terms of content and planned budget. […] Doing the research itself was challenging and painful, I don't mind, but in that process, I had to **report the progress several times**, then finally when it came to **presenting the final results**, I had to do it at **all levels**, from Department, to institution. Once the project is **approved**, I started to **claim the reimbursement** of the expenses I spent for the research. They probably offer the pre-paid option but the process is said to be **very painful** so I did not go for it; I waited until the project is finished then claimed for reimbursement. I paid the cost on my own and then claimed it back. And a **huge amount of paperwork** with **numerous** units, offices, departments involved really **suffocated** me. In my University, there is the so-called research management department that takes care of all the research activities teachers do, so I have to **contact them first** if I want to file a claim. I was **then referred to** the administration unit where they **assessed lots of forms** I submit and inform me what is missing. I then had to run for all the missing **trivial stuffs**. There were forms that the Research Management office had to give us, like the one that tells how much the Chief Evaluation Committee member received with their "fresh" signatures on it. But at the defence session, they did not give me that form, which is within their responsibility. When I filed the claim and needed that form, they insisted that they did (but in fact did not). I complained this with an experienced colleague and was advised that the girl in charge there is very capricious. My colleague told me that I should admit to that girl that I had received the form but lost it and kindly asked her for a favour of giving me another one. **Very frustrating**, but I had to do it to help my own business. We have usually joked with one another that if only we were richer and can afford to do research, we wouldn't bother to make the claim. We would do research ourselves to enrich our research profile, not for the money, to finally get what is so painful and tiring. I don't know you want to mention this in your research but if we want to process to be quicker, we need to give them **"thank-you" money**. I just wanted to tell the detailed truth.

Closely related to the inefficient research organizational structure was **the ineffective research policies**. In two interviewees' opinions, two weaknesses in research policies that may impede the

popularity of teacher research include the *overemphasis on experienced teacher researchers,* and *the availability of non-research alternatives*. While the first was said to be unfavourable to novice teachers' research endeavour, the second was explained to discourage teachers' effort in doing research in general since teachers tend to choose the easier non-research activities to make up for their unfulfilled research hours. Below were relevant extracts from their interview responses:

> T16: The **next difficulty** is that, for long, **those who are really good** at doing research and actively engaged in research have always been **well recognized**, but measures to encourage **those who lack research knowledge, skills, and experience** but are keen on research are **not effective**. I mean all policies **focus on** rewarding **teachers with research output**, **none** aims at **helpinginexperienced teachers** have necessary research knowledge and skills, and enough confidence to start doing research.
>
> T7: To be honest with you, having an article published in an international journal is equal to 180 paid hours, which is otherwise **so easy to make up for** by **teaching extra hours**. I just need to teach **three more hours every week** and can make up for **all the required research hours of the whole year**. You see, we just have to spend half a day every week teaching and earn the equal amount of paid hours; **isn't it easier** than working the whole year on a painful research project?

Next, **an immature research culture** was also reported as a hindrance for teachers' effort in research engagement. As described by one teacher, the English department where she works has not established a tradition of teacher doing research; and for those who do engage in research, benefits of research engagement do not seem to be truly valued and practiced among them. Such situation was posited to somehow negatively affect teachers' willingness and devotion to research. Below is the relevant excerpt from this teacher's interview:

> T16: Second, the **tradition,** the **culture** of doing research left by the previous generation of teachers is not strong. I mean, they used to **prioritise teaching over researching**. And now when they are required to do research, they do it to purely require such requirement, or for their own personal sake, to "beautify" their CV for example, **not** because they **value** the real benefits of doing research for their teaching and students learning. In fact, completed research results are hardly applied in practice. The topics may sound good, but the final results all end up being stored on shelves. […] What I mean is that the primitive research culture and tradition, to a certain extent, can **discourage** teachers from willingly devoting themselves to doing research.

One more external obstacle to teachers' engagement in research as revealed in the follow-up interview is **the particular difficulties inherent in the research conducting process**. One teacher who expressed a true interest in studying cross-culture communication said that her

research endeavour was considerably restrained by the unavailability of eligible participants. Another two teachers considered unreliable data as their biggest difficulty when doing research. These teachers noted:

> T2: I really enjoying doing research on cross-culture communication topics, I do, but it is **so hard to recruit participants** who usually include foreigners. If participants must be overseas, I always have to ask for help from my friends who are studying in that country to distribute questionnaires and conduct the interviews. Sometimes I **had to quit** an unfinished study just because I **could not get enough participants**. That's **my difficulty** when doing research.
>
> T21: The **biggest difficulty** is when I **collect the data**. I feel that some students don't really read the questionnaires when they tick the answers or are really honest when answering interviews. I cannot do anything to force them to take my research serious. Unreliable data really **dampens my enthusiasm** in doing research.

The final group of difficulties reported by teachers to have prevented them from being active in research pertain to **their personal limitations**. These include the 'inertial forces' in their personalities that delayed engagement in research, and the inexperience in conducting research that blocked their way to become teacher researchers. These excerpts are the illustrations:

> T20: The final **difficulty** is that I am young, newly employed, and **have never done** any research before, so it takes time for me to get enough experience and familiarity with the teaching materials and students to find interesting topics to research.
>
> T3: I face a lot of **difficulties**. **Personally**, I am quite **lazy** […] lazy to write. […] When I write, I don't develop a regular writing habits, […] I cannot overcome the **personal inertia** to sit down and write every day or at least every now and then. […] It's like I **cannot overcome myself**. In November 2015, I intended to write an abstract, but then **easily gave up**, because I did not know if it would be accepted or it would be just a waste of my time. Not until last November (2016) did I finally complete the abstract and submit it to a conference.

In short, both personal and contextual limitations have been reported to hamper teachers' engagement in research. Externally, five main obstacles emerged: (i) constraints in research resources including funding, reference materials, infrastructure, and human resources; (ii) inefficient research organization structure, (iii) ineffective research policies, (iv) a young research culture and (v) the research-specific difficulties. At a personal level, teacher research engagement was said to be hindered by (a) the inertial forces in their personalities and (b) the lack of experiences, skills, and knowledge for conducting research.

The next section, 6.3, will explore the frequency of teacher research and the impediments to the development of a research culture among EFL teachers from the perspectives of the heads of the English departments where the teacher participants worked.

6.3. Triangulated results from department leaders' interviews

To provide another source of information with which findings reported by teachers can be triangulated, 27 leaders of the English departments where the participating teachers worked were also interviewed. One of the interview questions asked the participating leaders to comment on the level of research activeness among the EFL staff and their perceived causes behind such a level. Relevant themes emerging from the leaders' answers are reported in the two subsections below; the participants will be referred to with their coded names, from L1 to L27, corresponding to 27 interviewed leaders.

6.3.1. Prevalence of teacher research from the department heads' perspectives

Overall, the current level of research engagement among their EFL teaching staff as described by the department heads fell short of what is required and expected of a university lecturer. This is evident in the common dissatisfaction expressed by most of the interviewed leaders about their staff's research practice (n=23), and the wish by all (n=27) that English teachers at their departments would do research more frequently. In the leaders' accounts, EFL teachers' research practice is portrayed as being fragmented, small-scale, externally motivated, individual-oriented, not meeting the university requirements, non-corresponding to their true research potentials in some cases, and finally hard to change. These can be seen in the following comments:

> L1: Currently I am **not satisfied**. **The number of publication** in my department is **low**. Although 30% of the staff in my department are pursuing a degree from overseas, their publications are **still limited to the dissertations** they did for the formal programmes. The number of those **willingly and voluntarily** work to increase their publication are **very small**. Even those who return from their study abroad **do not publishmuch**, **not** even as much as they are expected and required to. […] I definitely wish that our teachers do more research.
>
> L11: I am **not satisfied** (with the current level of EFL teacher research engagements). It (the research practice) is very **fragmented**, **small-scaled**, and

individual-oriented. The research performance in the department is still **very limited.** […] It is **hard and uncommon** for the teachers to produce high quality research. There are **only** five to six conference presentations and a couple of journal articles per year, which are frequently produced by **several** individuals, and has **not** become a **common** and widespread culture among all staff. […] Yes, of course, I really want them to be more research active.

L12: I think I am **not yet satisfied** because the **research potentials** of teachers here are **huge** compared to what they are demonstrating in practice. All teachers were formally trained in research. All most all of them have at least a Master's degree. I just don't see enough passion for research in them. Most of them do research **to tick the boxes**; some are satisfied with doing some non-research activities to make up for the unfulfilled research hours while in fact they **could have done much better** than that.

L15: Currently I am **not satisfied**. […] In the last two years, we **haven't got** any projects at the **university level**. **Most research** was published in the form of articles for research collection of the **department or university journals**. We **have not got** any project at **institution or Ministry level** in the last four years.

L16: To be honest, the teachers here **did not do research**. Not until the university officially imposed 80 hours of research every year on each lecturer did they start to do research. I have **not been satisfied** with this.

L17: I am **not yet satisfied**. Research is required to comprise 25% of all activities, but **very few** staff have ever **met that requirement**. We are just **working towards** meeting the 25% of workload that the university requires, a real 25% to be research. But the **changecannot happen overnight**.

T24: Currently not yet, **really not satisfying**. […] Teachers (in the department) **only do research to deal with the job requirement.** Only few teachers really care, the rest just want **to deal with the regulations**. They have many ways to fulfil the minimum research hours assigned to them, for instance, **presenting what is not really research** at conferences, **compiling textbooks**, although we have urged them all the time to submit research proposals. Research projects at the **university level** are **very rare, most** are **departmental** with common activities like textbook compilations.

T27: Research culture at my department, to be honest, is **not as strong as expected** of a university academic unit. Most projects, as I said, are teachers' **attempts to fulfil their minimum research hours**. Very few individuals care about research. In general, most teachers just do research **to avoid punishments**. So I **really wish** teachers here **would be more research active**.

L8: I am **not satisfied** and **personally wish** that they would **do more research**. But the change is up to them. If they have more free time, or are on maternity leave, they can do it. But in most cases, teachers teach too much hours, and the campus is too far away, how can they get the time to do research? It is really hard to expect the current research practice to change given such working conditions.

The situation was assessed as 'satisfying' by four department heads, but only in terms of the efforts and positive attitudes teachers demonstrated. The degree of research engagement per se among the teachers in these cases, are not satisfactory. These leaders shared:

> L9: **Not all of them fulfilled** the research hours on a regular basis, but to a certain extent, I am **quite satisfied**. Everyone **is aware** that this is a compulsory task and **determined** to do it. So am quite **satisfied** with them.
>
> L13: I think everyone have tried really hard. I understand that people have worked under lots of pressure. […] In terms of effort, I can say I am satisfied with the current situation, although teachers still have a long way to meet the general requirements in terms of research outcomes.
>
> L19: I am satisfied with what our staff have been doing. Of course they are still working towards academic standards imposed on them, and I do wish that to happen, but as a leader, I need to be realistic too. […] 70% of the teachers in my department are able to do research, but not all of them have the necessary conditions to do so. Given their current enthusiasm, sacrifice, activeness, and commitment, I can say I am generally satisfied with my staff in terms of their research engagement.
>
> L20: Yes, I am satisfied with current level of research engagement among my staff. I myself have tried my best but cannot always fulfilled the research responsibilities, so I cannot expect more from others.

The next sub-section will elaborate on the reasons that the interviewed heads of department listed for such a moderate level of research engagement among their EFL staff.

6.3.2. Obstacles to teachers' research engagement from the department heads' perspectives

Overall, the issues negatively affecting teachers' research endeavour as expressed by the department leaders can be classified to five groups similar to the findings from teachers' interviews: (1) the research resource constraints, (2) the inefficient research organizational structure, (3) the ineffective research policies, (4) the research culture, and (5) and the limitations pertaining to the teachers themselves. The number and nature of the sub-themes under each of these categories, however, are not all the same as those reported by the teachers.

The first category, **the research resource constraints,** features five types of limitations: time, finance, reference materials, human resource and infrastructure. Similar to the teachers' complaints above, the department heads also attributed the moderate level of teacher research engagement to two factors: that English teachers were deprived of sufficient time to do research by a heavy non-research workload; and that they were not provided with adequate financial and

academic conditions for conducting research. It is interesting to notice that, while all teachers blame their heavy teaching workload and family commitment for their lack of time for research, the university leaders added one more reason: other academic pressures from the university. One of them even considered this as the main cause of teachers' limited time budget. All these findings are revealed in the extracts below:

> L24: The reason is **lack of time**. I think the first reason is **lack of time**. Teachers have very **tight schedule** with **little time** for professional development activities. Besides, many teachers are young and not yet permanent staff members, so their immediate goals are **to obtain required certificates** and Master degrees, which is vital for them to become a permanent staff member. To become a permanent staff member is not easy. Apart from foreign language and IT certificate, they **are required** to have English language proficiency equal to C2. I have to emphasize "C2". […] C2 is too difficult. You see, teachers here have **too many kinds of pressures**, obtaining a permanent position, teaching, etc. […] they are **too busy** earning extra money; that's their basic needs, but can be one obstacle for them.
>
> L25: The **workload** in the department is **quite heavy** because we teach all students in the whole university, taking care of all General English courses, English for Specific Purposes courses, and also making sure students meet the national standard of language proficiency for university graduates at graduation. **The time left** for teachers to invest in research is **too little**. I know some teachers are really passionate and want to do research but **time** simply **does not allow** them.
>
> L26: Teachers in English department have to shoulder **too heavy teaching workload** and have **no time for doing research**. On average, each teacher in my department, we have 30 staff in total, teaching English to all students in the university, teach 7-8 periods everyday. Some even have to teach 10-12 periods a day. At peak time, a teacher may have to take on up to 50 periods of teaching per week. […] When remuneration for research outcomes is reasonable, teachers will do more research. But you know, a project at university level, which normally takes a year to finish, is funded only 10 million VND (about 500 USD), or less, not to mention even much less if teachers do it in groups. Given such **limited financial benefit** of doing research, it is understandable that they prioritise teaching, which can earn them much more money. Money anyway is an important factor. Teachers can't do research simply because **research cannot support their livings**.
>
> L2: They (the teacher) have to burden **too many teaching hours**. Here in Ho Chi Minh city, university English teachers **teach all day and night**, so when is the time for their research engagement?
>
> L7: Teaching workload is **not that heavy**. It is common knowledge that **teachers have extra classes outside** the university. I think that is one common reason why teacher lack time to do research.

> L1: […] **financial support** for research is **next to nothing**. This year, funding for research in my university is **significantly curtailed**. […] My department even have to use to the trade union fund to support research. As a result of fund reduction, the chances for younger teachers to have their proposals approved diminished.
>
> L4: However interested they are in doing research, teachers are still restrained from doing frequent research because **research resources** are **extremely limited**. Funding is **too limited**. Teachers normally receive some hundreds of thousand VND (about some tens of USD) upon completion of a research project, mostly for the encouragement purpose, not to financially support the research. Funded research, in addition, must be at the university level, and therefore usually very competitive. Given **too much teaching hours**, teachers at my department do not have much chance for funding.
>
> L11: The general research capacity of the department is still very modest. Most staffs are Masters, **very few are Doctors**. It is hard and uncommon for teachers with a Master's degree to produce high-quality research. […] I **don't think** there are individuals **capable enough** to lead a group research at a university level or above.
>
> L12: The **infrastructure** […] is **not good enough** to help teachers fully devote themselves to research. Infrastructure as you know, in terms of working place, all teachers share a common staff room with no computer, no photocopier, in terms of reference materials, **limited access** to academic journals, **out-dated** books, **limited** book numbers in the library, you name them, so common I don't have to repeat it, but we have to admit that this is a **huge rock** on the way.
>
> L22: First, teachers are **too busy**. They **teach every day** at the university and also take **extra classes** at nights and weekends to earn their livings. Second, we **lack strong research staff** who can give the novice researchers guidance on how to do research or lead a team project that can win funding from the university.

The second theme, namely the **inefficient research organization structure**, was reflected firstly in the *complex procedures* in which universities manage the research-related matters. Just as the teachers had reported as can be seen in the previous section, one interviewed leader also agreed:

> L20: The major difficulty that discourages teachers from doing research is the extremely complicated regulations and procedures. Too much paperwork, too many regulations. Even when teachers finish a project without any issues, they will be troubled with the complicated and lengthy process of getting it through the evaluation committee. There are teachers who have done research but never do it again because they are too tired of all the administrative processes and paperwork involved.

Inefficient research organization structure in the leaders' voices, however, is not limited to only the complexity in research management procedures. They revealed in their interviews that *an*

absence of an evaluation committee capable of judging language teaching research, or *a support unit* for particularly English language teacher researchers also played a role in obstructing the development of English teacher research. Below is how this issue is described:

> L14: We are not very strong in research because the major of the university is not linguistics or language teaching. Things are much easier at for example, the University of Foreign Languages, because the evaluation committee members who assess the proposals are also majored in TESOL and Linguistics. The committee here includes all of those majored in Agriculture, so they do not appreciate the practical nature of our research. […] That's why many English teachers are not research active and confident despite their awareness of the importance of doing research.
>
> L16: One difficulty is that this university is majored in Economics, so English teachers are kind of not taken care of. […] The University does organize training workshops about data processing every year for lecturers, but the skills and knowledge there are mostly applicable to research in economics. Hardly anything can apply to English teacher research.
>
> L23: Difficulties are many. First, there are no one in the university who are able to give them (EFL teachers) reliable feedback and guidance. Research in ESL (English for specific purposes) is more qualitative oriented while the evaluation committee members at this university tend to prefer quantitative approach.

In terms of **research policies**, the interviews with the leaders revealed that *limited opportunities* for formal recognition of research output, *availability of non-research alternatives* for teachers to fulfil research requirements*, lack of detailed guidelines* on research engagement, *impractical and ineffective research reward mechanisms* are decelerating the teacher research culture. As reported by different leaders, research credits are granted only to the projects that are officially approved by the universities or at least accepted to be presented at a departmental research symposium. While the former are limited in number and highly competitive, the much easier later option can also accommodate a small number of presentations. Such constraint, coupled with the presence of "flexible" research policies that allow teachers to make up for their research hours by taking on other non-research activities, such as teaching more research hours, was not only stagnating the research culture in the university, but worse even, steering teachers away from doing research. The following interview extracts illustrate these points:

L16: One more difficulty is that the number of teachers in my department is quite large while the university allowed a limited number of projects at the university level; the rest must end up having their research rated at the department level or even division level. Therefore, only very few teachers can grab the opportunity of doing university-level research. Even the spots at the department level is very limited. We have 64 teachers, but can organize only 3 symposiums every year, each of which can accommodate only 4 research reports. There are certainly too limited opportunities for teacher to have their research formally recognized.

L5: Teachers in my department do not do as much research as lecturers in other departments of the universities. One reason is that although they are required to do research, they can choose to teach more hours if they cannot fulfil the research hours. It is not a strict "must-do" task for English teachers at this university, they are more encouraged than required to do research. That's why they do not do it very often. I know many teachers would rather teach more hours than do research, because teaching is easier for them. The flexible policy is supposed to relieve the research pressure on teachers, thus encouraging them to gradually take the research responsibility, but I think it is somehow having the opposite effect on teachers.

L13: […] teachers here have to work under too much pressure. For long, they have been pushed to do research, manager just shout out: "Do research! Do research!" but never actually tell teachers what exactly they have to do, and what research looks like.

L6: Stipulating on paper that teachers must complete a certain number of research hours per year without any specific regulations on how to realize it, for instance, what happens if teachers fulfil or do not fulfil this research responsibility, does not help. For most universities, including mine, it is commonly stipulated that teachers may be considered for rewards, promotion, titles based on their research activities, and without research output, teachers are only rated having fulfilled the job requirement, or in some universities, even not fulfilling the job requirements. I don't think such regulation can do anything to promote teacher research. It's not realistic and sensitive to teachers' needs. You know, some teachers just don't care whether they gain a title or not, promotion is meaningless either. I mean the research remuneration mechanism are not motivating enough, or practical enough to make research engagement a worthwhile activity to teachers.

L13: Difficulties? I must say research policies! When new requirements about research responsibilities are announced, everyone rushes to find out ways to meet them. But there are just requirements, not exactly the kind of support that teachers want. For instance, the rewards for research output, being High Distinction labour and Distinction labour is pretty much the same, only 1 million VND (about 45 USD) in difference in rewards; or one domestic journal article can earn a teacher 500,000 VND (about 23 USD) while a Scopus article is worth 5 million in prize (about 227 USD), 10 times more, sounds great, but not much compared to its level of difficulty and the volume of effort a teacher has to spend to achieve it.

The next issue is concerned with **the research culture**. Teachers prioritise teaching to research, staff do not share a genuine interest in doing research, research values are not widely acknowledged and appreciated, platforms to showcase English teacher research are limited in number; these all reflect a weak research culture that also obstruct the development of teacher research at the department level, as reported by the department leaders. Also in the interviewees' words, such situation is caused by the fact that English department for non-English major students was either recently established, a minor department in a non-English major university or had long been assigned the teaching function rather than the research mission. The following excerpts reflect these matters:

> L2: Difficulties? The University is **not a language university**, its major is Finance and Banking; and the language department is **just one foundational division** in the university. While other departments have their own Journals, so publication is much easier for lecturers there. We **don't have our own journal** to showcase our teachers' research, and external journals dealing with language and English language teaching are also very limited.
>
> L16: Another **difficulty** lies in the environment. In a **non-English major** university like mine, English teachers **lack models** of relevant research to follow. In this Economics-majored university, research is different from research in the field of Linguistics. Research in economics normally involves model testing or mining secondary data, but these are not common in English language teaching research. That's why our English teachers find it **difficult** to do research.
>
> L4: ESL teachers, at least those at this university, tend to be **more focused on teaching** than researching. Doing research is just to fulfil external requirement, it have not got due attention and appreciation from the teachers.
>
> L10: We **don't have a strong research culture** yet. As I mentioned before, English department is **newly established,** its development is therefore way behind other department in the university. We have **not placed a strong focus on research** because just one and a half year ago, we were just a division, not a department. It is a **drawback** for us given such a **late starting point** and given our position of **a small department** inside an economics-majored university.
>
> L11: And **the research culture**, which I mean includes the culture of sharing, the culture of feeling ashamed for being left behind in the society and the world, the culture of reading, the culture of longing for knowledge. I don't mean we totally lack a research culture, I just mean that **these values have not been well-established yet** […] They **don't really care** about research and the benefits of doing research. […]. Research cannot give them immediate benefits while teaching extra classes can give them immediate

> money. Because they care more about short-term benefits, they **cannot show enough passion** for research.
>
> L25: We have just paid **attention to research recently**. For a long time, we are too relaxed about it, teachers could choose to do research or not without any consequences. When research becomes a required task, the disadvantage is that we are not ready yet, we are not yet willing to do so, we just do it because we are forced to do, not because we value it. […] Compared to other departments in the university, English department is just taking the **initial step into building a research culture** for the staff.

Research-specific difficulties were briefly mentioned, and all pertaining to the limited range of research topics for teachers to do research on. Below is an example:

> L7: One more difficulty is that, lecturers at English major university have a lot of fields of knowledge to do research about, literature, English history, cross-culture communication, and so on. Teachers here teach only four English language skills, so it is obviously difficult for them to select a research topic.

Finally, the interviewed leaders also pointed out some barriers to research that reside in the **teachers themselves.** These include *low motivation* for doing research, *inadequate ability* to do research. One leader emphasized that it was mainly the teachers' lack of interest in doing research that resulted in the modest level of research engagement among them.

> L24: Many **lack passion and interests** in doing research. That's another **challenge** for us.
>
> L6: We have tried our best to build a research active environment, but this has not been realized yet because of **teacher motivation**. Teachers must be motivated to do research, to share the expertise with others, they must really care about what is happening in the classroom. Only when these happen do teachers start to actively engage in research, but I **haven't felt** that types and level of **motivation** among teachers in my department.
>
> L7: In terms of **difficulties**, […] we have older teachers who always make all kinds of **excuses for their delay in doing research**, like family commitment. […] The main difficulty is that teachers are **passive.** Everyone can easily blame teaching hours, family commitment, low salary, and so on for not engaging in research, but it is hard to tell for example, how much is considered to be high enough salary? I agree these are difficulties, but the core reason is that teachers are simply **not interested** in doing research.
>
> L17: The teachers themselves have been **struggling** too with doing research due to **their lack of research skills**.

6.4. Connecting the quantitative and qualitative results

As the empirical analysis of the questionnaire surveys provided quantitative portrayal of the current level of research engagement among Vietnamese tertiary EFL teachers, the qualitative analysis of the interviews with teachers and English department leaders contributed extra validation, explanation, and more angles to the quantitative picture.

The survey findings showed that the sample engaged in research at a moderate level, which statistically significantly increases with age, experience, and qualification; and is significantly higher among teachers with previous formal research methodology training and student research experience. Teachers in Central Vietnam were also found to report higher level of research engagement then those from the North and the South.

The teacher interviews revealed that action research was the dominant type of research they conducted. Besides, academic research and partial contribution to a research project were also present. Only one activity was a non-research instance, consolidating the validity of the quantitative findings. The interviews with teachers also uncovered six groups of difficulties teachers face while doing research: research resource constraints, inefficient research organization structure, ineffective research policies, young research culture, research-inherent challenges, and personal limitations, of which the first one appears dominant. These obstacles may be understood as one possible explanation to the modest level of research engagement teachers reported in the survey.

Interviews with English department leaders disclosed consistent results with teacher survey and teacher interviews. Specifically, they all assessed the current degree of research engagement among EFL staff as of a modest level. The difficulties they listed to explain for such situation also echoed what teachers said in their interviews.

Putting the mixed data together, the overall degree of engagement in research among Vietnamese tertiary EFL teachers is conclusively modest, and varies according to teachers' demographics, personalities, and a wide range of contextual, attitudinal, motivational, and personal constraints. The following chapters will explore five personal factors that may affect how often teachers do

research: teacher conceptions of research, research self-efficacy, context beliefs about doing research, attitudes towards research, and motivation for research.

Chapter 7: Teachers' conceptions of research

This chapter presents the insights into teachers' conceptions of research, which were obtained through section 1 of the questionnaire, in which teachers were asked to evaluate 10 given scenarios as being or being not "research" (see Section 5.3.1.2. in Chapter 5), and the follow-up interviews and written emails, in which teachers explained the scenario assessments they gave in the questionnaire. The objective of the chapter is to provide answers to the research question 2a. What conceptions of research do EFL teachers at Vietnamese public university hold?

The chapter is organized into three main parts: the first one reports the results from the questionnaire, the second focuses on the analysis of teachers' follow-up interviews, and the third connects both quantitative and qualitative results presented in the previous two sections. Section 7.1. below will start with the questionnaire results.

7.1 Quantitative results from teachers' surveys: Teachers' assessments of scenarios

As mentioned above, section 1 of the questionnaire asked teachers to indicate the extent to which they felt each of the activities described in 10 given scenarios was or was not "research" by choosing from four multiple options: 1.definitely not research, 2.probably not research, 3.probably research, and 4.defninitely not research. There were no right or wrong answers, and the purpose of this questionnaire section was to infer teachers conception of research from what they considered as "research" as reflected in their scenario ratings. The scenarios can be found in Table 7.1, and teachers' responses are summarized in Table 7.2 and Figure 7.1. It should be noted at this point that teachers' ratings of the scenario yielded a Cronbach's $\alpha = .71$, which indicates a reasonable level of internal reliability of the 10 scenarios in addressing a common underlying construct (teachers' conception of research).

Table 7. 1. Ten scenarios

1. A teacher noticed that an activity she used in class did not work well. She thought about this after the lesson and made some notes in her diary. She tried something different in her next lesson. This time, the activity was more successful.
2. A teacher read about a new approach to teaching writing and decided to try it out in his class over a period of two weeks. He video-recorded some of his lessons and collected samples of learners' written work. He analysed this information then presented the results to his colleagues at a staff meeting.
3. A teacher was doing a Master of Arts course. She read several books and articles about grammar teaching then wrote an essay of 6000 words in which she discussed the main points in those readings.
4. A university lecturer gave a questionnaire about the use of computers in language teaching to 500 teachers. Statistics were used to analyse the questionnaires. The lecturer wrote an article about the work in an academic journal.
5. Two teachers were both interested in discipline. They observed each other's lessons once a week for three months and made notes about how they controlled their classes. They discussed their notes and wrote a short article about what they learned for the newsletter of the national language teachers' association.
6. To find out which of the two methods for teaching vocabulary was more effective, a teacher first tested two classes. Then for four weeks she taught vocabulary to each class using different methods. After that, she tested both groups again and compared the results to the first test. She decided to use the method which worked best in her own teaching.
7. A headmaster met every teacher individually and asked them about their working conditions. The head made notes about the teachers' answers. He used the notes to write a report which he submitted to the Ministry of Education.
8. Mid-way through a course, a teacher gave a class of 30 students a feed-back form. The next day, five students handed in their completed forms. The teacher read these and used the information to decide what to do in the second part of the course.
9. A teacher trainer asked his trainees to write an essay about ways of motivating teenage learners of English. After reading the assignments, the trainer decided to write an article on the trainees' ideas about motivation. He submitted his article to a professional journal.
10. The Head of the English department wanted to know what teachers thought of the new course book. She gave all teachers a questionnaire to complete, studied their responses, the presented the results at a staff meeting.

Table 7.2 below displays the number of teachers responding to each scenario and the percentage of respondents choosing each of the four rating options for each scenario. To allow the overall trends in teachers' responses to emerge more clearly, four ratings options were further collapsed into two categories: not research (comprising "definitely not research" and "probably not

research") and research (including "probably research" and "definitely research"); and the findings under these two broader categories are presented in Figure 7.1.

As table 7.2 and figure 7.1 show, scenario 4 was the most highly rated as research by the participating teachers (91.5% assessed it as "research" and 74.7 % was definitely sure). This result is not surprising because the activity described in scenario 4 demonstrates some features commonly associated with "academic" research: large scale, questionnaire use, statistical analysis, academic investigator, published in an academic journal. The second and third most highly rated scenarios are numbers 2 (60.8% said it was definitely research), and 6 (55.4% chose "definitely research"). These two scenarios both clearly exhibits some features of classroom research (teacher as researcher, trial of an "action", evaluation of the action effects) although the research methods differed. For example, the teacher in scenario 2 collected and analysed students' work and video data while the teacher in scenario 6 used pre- and post-test data. Although no explicit research terminology was used in scenarios 2 and 6, several research-associated words such as "samples", "analysed", "tested" may have influenced participants' assessments of these two scenarios.

Scenario 8, in contrast, was the least recognised as research by the surveyed teachers; 66.5% felt it was not research, and 33.6% said they were definitely sure. Once again, such a result is predictable because what scenario 8 described is purely a routine reflection activity, in which a teacher asks students for feedback on his/her performance and adjusts the teaching practice accordingly; no systematic analysis of data was involved, both data volume and return rate is negligible (5 out of 30 students returned the feedback form). Two other low-rated scenarios are number 7 and 9, which were put under "not research" category by respectively 61.6% and 48.9% of the total participants. In scenario 7, a headmaster used his own notes about teachers' feedback on the working conditions for writing a report, while scenario 9 describes a teacher trainer writing an article based on the ideas she collected from the trainees' essays. The responses, however, are more evenly spread over the four rating options for scenario 9 than 7. Although 48.9% rated scenario 9 as not research, still 31.6% felt it was probably research and as much as

19.5% said it was definitely so. This is also the only scenario on which "research" and "non-research" ratings are roughly equal (51.1% and 48.9%).

The most surprising result may be the high rating as "research" that scenario 1 received. Although narrating a routine reflective practice undertaken by a teacher to modify his/her teaching practice, which are in many ways similar in nature to the activity described in scenario 8, scenario 1 was evaluated as "research" by as much as 69.8% of the participants; 21.7% even said it was definitely so. Scenario 8, as reported above, was contradictorily the lowest rated as research by participants.

Table 7. 2. Teachers' assessments of ten scenarios

Scenario	N (Valid)	Definitely not research (%)	Probably not research (%)	Probably research (%)	Definitely research (%)
1	561	14.3	15.9	48.1	21.7
2	561	1.8	6.8	30.7	**60.8**
3	560	14.3	20.7	37.5	27.5
4	558	2.7	5.8	16.8	**74.7**
5	559	5.7	14.0	41.1	39.2
6	561	2.9	9.6	32.1	**55.4**
7	560	**32.9**	28.7	28.2	10.2
8	560	**33.6**	32.9	26.4	7.1
9	560	**21.6**	27.3	31.6	19.5
10	561	8.9	17.3	41.4	32.4

Figure 7. 1. Teachers' assessments of ten scenarios

The statistical analysis of teachers' assessments of the scenario have somehow revealed a wide diversity in the way teachers understand what research is. Exploring these understandings in more depth, subsequent interviews and written emails asked teachers to explain their reasons for the scenario evaluations and to provide their own definition of research. Findings from the qualitative analysis of the follow-up data is presented in the following sub-section.

7.2. Qualitative results from teachers' follow-up interviews and written emails: Teachers' explanation of scenario assessments.

In the follow-up phase, teachers were asked about their ratings of two scenarios in their returned questionnaire, one they rated as "definitely research" and one they felt is "definitely not research". The results show three strands of criteria on which teachers based their judgments. Each of them is showed below.

First of all, **the presence of the procedural or structural elements of research or the lack thereof** emerged as a dominant category of criteria teachers used to determine whether a scenario is research or not. Explaining their choice of "definitely research" for scenario 4, most teachers mentioned the basic components of research or basic steps of a research process they found in the scenario, such as *data collection, data analysis, research topic, research objectives, research results,* and *research publication*, as the reasons. Scenario 1 was also considered

"definitely" research since it demonstrated a teacher following the steps of action research, including observation, self-assessment, planning an action plan, implementing the action, and continuing the observation and reflection cycle. The comments below reflected this strand of criteria:

> T2: I chose "definitely research" (for scenario 4) because to my understanding, doing research means **collecting data**, **analysing data** and **presenting the results**. The situation includes **data collection**, **data analysis**, and **writing up** an article means the next step, presenting the research results. That's why I think it is definitely research.
>
> T5: In my opinion, research must include **conducting a survey**, which means for example using **a questionnaire**, then **analysing the data**, **drawing conclusions**, etc. That's research. The research must then be **written up and published**. Scenario 4 included **all of these**, that's why I think it is definitely research.
>
> T22: I thought it (scenario 4) was definitely research because it had the **research instrument** (questionnaire), the **research topic** (the use of computers in language teaching), the **research objectives**, and the **research results**.
>
> T26: I chose "definitely research" because the activity (scenario 1) demonstrates some **basic components and steps of action research**. The teacher noticed that an activity she used in class did not work well, this means she had **observed** and **self-assessed** her own teaching. When she thought about this lesson and made some notes in her diary, she was actually **reflecting on the use** of this activity, and probably **planning an action plan** for improvement. By **trying** something different in the following lesson, the teacher showed her experimentation of an action and **continued the observation and reflection** cycle (this time the activity was more successful). In fact, whether the new activity was successful or not, what the teacher did was still research.

In the same vein, scenario 8 was rated as "definitely not research" because some research components or steps were said to be missing:

> T3: I think this is **just the initial part** of a research study, **the data collection phase**. A research study must be complete with all its required parts, including for example research aims, research results, that's called "research". This scenario can only be considered **part** of a research study. That's why I think it's definitely not research.

It is interesting to note here that while some teachers are quite strict about the inclusion of all perceived research components or steps in a scenario for it to be considered "research", a few others demonstrate a much looser view, categorising a scenario as "research" even when it involves only one or few research elements. On the strict side, this teacher decided to lower her rating of scenario 4 from "definitely research" to "probably research" only because she just realized it did not mention the conclusion-drawing step:

> T24: The scenario has participants, questionnaire, and statistical analysis. But on a second thought, I think it is more reasonable to consider it "probably research" than "definitely research" because it did not mention conclusion drawing or suggestions or implications. It is just reporting on the process of collecting data and analysing data, and does **not involve giving any implications** or **making any conclusions.**

On the other side, scenario 1, which described a teacher mindfully thinking about her practice and adjusting her teaching as a result, was considered "definitely research" by some teachers who can tell from the scenario only the "action" phase of the multi-step action research process. Scenario 2, and 9 was similarly rated despite their inclusion of only data analysis and result reporting phase (scenario 2), or only the synthesis of others' ideas (scenario 9):

> T18: I chose 4 (for scenario 1) because the teacher there was **trying a new activity** in her lesson. It belongs to what we call **action research**.

> T7: I chose "definitely research, didn't I? Well, it is because I saw that the teacher in the situation (scenario 2) **analysed the data** and **came up with results**, so I thought it was research.

> T9: I think the scenario (9) is definitely research because **reading**, **collecting ideas** and **synthesizing them** in one's own writing can be research.

One more noteworthy point in teachers' comments under the first theme is their views towards the dissemination of research results. While it is acknowledged as a necessary step in doing research by the participants, it tends to be associated with formal, written form of research publications. "Written documents" was used by two teachers (T33, T5) to describe how the research results should be made public. T5 mentioned this point in his explanation why he chose "definitely research" for scenario 4:

> T5 (comments on scenario 4): In my opinion, research must include doing a survey, which means for example using a questionnaire, then analysing the data, drawing conclusions, etc. That's research. The research must then be published in **written documents**. That's why I think the scenario is research.

One teacher even did not count "presentation at the department level" as one form of research dissemination, and therefore rated scenario 2 as "not research":

> T4 (Comments on scenario 2): Because the teacher was just **presenting** in a staff meeting at the department level. It should be called sharing experience, […] **not enough to be called research** because there is **no publication of results** […]. Experience sharing would be a more proper name.

The second type of reasons teachers gave to explain their choices of scenario ratings was the **perceived characteristics of research**. Objectivity, practicality, novelty, rigor, logicality,

reliability, sufficiently large database, are the recurrent criteria that teachers based on to assess the scenarios. Other aspects of research characteristics such as specific research subjects and topics, and clear research design were also mentioned by the participants. One teacher explained why she chose “definitely not research” for scenario 1 because it lacked several qualities that she thought research should incorporate:

> T6 (Comments on scenario 1): I think research must be based on **real-life** data. The teacher in the scenario found the activity "ineffective" but I am not sure he based this judgement on his **subjective** feeling or on **objective** data, i.e. based on students' test results or something else. Research must be **logical**, and **based on evidence** to be called research. **The research design** must be **clear**. The scenario sounds like an "action research", in which a teacher tries an activity in class and evaluate it, but the timing and procedure is not described in the scenario. Even action research needs to be **rigorous** in time and process.

The following teachers gave a “definitely research” ratings to scenario 3, which describe the literature-based essay writing of a Master student teacher, because she found “rigor” in the way such activity was carried out:

> T25: I found definitely research because the teacher was reading the materials **carefully and intensively**, and wrote an essay to discuss the topic in depth. The teacher clearly had particular objectives for what she was doing.

Among the mentioned characteristics, novelty was the most commonly used, sometimes as a sole criterion, by the participants to evaluate a scenario. As many as six teachers said that research must be original in terms of ideas or output, and therefore gave a “non-research” ratings to the scenario that did not show “something new”. Scenario 5 for example, which was considered “research” by a majority of participants (80.3%), was considered “definitely” otherwise by one teacher just because of its lack of novelty in the results:

> T11(1): As for me, what is shown in the situation is just limited to observation and synthesizing information observed. Research, otherwise, **must generate something new** based on a given background information. The situation is merely observation and synthesis of experiences, the researcher **did not suggest anything new** on the basis of that observation.

Scenario 9, which narrated the process in which a teacher trainer wrote a report based on the ideas he collected from the trainees’ essay, was also judged as “definitely not research” by T10 for the same reason:

> T10 (2): Because there is **nothing new** there. It was **just a collection of ideas** written by others. In my opinion, a piece of research **must create something new to be considered research**. The product in the situation is just based on others' work and offers **nothing new** for teachers.

Unlike the comments on the presence of research elements, which were mostly found in teachers' accounts for their "definitely research" ratings, most of these characteristics interestingly appeared in teachers' critiques of the scenario that they rated "definitely not research".

The final orientation in assessing the scenario shown in teachers' follow-up interviews and written emails was to base on the **perceived functions of research**; that is, teachers tend to consider an activity as research when they found its purpose matched what they considered research was supposed to contribute. Three distinct functions of research were evenly mentioned by six participants as their judging criteria: research for problem solving, research for self-development, and research for assessment. In the following illustrating examples, the respondents gave a "definitely research" rating to scenario 2 (T16, T19) and scenario 6 (T29) mainly because the activity described in each scenario is aimed to solve a problem faced by teachers in the process of teaching, to improve teaching quality, and to evaluate the effectiveness of their current practice:

> T16: Actually as far as I know, action research is based on the existing problem we face in the process of teaching. That kind of research aims **to solve these problems**. From that approach, I see that the situation is definitely research because the teacher here is trying **to solve some problem**.

> T19: As for me, doing research is a process that helps teachers **to improve their teaching**, and this is exactly what the teacher in this situation was doing. There is also data collection, data analysis, and report of results, that's surely research!

> T29: I chose 4 because I found it exactly an experimental research, to my understanding, which is usually conducted **to evaluate the effectiveness** of different teaching methods. Although it is not clear whether the teacher (in the scenario) had controlled all the variables or what the exact research methodology was, what she was doing was **aimed at evaluating** her current teaching practice. That's **an important purpose** of teacher research.

The problem-solving purpose of research was particularly emphasized by one teacher to the point that, in his opinion, it seemed to be the sole aim of conducting research. Indicating in the survey

that scenario 7 was probably not research, this teacher stressed in the interview that it was because the headmaster in the scenario was not trying to address a problem:

> T9(2): I think it is probably not research because **the purpose** of the Head Master is **just to understand** the current situation, **not really to do research**. It can be research in the case where there is **a big problem** and the Head Master wants **to do something to address it**. If it is **just to examinethe current situation**, it is normal, **not research**.

In short, three trends existed in the way participating teachers assessed the 10 scenario as being or not being research: (1) using the perceived elements and process of research as judging criteria; (2) using the perceived functions of research as criteria; and (3) using the characteristics of research as criteria. Three other striking tendencies can be noticed. First, while trend (1) can be seen in both teachers' advocacy and critical comments on the scenario, trend (2) can be found mostly in teachers' accounts for their "definitely research" choice, and (3) was mostly used to determine "definitely NOT research" scenario. Also notably, almost all teachers based their scenario assessment on only one type of criteria, and very few of them mentioned more than one when explaining for their choice of rating for a scenario. Third, teachers using the first group of criteria form a continuum with those holding a strict structural view of research on one hand, and those with a much looser view of research on the other. Finally, among the functions of research that participants mentioned, "problem-solving" appears to be most highlighted, and among the characteristics of research that teachers refereed to, "novelty" seems to be dominant.

7.3. Connecting the quantitative and qualitative results

Connecting the quantitative analysis of survey responses, and the theme-based analysis of teachers' follow-up interviews and written emails, the results consistently showed a diversity in the way teachers perceived what research is.

Among 10 scenarios in the survey, while some appear to be indisputably "research" according to participants' ratings (scenario 2, 4, 6), the rest received contestable evaluations. The follow-up interviews showed that teachers based their scenario ratings on widely different criteria: the research elements, the perceived characteristics of research, and the perceived functions of

research that they could find in the scenario. Very few teachers used comprehensively these criteria to judge the scenario in the survey.

Overall, the participants' diverse conceptions of research may form a continuum, with a strict structural view of research at one side, and a loose perspective which synonymizes even routine reflection with research on the other.

Chapter 8: Teachers' research self-efficacy, attitudes toward research, context beliefs about doing research, and their impacts on teachers' level of research engagement

The objective of the chapter is to provide answers to two research questions:

2b. Which kind of self-efficacy beliefs, attitudes, context beliefs about doing research do they have?

2c. How do teachers' self-efficacy beliefs, attitudes, context beliefs about doing research correlate with their reported level of engagement in research?

The chapter is divided into four main thematic sections (1) research self-efficacy (2) attitude towards research, (3) context beliefs about doing research, and finally (4) the impacts of these three cognitive factors on teachers' engagement in research. The section below will start with the results of the data analysis regarding teachers' research self-efficacy.

8.1. Teachers' research self-efficacy

This section statistically explores teachers' research self-efficacy, which was measured via a 17-item scale in part 2 of the questionnaire. The section first reports on the reliability and usability of the research self-efficacy (RSE) scale, then presents the findings from the analysis of teachers' responses to 17 questionnaire items (2.1 through 2.17) included in the scale.

8.1.1. The psychometric properties of the scale

As indicated in the methodology chapter, the reliability and usability of the RSE scale was examined via factor analysis, item-total correlation, and internal consistency coefficient α.

A principle-components analysis (CPA) using SPSS version 22 was performed on the research self-efficacy scale to explore its general internal structure (item 2.17 was not included in the analysis because it assessed an individual teacher' overall ability to complete a research project and therefore is not expected to contribute to any latent sub-scale). Prior to the analysis, the suitability of the data for CPA was assessed. The correlation matrix showed that all the

coefficients are of .3 and above; the Kaiser-Mayer-Olkin (KMO) value was .94, exceeding the suggested minimum value of .6, and the result of Bartlestt's Test of Sphericity was statistically significant ($p<.05$), supporting the factorability of the correlation matrix. PCA revealed the presence of three components with eigenvalues greater than 1, explaining 53.8%, 6.6%, and 6.0% of the variance respectively. The first component, which can be named *Research Planning*, had 4 items (item 2.1 through 2.4), with factor loadings ranging from .53 to .94. Component 2, which can be labelled *Research Main Tasks*, had 6 items (item 2.9 through 2.14) with factors loadings ranging from .49 to .91. Component 3, which included *Research Supplementary Activities*, had 6 items (2.5 through 2.8, 2.15, 2.16) with factor loadings ranging from .46 to .84. All items loaded substantially on only one component; and their communalities values are also of .4 and above, suggesting good fitness among the items within each factor. Therefore, all 17 items of the scale were retained for further analysis. It was also decided that the instrument consists of the three abovementioned sub-components: Research planning (items 2.1. through 2.4), Research Main tasks (items 2.9 through 2.14); and Research supplementary activities (items 2.5. through 2.8, 2.15, 2.16).

Internal consistency coefficients were estimated at moderate to high level for each of the three components or subscales, and for the total Research Self-Efficacy scale. Cronbach alpha coefficient for the total 17-item scale was .95, which does not increase should any item be deleted. Item-total correlations ranged from .56 to .81, exceeding the recommended minimum of .3. For the three sub-scales, coefficient alpha was .89 for Research Planning (4 items), .92 for the Research Main Tasks (6 items), and .82 for the Research Supplementary Activities (6 items). Item-total correlations within each sub-scale ranged from .46 to .85, being at medium to high level.

Overall, the psychometric properties of the research self-efficacy scale in use in the current study is supported on the basis of PCA, internal consistency estimates, and item-total correlations. All items were retained for further analysis.

8.1.2. Teachers' research-self efficacy as measured by the research self-efficacy scale

Teachers' level of research self-efficacy was reflected in the scores on a 100-point scale (with 0 being "cannot do at all" and 100 being "definitely can do") they rendered to 17 research-related activities. Teachers' responses are presented in table 8.1, 8.2.

Table 8.1 presents the sample means, minimum and maximum values, and standard deviations for all 17 items in the RSE scale; the items are organized based on the ascending order of their mean values. As table 8.1. shows, the participants of the study reported an overall *moderate* level of research self-efficacy (Mean=69.20; SD=13.78). Concerning specific research-related activities, the sample also demonstrated mid-range to high perceived ability to perform them with the mean scores ranging from above 50.00 to 79.39 on the 100-point scale. Among 17 research activities listed, teachers' perceived ability to "use data management and analysis software" was the lowest (Mean=52.15), while their perceived ability to "understand typical research issues such as plagiarism, ethics, ownership of information" was the highest (Mean=79.39). At no activities did the participants show a low level (Mean<50) of perceived performance ability.

Table 8. 1. Sample Means and Standard Deviations in 17 research-related behaviours

RSE Item*	N	Mean	SD
2.11. Using data management and analysis softwares (e.g. NViVo, SPSS)	532	52.15	24.46
2.5. Identifying available sources of support (e.g. fund, guidance)	533	61.00	20.69
2.14. Finding a suitable way to disseminate the research results	534	64.34	19.96
2.10. Processing and analysing data	534	67.53	18.59
2.12. Writing an academic research report	535	67.94	19.69
2.17. My overall ability to do research	534	68.44	15.95
2.7. evaluating the reliability of reference information (e.g. books, journal articles, websites)	535	69.11	18.39
2.9. Collecting sufficient data to answer a research question	535	69.16	17.21
2.2. Judging the scope of a research project based on the research questions	536	69.95	19.41
2.3. Selecting appropriate research methodology for a research question	535	70.15	18.47
2.8. Analysing, synthesizing, integrating difference sources of reference information	535	70.41	17.68
2.6. Identifying available sources of reference information (e.g. books, journals, library)	532	71.35	17.18
2.1. Identifying and formulating research questions from my teaching practice or existing literature	536	71.98	19.04

RSE Item*	N	Mean	SD
2.4. Planning a research project	534	72.78	18.49
2.13. Delivering an academic oral presentation reporting the research results	534	73.30	19.50
2.16. Co-operating with other teachers to conduct a group research project.	532	76.91	18.64
2.15. Understanding typical research issues such as plagiarism, ethics, ownership of information.	534	79.39	18.65
Total level of research self-efficacy	**536**	**69.20**	**13.78**

Note: Min=Minimum; Max=Maximum; SD: Standard Deviation. *Each item is measured on a 100-point scale ranging from 0 (cannot do at all) to 100 (absolutely certainly can do)

Table 8.2 presents teachers' self-efficacy by three main types of research-related activities: research planning, research main tasks, and research supplementary activities. The mean score for each group of activities are calculated by averaging the scores of all the items belonging to the group.

Table 8. 2. Teachers' self-efficacy by types of research-related activities

	f	%	Mean	SD	Level of self-efficacy
Research planning (items 2.1-4)					
High (>70)	282	52.6			
Moderate (above 50-70)	192	35.8	71.19	16.30	High
Low (≤50)	62	11.6			
Research main tasks (items 2.9-14)					
High (>70)	216	40.4			
Moderate (above 50-70)	220	41.1	65.72	16.50	Moderate
Low (≤50)	99	18.5			
Research supplementary activities (items 2.5-8, 2.15-16)					
High (>70)	291	54.4	71.35	13.59	High
Moderate (above 50-70)	209	39.1			
Low (≤50)	35	6.5			

Note: f=frequency; SD=Standard Deviation

According to table 8.2, the participants appeared the most self-confident with the research supplementary activities (items 2.5 through 2.8, 2.15, 2.16) while feeling the least able with the research main tasks (item 2.9 through 2.14). The mean scores of teachers' self-confidence in conducting research planning (item 2.1 through 2.4) and research supplementary activities are of

high levels, at 71.19 and 71.35 on a 100-point scale respectively, while the mean score for the research main task group was 65.72, at a moderate level.

Overall, Vietnamese tertiary EFL teachers demonstrate a moderate level of research self-efficacy. They are the most self-confident in the research supplementary tasks while showing the least confidence in research main tasks.

8.2. Teachers' context beliefs about doing research

8.2.1. Quantitative results from teachers' survey

8.2.1.1. The psychometric properties of the Context Beliefs about Doing Research (CBADR) scale

As indicated in the methodology chapter, the reliability and usability of the scale was examined via factor analysis, item-total correlation, and internal consistency coefficient α. All reliability tests were performed on the total context beliefs scores for the sub-scales, each of which was produced by summing the scores for its Enable item and Likelihood item (See Section 5.7.3.2. Chapter 5).

A principle-components analysis (PCA) was performed on the CBADR scale to explore its general internal structure. Prior to the analysis, the suitability of data for PCA was assessed. The correlation matrix showed the presence of many coefficients of .3 and above; the Kaiser-Mayer-Olkin (KMO) value was .90, exceeding the suggested minimum value of .6, and the result of Bartlestt's Test of Sphericity was statistically significant ($p<.05$), supporting the factorability of the correlation matrix. PCA initially revealed the presence of three components with eigenvalues greater than 1, explaining 35.9%, 8.1%, and 7.3% of the variance respectively. The screeplot, however, indicated a clear break after the first component, suggesting a single component solution be the best approximate simple structure for the CBADR scale. In the oblique (Oblimin) rotation, the one-factor solution accounted for all except for item 3.8 of the CBADR scale. Item 3.8 did not load significantly on the single factor (factor loadings was .38), and had the lowest communalities value of only .15, showing poor fitness with other items. Other items load significantly on one single component with factor loadings ranging from .50 to .70; their

communalities values are also of .3 and above, suggesting good fitness among all the other items within the scale. The single component structure of the scale is therefore supported.

Further calculation of internal consistency coefficients for the scale yielded high Cronbach alpha value of .85, which, however, increases to 8.6 when item 3.8 is deleted (Cronbach alpha does not increase by deleting any of the remaining items). Item 3.8 also had the lowest item-total correlation coefficient (.31).

Overall, the psychometric properties of the research self-efficacy scale in use in the current study is supported on the basis of PCA, internal consistency estimates, and item-total correlations. Item 3.8 (Research engagement is made compulsory) was omitted from further analysis to increase the internal consistency of the scale.

8.2.1.2. Teachers' context beliefs about doing research as measured by CBADR scale

Table 8.3 displayed the means and standard deviations of 13 retained items in the Context Beliefs about Doing Research scale. For each item, scores for the Enable subscale, Likelihood subscale, and the total Context beliefs scale are provided.

Table 8. 3. Means and Standard Deviations of each bi-polar item in the CBADR scale

Item	Content	Enable Mean* (*SD*)	Likelihood Mean** (*SD*)	CBADR Total Mean (*SD*)
3.1	Reasonable teaching workload	4.28 (*0.83*)	3.01 (*1.39*)	3.67 (*.81*)
3.2	Sufficient funding	4.22 (*1.00*)	3.16 (*1.11*)	3.70 (*.76*)
3.3	Support from other teachers (e.g. guidance, coaching, informal discussions, co-operation in team research)	4.29 (*0.70*)	3.90 (*0.94*)	4.10 (*.64*)
3.4	Strong research culture (e.g. most colleagues frequently do research or care about research)	3.95 (*0.97*)	3.27 (*1.14*)	3.61 (*.79*)
3.5	Availability of research materials (e.g. books, journals)	4.24 (*0.92*)	3.26 (*1.17*)	3.75 (*.80*)
3.6	Co-operation from learners (e.g. they are willing to provide data to your research)	4.28 (*0.73*)	4.10 (*0.81*)	4.19 (*.64*)
3.7	Encouragement and support from employers (e.g. free research training workshops, financial rewards for research publications, travel grant to present at local/international conferences)	4.35 (*0.80*)	3.77 (*1.05*)	4.06 (*.72*)
3.9	Availability of opportunities to publish your research results (e.g. research conferences,	4.16 (*0.83*)	3.93 (*0.96*)	4.05 (*.73*)

Item	Content	Enable Mean* (*SD*)	Likelihood Mean** (*SD*)	CBADR Total Mean (*SD*)
	teacher research symposium)			
3.10	Adequate infrastructure (e.g. computers, software, internet, own working space)	4.16 (*0.94*)	3.37 (*1.21*)	3.78 (*.84*)
3.11	Formal recognition for research engagement (e.g. research publications are made a criteria for promotion or salary increase)	4.31 (*0.78*)	3.88 (*1.07*)	4.10 (*.75*)
3.12	Involvement of a senior academic supervisor/team leader	4.24 (*0.80*)	3.56 (*1.03*)	3.90 (*.72*)
3.13	Sufficient quality of research evaluation committee	3.56 (*1.03*)	3.74 (*0.95*)	4.00 (*.70*)
3.14	Reasonable and supportive research regulations (e.g. funding application process, format of published research)	4.25 (*0.82*)	3.79 (*0.99*)	4.04 (*.68*)
	Total	**4.24 (*.54*)**	**3.59 (*.68*)**	**3.92 (*.45*)**

Note: 494<N<525; SD=Standard Deviation; *Items are rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree); **Items are rated on a five-point Likert scale ranging from 1 (Very unlikely) to 5 (very likely).s

As can be noticed from table 8.3, the overall context beliefs of the whole sample was fairly high (Mean=3.92, SD=.45). Concerning the two sub-scales, the participating teachers showed rather high enabling beliefs about 13 factors with all means greater than 3.5 on a 5-point scale. The two factors that teachers believed to be of most importance for them to be an active researcher were "the encouragement and support from employers" (item 3.7, Mean=4.35); and the "formal recognition for research engagement" (item 3.11, Mean=4.31). The lowest rated items on the Enabling scale, namely "sufficient quality of research evaluation committee" (item 3.13), and "strong research culture" (item 3.3) still received above-average Enabling scores of 3.56 and 3.95 respectively. The teachers, however, did not demonstrate as strong beliefs that these factors were actually occurring in their work places as can be seen in the lower likelihood sub-scale means in almost all items. The lowest rated item on the Likelihood sub-scale was the "reasonable teaching workload" (item 3.1, Mean=3.01). This is also the factor that showed the largest discrepancy between teachers Enabling beliefs and their Likelihood belief; the difference in the mean scores of the two sub-scales was 1.17. "Sufficient funding" (item 3.2), and "availability of research reference materials" (item 3.5) also received low ratings on the Likelihood scale (Means =3.16 and 3.26 respectively) and had a large difference in the mean scores of two sub-scales (Mean differences were 1.06 and .98 respectively). At the opposite end, "cooperation from

learners" (item 3.6) and "availability of opportunities to publish research results" (item 3.9) were believed to be the most likely to occur (Mean scores were 4.10 and 3.93 respectively) although the Likelihood scores were still lower than the Enabling score (Mean differences were .18 and .23 respectively). "Sufficient quality of the research evaluation committee" (item 3.13) was the only factor for which teachers showed stronger Likelihood beliefs (Mean=3.74) than Enabling beliefs (Mean=3.56). In short, although teachers displayed overall positive context beliefs about 13 contextual factors, there exists a mismatch between their specific beliefs about the Enabling ability and the Likelihood of occurrence of these factors. Teachers believed most factors would help, but did not believe as strongly that they would be available at their universities.

A paired-sample t-test was conducted to determine the possible existence of a significant discrepancy between the strength of teachers' overall enabling beliefs and their overall likelihood beliefs. The results revealed a statistically significant difference between the Enabling mean score (M=4.24, SD=.54) and the Likelihood mean score (M=3.59, SD=.68), $t(511)=17.58$, $p<.0005$ (two-tailed). The mean difference was .65 (95% CI [0.15, 0.9]), the eta squared value of .37 indicated this was a substantial difference. Such test results confirm the observation made in the previous paragraph that although teachers generally strongly believe that the 13 listed context factors would help, they did not think as positively that they were available at their universities.

The following subsection will add more depth into the analysis of the contextual factors by reporting the findings from the open ended item in the teachers' survey and interviews with the heads of the English department where the survey participants worked.

8.2.2. Qualitative results from open ended item in teachers' survey

In the survey, participants were asked to note any contextual factors (with accompanying Enabling score and Likelihood score) that they felt were not included in the scale. In total, 13 teachers responded to this open-ended item; and the notes they left contained one new factor and nine other instances, which were actually the variations and detailed versions of the items of the CBADR scale.

First, the new contextual factor can be named "cooperation with other universities", which were indicated via two following notes:

> "networking with other universities/institution" (n=1; Enabling score=4; Likelihood score=4)
>
> "availability of visiting scholarship opportunities from/to other universities" (n=1; Enaling score=5; Likelihood score=3)

Nine other "factors" identified in 12 teachers' notes were actually examples of the factor 3.7, 3.9, 3.11, and 3.14 of the CBADR scale. The following six notes can be categorized under the heading of "Encouragement and support from employers" (item3.7):

> "the significance of the topic was recognized" (n=2, Enabling Mean=4.5; Likelihood Mean=4)
>
> "Availability of English language support for teachers" (n=1; Enabling score = 5; Likelihood score = 1)
>
> "Extra financial rewards for high-quality research" (n=1; Enabling score=5; Likelihood score=2)
>
> "Research awards" (n=1; Enabling score=4; Likelihood score=1).
>
> "Availability of opportunities to apply research results" (n=3; Enabling Mean=5; Likelihood Mean=2.7)
>
> "Research training" (n=1; Enabling score=4; Likelihood score =4)

The following one note can be categorized as a specific example of "reasonable and supportive research regulations" (item 3.14):

> "Research funding paid in periodical instalments" (n=1; Enabling score=5; Likelihood score=2)

One note was an illustration of item 3.9. availability of opportunities to publish research results:

> "updated and easily accessible information about available conferences and publication opportunities" (n=1; Enabling score=4; Likelihood score=2).

Finally, one note relates to the formal recognition of research outcomes (item 3.11):

> "research profile made an official condition for consideration of overseas study" (n=1; Enabling score =4; Likelihood score=4).

8.2.3. Triangulated qualitative results from department heads' interviews: Contextual support for teacher research

In their interviews, the department leaders were asked to detail all the contextual factors that are favourable to augmenting teacher research and that were actually present at their departments and universities. Similarly to the findings about the teachers' open-ended responses, the leaders were giving various examples related to the factors listed in the CBADR scale. With extended answers, the leaders, however, referred to more context factors than the teachers, and were able to elaborate on both the extent of and the reasons for the availability of each factor. In total, the interviews mentioned 13 factors included in the CBADR scale (except for item 3.10) "adequate infrastructure", and revealed one factor which is new to the scale. Each of them is presented in turn below.

The first factor, "**reduced teaching workload**" (item 3.1 in the questionnaire) were mentioned by 6 out of 27 interviewed department leaders. These leaders acknowledged that they were applying various policies to allow more research time for staff. Such policies include reducing the number of required classes and extra-curricular activities for research-active teachers (n=4), allowing teacher to arrange their own teaching schedule (n=1), and recruiting more staff members (n=1). It was noted by the leaders, however, that none of the applied policies help fully solve the heavy teaching workload issue because of the large teacher/student ratio. The following excerpts illustrate these points:

> L3: I tried as hard as I can to **reduce the teaching workload** for teachers so that they can have more time for research. For example, I submitted my proposal to recruit more teachers to the university last year and luckily got it approved. So this year, I can recruit more teachers, and the hours each teacher have to teach each week will be less, although **not much**, than we did.
>
> L4: […] We can be **flexible** with teachers in terms of **timing**. We cannot reduce the teaching hours for them but we **let them choose their own teaching schedule** in a way that minimizes their traveling time, like teaching all hours in one whole day. We let them choose what suits them best so that they can have more time for research.
>
> L15: Teachers here have to share many common tasks, like students counselling, holding workshops, etc. Teachers who are doing research can have required hours on other common tasks **reduced,like teaching hours** or the extracurricular activities. Of course

> we cannot reduce many hours for them because we have too many students to teach and too few staff.

Secondly, concerning "**funding**", most interviewed leaders agreed that financial support for research at their universities is available but either limited or difficult to access. Some leaders mentioned extra efforts at the department level to increase the research funding, such as offering teachers extra budget from the department. Even so, however, none of them were positive that the overall financial investment in EFL teacher research activity was "sufficient" because of not only the budget constraints at all levels, but also of the low position language department has in non-English major universities. These leaders shared the following views:

> L2: At the department level, we tried to **top up the limited funding** from the university. We offered teachers some **extra money** for their research, using the department budget, but it is still **very modest**, just **in the spirit of encouragement**. We have no other choice because our budget is provided by the university to cover all annual activities, and teacher research is just one of them. We don't have our own fund that is big enough to make any difference to the financial benefit of doing research for teachers.
>
> L7: We are trying to **improve the funding** for teachers as well, by looking for all available sources of research funding and encouraging teachers to apply for them. Project 202o for example, is offering financial support for teacher research. We let teachers know, and encourage them to apply for it. That's all we can do.
>
> L24: There is **no notable policy in terms of funding**. There is **some financial support** for research, of course, but the amount depends on the available budget of the university, and funding for English language teaching projects are **normally modest**, much less than ones on technology, the major of this university. We have some **support at the department level** but it's **negligible** because everything depends on the university, and we don't have our own source of income. But I know this is the common situation everywhere. Research funding in general is just **a way of encouragement**, and **never corresponds to** the real cost teachers have to spend on their research.

The third factor, "**support from other teachers**" (item 3.3 in the questionnaire) was mentioned by one leader, who said peer support at his department came from experienced and able staff who returned from overseas post-graduate studies:

> L17: More and more **experienced and able staff** with a Master degree or a PhD come back from overseas every year. These teachers **coach** and **engage other junior teachers in their research**.

Item 3.6 of the questionnaire, **cooperation from learners**, while assessed as the contextual support that is the most likely to occur at their universities by the participating teachers, was highlighted by only one department leader. According to this leaders, EFL teachers at a non-

English major university have the advantageous access to a large number of EFL students, who are diverse in backgrounds, and generally supportive of teacher research:

> L6: […] there are **plenty of students** for teachers to research because the English department is in charge of teaching English to students of the whole university. Students in this university are furthermore of different levels, studying various majors, and have various needs, and from my experience, they are **enthusiastic** in providing data for teacher research. That's one **big advantage** that teachers here have for doing research.

"**Encouragement and support from employers**" (item 3.7) was the only one factor that permeated almost all the conversations. Twenty-five leaders (out of 27 interviewed) acknowledged their efforts to promote teacher research in their department in all possible ways, including from travel grants for conference attendance, research seminars and workshops, to the encouragement of the feasible types of research. Below are some examples:

> L1: The **Board of Managers** of the department find **every possible ways to support** teacher research. For instance, for teachers who want to present their research at conferences, we approve their leave, we offer them travel grants.

> L5: We always try to **encourage** our staff to do research, by holding frequent seminars, workshops, meetings for them to share research experiences. I sometimes invited external experienced scholars to train teachers on doing research. For instance, in 2015, two American well-known scholars worked with the department. These scholars, together with some of our staff who graduated from overseas studies, coordinated to hold what I can call research training workshop for teachers. We believe these events will create the "research" environment for teachers in the department. […] I **encouraged** teachers to do research of reasonable scale, not the kind of projects that have to be reported on hundreds of pages of paper. It can be action research, a case study, or some small-scale experimental study that can be easily carried out within their classrooms, and that teachers are willing to share the results in departmental seminars or meetings.

Two other leaders interestingly disclosed the total lack and unnecessity of departmental support because of the obligatory nature of teacher research at their university:

> L2: Research is **required**. Unlike some universities in which teachers are allowed to choose between doing research and teaching more hours, in this university, doing research is **obligatory**. No research, no fulfilment of job requirements. It is a **responsibility** for all teachers. We **don't need** to have **encouragement and support measures**. The universities already have research policies [...] At the department level, we **don't need** to offer any extra means of support.

> L20: There is no such policy at all. Research is compulsory and everyone has to do it.

At the institution level, three department leaders acknowledged the universities' extra effort in supporting teacher research by offering financial rewards for publications, and varying the ways in which teachers can claim research credits. Two of them noted:

> L2: The universities gave teachers **many options to claim research points**, like publications in journals, presentations at international conferences, domestic conferences, or even at departmental research symposia. They also **offer financial rewards** for publications depending on the quality and types of publications.
>
> L10: We are aiming at being a research-oriented university, so we are **encouraging** research, especially academic research. Research output is experiencing impressive development in recent years […] because of the **incentives** the university applies. For example, for each international publication, the University awards 100-200 million VND (about 4,500-9,000 USD) to the researchers. That's the major policy that encourages teachers to do research.

It is interesting to note that in two other cases, the universities were reported to even set barriers to the promotion of teacher research. One leader said the university set barriers to teachers who wanted to pursue post-graduate studies overseas, which he thought is beneficial for their research capacity, and the other quoted funding limitations as the reason for the university's curb on financial encouragement for teacher research. Below are their comments:

> L1: One way to encourage teacher research is to send them overseas for further study. Recently, as EFL teachers have more opportunities to study abroad, the universities leaders tend to try to **set barriers** to **prevent** teachers from going.
>
> L27: The University encourages teacher research by offering financial rewards for those who have their research published in academic journals. The reward in this university is 800,000 VND (about 36 USD) per published article. Several years ago, it was 2 million VND (about 90 USD) per journal article. However, when teachers became very enthusiastic in publishing and started to publish more frequently, the amount **turned out to be a burden** for the university, and they **changed** it into the "encouraging" amount I mentioned, 800,000VND.

Next, the availability of opportunities to publish teacher research was also included in the list. According to one leader, there are research conferences of all levels for teachers to disseminate their research:

> L5: It's **so easy** for teachers to **make their research results public**. Apart from international conferences, there have been also conferences on a national, regional, and institutional scale, like the one held by our department lately. […] We always expect teachers to do more research and this is good news. Many teachers have submitted their proposals for international conferences, but if they are unable to attend, there are still **many other feasible choices** for them, like coming conferences in Hue, Hanoi, Cambodia, or other South East Asia countries.

Another department head acknowledged the leadership of several senior teachers in the department in initiating and involving other staff in team research as a contextual research facilitator available in her department:

> L16: We normally have some **"leaders"** who raise the topics, call for team members and form a research group. The **leaders** usually include the Department head. I always raise a concern, then call for research groups to investigate it.

"Quality of research evaluation committee" was mentioned by one leader, but was assessed as insufficient and thus hindering to EFL teacher research:

> T14: Policies for teacher research was actually regulated by the University, not decided by the department. […] Foreign Language Department, within this [university name], has a lot of difficulties. […] It is **very hard** for us to **get access to funding** because **the evaluation committee** members do not major in Linguistics and are **unable** to assess the impact or significance or our research as correctly as the ones proposed by other departments.

Formal recognition of research engagement was another contextual advantage available at both department and university levels according to five interviewed leaders. Specifically, research records were said to be a criterion teachers must meet to be considered for formal awards, salary increase, or overseas study opportunities:

> L4: **Research outputs** are counted in the consideration of **professional awards**, for instance, "advanced labour of the year". If one does not do research, s/he is not considered for any award of the year.
>
> L22: Those who do not fulfil their minimum research hours are considered not fulfilling their job requirement, and thus deprived of all kinds of **entitlements** of that year. We have also made it one important criteria for sending teachers to **study overseas**. Those with stronger research profiles are **prioritized for overseas study** opportunities.
>
> L10: 40% of teacher evaluation points come from doing research, and teacher evaluation result affects **teachers' salary**. The department policy has to be based on this. We encourage staff to do as much research as we can.

The final factor in the Context Beliefs scale of the questionnaire, "reasonable and supportive research regulations" (item 3.14) was reported by one leader, being the department's manager's effort to simplify the administrative procedures:

> L25: The Department can only support teachers in terms of timing, application of research results in the classroom, **simplification of all the procedures and paperwork** involved to make research as **easy** as possible for teachers.

One new contextual factor that is said to facilitate teacher research in leaders' opinions was the availability of a wide variety of activities that can be considered as research at their universities. This can be seen from the following excerpt:

> L11: In this University, **many things are counted as "research**". They may include very **conventional things** like publications in academic journals, or other **unconventional ones** like designing courses, applying Information and Communication Technology (ICT) in teaching, editing manuscripts for journal publications, etc. They are all counted as research activities, I mean research comprised a very **wide range of activities** here, and each so-called research activity earns teachers research hours. That is **one common incentive** for teachers to do research in this university. For instance, the effective use of ICT in teaching can be counted as working hours. If the course they teach is worth 45 teaching hours, teachers who blended ICT in their teaching can gain extra research hours on top of the standard 45 teaching hours.

8.2.4. Connecting the quantitative and qualitative results

The quantitative analysis of teacher surveys has shown that teachers hold overall positive context beliefs about doing research, i.e. they generally believe that a research-active environment is possible at their universities. Their beliefs about the availability of different research-enabled factors at their workplace, however, is not as strong as their beliefs in the importance of these factors in enabling them to be active researchers.

The qualitative analysis of the open-ended item in the survey uncovered one unlisted contextual factor that may influence teachers' research engagement: cooperation with other universities.

The qualitative findings from interviews with department leaders revealed the actual presence of all factors listed in the survey (except for the "adequate infrastructure") in their universities although at a varying degree of availability. The leaders expressed difficulties in assuring the "reasonable teaching workload", "sufficient funding", which is congruent with the findings from teacher surveys. Contrary to teachers' survey responses which highlighted the high level of availability of "learner's cooperation" however, only one leader mentioned this as an available advantage for teachers in their workplace.

Connecting the mixed data, the results indicated that in both teachers' subjective beliefs (as reflected in the surveys) and in triangulated reality (as reflected in leaders' interviews), the contextual conditions for EFL teachers to engage in research at Vietnamese public universities

are, to a certain degree, available. However, the level of availability does not appear to meet teachers' needs.

8.3. Teachers' attitudes towards research

8.3.1. Quantitative results from teachers' survey

This section reports on participants' attitudes towards research, which was statistically measured by the 11-item scale in part 4 of the survey (survey items 4.1. through 4.11). The psychometric properties of the scale will be reported first, and the summary of teachers' attitudes measures will be presented in the second and final part of the section.

8.3.1.1. The psychometric properties of the teachers'-attitudes-towards-research scale

As indicated in the methodology chapter, the reliability and usability of teachers'-attitudes-towards-research scale (TATR) was examined via factor analysis, item-total correlation, and internal consistency coefficient.

A principle-components analysis (PCA) using SPSS version 22 was performed on the TATR scale to explore the general internal structure of the scale. Prior to the analysis, the suitability of data for PCA was assessed. The correlation matrix showed the presence of many coefficient values of .3 or above; the Kaiser-Mayer-Olkin (KMO) value was .86, exceeding the suggested minimum value of .6, and the result of Bartlestt's Test of Sphericity was statistically significant ($p<.05$), supporting the factorability of the correlation matrix. PCA revealed the presence of three components with eigenvalues greater than 1, supporting the intended three-factor structure of the TATR scale.

As expected, the first component, Research Usefulness, includes items 4.1 through 4.4, with factor loadings ranging from .6 to .91, accounting for 42.7% of the variance. The second component, Research Anxiety, has the next four items on the scale (4.5 through 4.8) with factor loadings ranging from .78 to .91, explaining 20.1% of the variance. The third component, Teachers' Positive Research Predispositions, consists of the final three items of the scale (4.9 through 4.11) with factor loadings ranging from .87 to .9, and accounted for 10.8% of the variance. All items were found to load on one single factor, and their communalities values are

also of .5 and above, suggesting good fitness among the items within each sub-scale. Such results support the intended three-component structure of the scale, and the retainment of all 11 items for further analysis.

Internal consistency coefficients were estimated at a medium level for all three sub-scales as well as the total scale. Coefficient alpha was .83 for Research Usefulness (4 items), .88 for Research Anxiety (4 items), and .88 for Research Predispositions (3 items), and .86 for the total scale (11 items). These figures do not increase should any item be removed from the scale or sub-scales. Item-total correlations within ranged from .56 to .83 within each sub-scale and from .36 to .66 within the total scale, exceeding the recommended minimum of .3.

Overall, the psychometric quality of the research self-efficacy scale in use in the current study is supported on the basis of PCA, internal consistency estimates, and item-total correlations. Cores of all 11 items were included in the official analysis.

8.3.1.2. Teachers' attitudes towards research as measured by the TATR scale

Survey data concerning teachers' attitudes towards research are summarized in table 8.4. According to the table, Vietnamese EFL teachers' overall attitudes towards research are moderately positive (Mean = 3.53 on a five-point scale). Among three main attitudinal dimensions, the perceived usefulness of research was the most positively rated (Mean=4.30) while teachers' research anxiety was rated the lowest with the mean score indicating somehow negative attitude (Mean=2.87 on a five-point scale). The benefits of research most highly appreciated by the teachers was its helpfulness to their jobs (item 3.3, Mean=4.42), and the aspect of research that negatively concerns teachers the most was the difficult nature of the activity (item 3.8, Mean=2.60). All positive research predispositions were rated at a mid-range level.

Overall, the data indicated teachers' slightly positive attitudes towards research, which was made up of their high appreciation of research usefulness, but neutral level of interest and slightly elevated degree of anxiety they felt in relation to research engagement.

Research usefulness – the most positive aspect of doing research in the participants' opinion was further explored in the follow-up interviews and written emails. The results of the qualitative data analysis are presented in the following sub-section.

Table 8. 4. Means and Standard Deviations of each items in the TSTR scale

Factor	Item	N	Mean	SD
Research usefulness		529	4.30	.62
	3.1. Doing research is good for my career	529	4.33	.76
	3.2. Research is helpful for me in my job	528	4.34	.74
	3.3. The skills and knowledge I may acquire from doing research will be helpful for me in the future	527	4.42	.679
	3.4. Research should be an indispensable part of my job as a university EFL teacher	525	4.11	.87
Research anxiety		528	3.13 (2.87*)	.95
	3.5. Doing research scares me	523	2.83 (3.17*)	1.15
	3.6. Doing research is stressful	528	3.11 (2.89*)	1.12
	3.7. Doing research makes me nervous	526	3.19 (2.81*)	1.10
	3.8. Doing research is difficult	528	3.40 (2.60*)	1.08
Positive Research Predispositions		526	3.43	.81
	3.9. I enjoy doing research	526	3.43	.90
	3.10. I find doing research interesting	525	3.56	.88
	3.11. Doing research is pleasant	524	3.31	.91
Total Attitudes towards research**		**529**	**3.53**	**.61**

Note: *Reversed score** Counted with reversed Anxiety subscale scores

8.3.2. Qualitative results from teachers' follow-up interviews and written emails

8.3.2.1 The perceived values of research engagement

In the post-survey interviews and written emails, selected survey participants were asked to elaborate on the importance of doing research in their opinion and explain why they thought so.

Participants' responses to these questions uncovered several important themes, which are presented below.

Regarding the importance of doing research, almost all teachers (n=45) responded positively to it. The phrases that frequently appeared in teachers' answers about the perceived role of research in their jobs as university lecturers were "very important", "integral part", "obviously important", "essential", and "necessary". Only one teacher disclosed a negative predisposition, saying that research was not a suitable task for teachers in general, who in her opinion should focus on teaching, and not a feasible task for Vietnamese university teachers in particular because of the lack of the research human resources. This participant found the formal research experience "painful" as a result:

> T2: I know that research is a compulsory task for university teachers, but […] I think that if my job is a **teacher**, I just want to **focus on teaching**. […] Universities require us to do research because they want to look "Western", not because they think we can do it well. The Western have many PhDs and Professors who can do research while **very few of us have a PhD**. Compiling textbooks is fine, organizing workshop is fine, but **doing a formal research** with all the data collection and analysis procedures is **so painful**.

Concerning teachers' descriptions of research benefits, several importance themes emerged. Central in all participants' interview responses were the professional development effect of doing research on individual teachers. In their opinion, research engagement would help teachers to become more critical, to make their lessons more evidence-based with research results, to advance professional knowledge, to gain better understanding of different aspects of the teaching profession, to be able to figure out and address their own problems, to enhance their overall intellectual ability, to discover suitable teaching methods, and ultimately improve the overall teaching quality. One teacher added that the research skills and knowledge teachers gained from first-hand research experience would also enable them to support students to do student research. All these professional development benefits are evident in the following excerpts:

> T2: Research can **upgrade my critical thinking skills** to a higher level.
>
> T3: I think research is **very important**. University teachers have to **update their knowledge** frequently and doing research is an **effective** way to do it. Research can also make our lecturers **more evidence-based** and therefore sound **more convincing**

> to students. When I want to talk to students about English culture for example, I may use my research results in my lessons. This clearly **improves the quality of the information** I transfer to the students, or in other words, improves **the quality of my teaching.**
>
> T5: It (research engagement) may not be important for teachers of lower levels, but is **definitely very important** for university teachers. […] The first one is for the teachers ourselves, professionally. Teachers doing research will not only **improve their English language proficiency**, because we have to read a lot in English, write a lot in English, and sometimes listen and speak in English too when doing research, but also **other kinds of knowledge**. We know more about the topics we are researching, the research methodology, and so on.
>
> T8: **Of course** doing research is **good** for me as a teacher because doing a research project means having to deal with all sorts of activities, from reading and analysing the literature, collecting data, interpreting the data, etc. **My intellectual ability** can **improve** accordingly.
>
> T9: **Very important**, because various problems may occur in our teaching practice, and each group of students have their own backgrounds and suits particular teaching style. We the teachers need to do research to **know and solve our problems**, and **explore the teaching strategies and methods** that suit students' individual needs.
>
> T18: Research is **important** because it helps **enrich our professional knowledge**, **improve our teaching quality**, and **enable us to supervise students** doing research. If we did not do research ourselves, and thus gain sufficient research knowledge and skills, how could we **instruct students** to do their research?

As a result of the above professional gains for teachers, research engagement was said to also benefit student learning, and the wider schools. Although no detailed elaboration was provided, this point is mentioned by several participants as a subsequent effect of teacher professional development:

> T5: So the first benefit is for myself. The second **benefit** is for **the students**. If teachers can do research, **students can benefit** from that too. If the research has a very strong impact, **higher levels** like the university can **also benefit** from the research as well.
>
> T6: If I can update my knowledge and improve my teaching, **my students** can **obviously benefit** from that too. So in general, doing research is not only good for me but also **good for my students**.

Overall, the post-survey participants positively valued teacher research, which according to them can help advance their professionalism and consequently boost student learning and school improvement.

8.3.3. Connecting the quantitative and qualitative results

Connecting the quantitative and qualitative data, the results are consistently indicative of an overall positive attitudes held by teachers towards engagement in research, especially the usefulness of the activity to teacher professional development. The quantitative data, however, exclusively demonstrated only moderate level of interest teachers shown by teachers and a moderately high degree of anxiety they felt in relation to research engagement.

8.4. The impacts of teachers' research self-efficacy, context beliefs about doing research, and attitudes towards research on their reported level of research engagement

This section statistically examines the impacts of three cognitive factors (research self-efficacy, context beliefs about doing research, and attitudes toward research) on teachers' degree of research engagement reflected in their reported frequencies of doing research. In order to achieve this aim, relevant data obtained from the survey was analysed using standard multiple regression technique.

First, the independent variables were prepared by averaging the scores of all the items in one scale or sub-scales. Because the research-self efficacy scale contains three sub-scales, three composite scores were computed for three self-efficacy variables: Self-efficacy sub-scale 1 (Research planning); Self-efficacy sub-scale 2 (Research main tasks), and Self-efficacy sub-scale 3 (Research Supplementary tasks). In the same way, three composite scores corresponding to three sub-scales in the Attitudes towards Research instrument were computed: Attitude subscale 1 (Research usefulness), Attitude subscale 2 (Research anxiety), Attitude subscale 3 (Positive research predispositions). Since the Context Beliefs about doing research has a single-factor structure, one composite score was prepared for the whole scale by averaging across the retained 13 items. The final outcome was seven independent variables (IV): three self-efficacy variables, three attitudinal variables, and one context belief variable. The dependent variable (DV) is the score teachers rendered to item 6.3 of the survey questionnaire.

Next, preliminary analyses were conducted to ensure all assumptions underlying standard multiple regression statistics were met. The results showed no outliers (as assessed by no residuals greater than ±3.3), no evidence of multi-collinearity (as assessed by tolerance values greater than 0.1, and VIF values smaller than 10). There was linearity (as assessed by partial regression plots), homoscedasticity, and normal distribution of the residuals (as assessed by visual inspection of the residual plots). In short, there were no violations of the assumptions of linearity, normality, homoscedasticity, non-existence of outliers, and non-existence of multi-collinearity, suggesting the suitability of the use of standard multiple regression statistics.

A standard multiple regression was run to predict the frequencies of doing research (DV) from research self-efficacy (three IVs), context beliefs about doing research (one IV), and attitudes towards research (three IVs). The results were displayed in table 8.5. As the table shows, all the seven independent variables were simultaneously entered in the model, which statistically significantly explained 18.3 % of the variance in the reported frequency of doing research (R Square = .198, adjusted *R* Square = .187, $F(7, 489)=17.248$, $p<.0005$. Among the seven independent variables in the model, Self-efficacy sub-scale 2 (Research main tasks), Total Context beliefs about doing research, and Attitudes sub-scale 2 (Research anxiety) made significant unique contribution to the prediction of the reported level of research engagement. The Research Anxiety recorded the highest standardized Beta value (Beta=.190, p<.0005), uniquely explaining 2.7 % of the variance in how often teachers said they did research. At the second place, self-efficacy about the research main task had the Beta value of .165 (p=.015), uniquely predicting 1 % of the variance in teachers' reported level of research engagement. Next, the Total context beliefs about doing research had the Beta value of .097 (p=.027), uniquely explaining .9% of the variance in teachers' reported frequencies of doing research. Finally, teachers' self-efficacy about the research planning tasks did not add statistically significantly to the predictability of the model (Beta=.109, p=.074), neither did teachers' self-efficacy about the research supplementary tasks (Beta= -.039, p=.542), teachers' sense of research usefulness (Beta=.041; p=.403), and teachers' positive research predispositions (Beta = .094, p=.066).

Overall, the standard multiple regression results show that the model of research self-efficacy, context beliefs about doing research, and attitudes towards research significantly predicted teachers' reported frequencies of doing research. Three variables, namely research self-efficacy about research main tasks, research anxiety, and teachers' beliefs that their schools are supportive of their research engagement, have statistically significant and unique impacts on how often teachers say they do research. Of these three, teachers' research anxiety exert the most substantial influence. On the other hand, teachers' self-efficacy about research planning and research supplementary tasks, their attitudes towards the usefulness of doing research, and their positive research predisposition, although appearing to positively correlate with teachers' reported frequencies of doing research, did not significantly predict teachers' level of research engagement.

Table 8.5. Frequencies of doing research explained: Standard Multiple Regression

Model Summary

For Dependent Variable: Reported frequency of doing research

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	*.445	.198	.187	.944

*Predictors (Independent variables): Self–efficacy sub-scale 1 (research planning tasks), Self–efficacy sub-scale 2 (research main tasks), Self–efficacy sub-scale 3 (research supplementary tasks), total context beliefs about doing research, and Attitude sub-scale 1 (research usefulness), Attitude Sub-scale 2 (Research anxiety), Attitude sub-scale 3 (Positive research predispositions).

ANOVA

Model	*Sum of Squares*	*Df*	*Mean Square*	*F*	*Sig.*
Regression	107.527	7	15.361	17.248	.000
Residual	441.156	489	.891		
Total	543.025	496			

Coefficients

Model	*Standardized Coefficients*	*Sig.*	*Correlations*	*Collinearity Statistics*	
	Beta		*Part***	*Tolerance*	*VIF*
Self-efficacy sub-scale 1(Research Planning)	.109	.074	.073	.441	2.207
Self-efficacy sub-scale 2(Research Main tasks)	.165	.015***	.099	.363	2.753
Self-efficacy sub-scale	-.039	.054	-.025	.392	2.551

3(Research Supplementary tasks)					
Total context beliefs about doing research	.097	.027***	.090	.869	1.150
Attitude sub-scale 1 (Research usefulness)	.041	.403	.034	.681	1.468
Attitude sub-scale 2 (Research anxiety)	.190	.000***	.166	.763	1.311
Attitude sub-scale 3 (Positive research predispositions)	.094	.066	.075	.633	1.581

Note: **Square of the coefficient correlation part indicated the percentage of the unique contribution of each individual variable to the total R Square. *** statistically significant at the p<.05 level.

Chapter 9: Teachers' motivation towards research

This section presents and discusses the results of the analysis performed on the data about teachers' motivation toward research. It aims to provide answers for the following research questions:

3a. How much are Vietnamese tertiary teachers of English motivated to do research?

3b. To what extent are teachers' specific behavioural regulations associated to their reported level of research engagement?

4a. What initially motivates teachers to do research?

4b. What factors sustain/reduce their motivation in the process of conducting research?

The chapter is structured into four main sections. The first section presents and discusses the findings from the quantitative data analysis, which responds to the research questions 3a, 3b. while the second one focuses on the results of the qualitative data analysis that addresses questions 4a, 4b. The chapter will then integrate both qualitative and quantitative findings. The whole chapter aims to portray a holistic picture of Vietnamese tertiary ESL teachers' motivation towards research, the influences on their motivation changes, and the impact it may exert on their level of research engagement.

9.1. Quantitative results from teachers' surveys

9.1.1. The psychometric properties of the research motivation scale (RMS) for teachers

As indicated in the methodology chapter, the validity and reliability of the scale were assessed by an inspection of the correlation matrix of 6 latent variables: Intrinsic motivation (IM); Integrated regulation (INTEG); Identified Regulation (IDEN); Introjected Regulation (INTRO); External regulation (EXT); and Amotivation (AMO). Pearson correlations computed amongst the six latent variables (or sub-scales) are displayed in table 9.1. below.

Table 9. 1. Pearson correlations for the RMST's subscales

Variable	INTEG	IDEN	INTRO	EXT	AMO
IM	.63*	.42*	.29*	-.04	-.17*
INTEG		.34*	.37*	.1*	-.10*
IDEN			.23*	.23*	-.27*
INTRO				.24*	.11*
EXT					.22*
AMO					-

Note: N≤519; *Correlation is significant at the 0.05 level (two-tailed). IM=Intrinsic motivation; INTEG=Integrated regulation; IDEN=Identified Regulation; INTRO=Introjected Regulation; EXT=External regulation (EXT); AMO=Amotivation.

As can be seen from table 9.1, the correlation matrix demonstrated an overall presence of a self-determination continuum. The correlation patterns were also in agreement with the ones obtained with the full version of the scale used in the previous studies (see Tremblay et al., 2009; Fernet et al., 2008). This provides support for the construct validity of RMST of the present study although it is a shorter adapted version from the full Work-Extrinsic-and-Intrinsic-Motivation Scale (WEIMS) developed and validated by Tremblay and colleagues (2009).

9.1.2. Teachers' research motivation as measured by the Research Motivation Scale (RMS) for teachers and reflected in the open-ended questionnaire item

Table 9.2 provides the descriptive information about teachers' research motivation as measured by the RMST scale in the survey.

Table 9. 2. Means and Standard Deviations for Individual Items and Total scale of the RMS

Motivation types	Items	N	Min	Max	Mean	SD
Self-determined motivation (SDM)						
IM	5.1. I enjoy doing research.	515	1.00	7.00	4.05	1.54
INTEG	5.2. It is a fundamental part of who I am.	515	1.00	7.00	3.79	1.42
IDEN	5.3. Research helps me obtain career objectives that I feel important.	520	1.00	7.00	4.94	1.48
Non-self determined motivation (N-SDM)						
INTRO	5.4. I will feel bad if I don't do it.	510	1.00	7.00	3.32	1.60
EXT1	5.5. Because I am required to do so.	506	1.00	7.00	4.37	1.79
EXT2	5.6. Because I can earn financial rewards from doing it.	507	1.00	7.00	3.68	1.84
AMO	5.7. I don't know, I don't always see the reasons for doing research.	469	1.00	7.00	2.12	1.52
Total motivation**		**458**	**-26.00**	**33.00**	**6.72****	**9.93**

Note: IM=Intrinsic motivation; INTEG=Integrated regulation; IDEN=Identified Regulation; INTRO=Introjected Regulation; EXT=External regulation (EXT); AMO=Amotivation.
SD=Standard Deviation
Individual items were measured on a 7-point Likert scale ranging from 1 (does not correspond at all) to 7 (correspond exactly).
* = 3 x IM + 2 x InTEG +1x IDEN – 1x INTRO – 2 x EXT (Mean) – 3 x AMO.
** The range of possible scores is between ±36.

The data in Table 9.2 indicated that Identified regulation (M=4.94; SD=1.48) was the main underlying reason for Vietnamese tertiary EFL teachers' research engagement. This means that the participating teachers do research mainly because they identify with the benefits of the activity. Teachers were also motivated to do research by external requirements (Mean = 4.37), and intrinsic interest in the activity (Mean=4.05). Introjection (i.e. teachers do research to avoid bad feelings) and integration (i.e. research has been fully internalized and becomes part of an individual teacher's self-image) received mean scores of just slightly above the average, (Mean = 3.32 and 3.74 respectively), meaning they are less common motives driving the sample's research activities. Amotivation was the least acknowledged type of motivation (Mean=2.12), indicating very few teachers engaged in research passively and without knowing why they did so. The total score for teachers' research motivation was 6.72 on a ±36 range of scores, signalling a moderate self-determined profile of the sample of the current study. Overall,

although both extrinsic and intrinsic motives exist, Vietnamese tertiary EFL teachers were more self-determined than controlled in their decision to engage in research.

Apart from the numerical scores, forty-two teachers gave "other" reasons for doing research via the open-ended item. The most common theme emerging from these were to improve learning and teaching quality and to develop professionally, which seem to correspond to the most highly rated item in table 9.2 (item 5.3. Research helps me obtain career objectives that I feel important). Teachers explained that they do research to "improve my teaching quality", "to improve my student learning", "to benefit my teaching by solving the current difficulties I have in teaching", "to update my professional knowledge while not pursuing a higher degree research study", "to understand more about different aspects of learning and teaching and consequently can find better ways to help students". Other "career objectives" that motivate teachers to do research included "to contribute to the development of the society", "to practice and improve my reading and writing skills". Some teachers noted external requirement "it is compulsory for teachers to do research", personal interest ("to satisfy personal curiosity"), and a need for enhanced self-esteem ("to feel more confident) as reasons for their engagement in research. These drives once again respectively reflect the extrinsic motivation (item 5.5), intrinsic motivation (item 5.1), and introjection (item 5.4) in the questionnaire.

Scores of individual items on the RMS, and the total scale score were correlated with the score for frequencies of doing research (using Pearson's product-moment correlation) to explore the relationships between teachers' motivational profiles and their degree of research engagement. Preliminary analyses showed the linear manner of the relationships with all variables normally distributed and there were no outliers. The results of calculated Pearson correlations appear in Table 9.3

Table 9. 3. Correlations between frequency of doing research and motivation sub-scales/total scale

	IM	INTEG	IDEN	INTRO	EXT**	AMO	Total motivation
Frequency of doing research	.33*	.38*	.19*	.16*	.03	-.05	.25*

Note: IM=Intrinsic motivation; INTEG=Integrated regulation; IDEN=Identified Regulation; INTRO=Introjected Regulation; EXT=External regulation (EXT); AMO=Amotivation; *=statistically significant at $p<.01$ level (two-tailed); $447 \leq N \leq 513$; **=Mean (EXT1, EXT2)

As can be seen from Table 9.3, there was a small positive correlation between teachers' overall self-determination profile (total motivation) and their reported frequencies of doing research, $r=.25$, $p<.0005$, with the level of self-motivation explaining 6% of the variance in the reported frequencies of research engagement. Regarding specific types of motivation, research engagement correlated positively and significantly with four out of five types of motivation, namely intrinsic motivation ($r=.33$, $p<.0005$), integration ($r=.38$, $p<.0005$), identification ($r=.19$, $p<.0005$), and introjection ($r=.16$). The strength of the correlation appears to be larger with the more self-determined types of motivation (e.g. Introjection vs. identification). However, the most self-determined motive – intrinsic motivation – was found to exhibit weaker relationship with frequencies of doing research than its less self-determined precedent—integration. A negative relationship was found between a lack of motivation (amotivation) and research engagement, but the relationship did not reach statistical significance. External regulation did not yield a statistically significant correlation with teachers' reported frequencies of doing research either, although the correlation appears to be positive.

9.2. Qualitative results from teachers' interviews and diary studies

This section presents the results of the thematic analysis of the qualitative data obtained via two interviews and six diary entries from three case-study teachers over a three-month period starting from when they commenced their own research (See chapter 4-Methodology). The section starts with a brief description of the four cases studied, which is followed by the presentation of the main themes emerging from the data. The themes are presented under two categories (1) initial motivations and (2) motivational influences during the process of conducting their research –

which correspond to research question 3a, 3b. The results are then discussed at the end of the section.

In this whole section, the three participating teachers are referred to by their pseudonyms, Dung, Hoa and Son; the two interviews (conducted with each participant) are referred to as Int1, Int2; and the six diary entries (written by each participant) are referred to as DE1, DE2, DE3, DE4, DE5, DE6. As a result of such codings, "Hoa, DE1", for instance, refers to the first diary entry provided by Hoa.

9.2.1. Description of the respondents

Respondents for this qualitative case study were three English language teachers, Dung, Hoa and Son, from two public universities in Vietnam. Hoa and Dung were the former colleagues of the author, while Son is a friend of Hoa, working in a nearby university. They were selected because they satisfied all the requirements of the Study (i.e. being a public university teacher of English who had been doing a research project for no more than two weeks since they started it), and consented to commit to the three-month data collection period of the Study. In general, the participants are roughly similar in terms of educational background, and academic commitments, but differ in the extent to which they care about and are able to do research. The conditions, nature, function, and structure of the projects they were doing were also different. The background, research experience, and the research project each participant was doing are described in turn below.

The first participant, Son, aged 31, is an early-career English language teacher, who showed a genuine interest in doing research but was hindered from fulfilling it by the many roles he had to juggle. He obtained a Bachelor degree in English Language Teaching in 2007, a Master degree in Linguistics in 2015. At the time of providing data for this study, Son had been teaching English at a public university for eight years and did not have any intention to change his job. Son's intrinsic love for research can be seen from his switch from a well-paid interpretation job he had done for two years after university graduation to the poorly-earning tertiary English teaching because of his desire to "do research **to know more** about English language teaching

and to improve Vietnamese students' English" (Son, Int1). He was also actively searching for a scholarship to pursue a PhD overseas purely because it would provide a chance to strengthen his research skills. When trying to translate this wish into reality, however, Son has faced numerous difficulties. As a young full-time staff member, Son was required to teach 15 hours per week, and submit research outcome equivalent to 100 teaching hours at the end of each year. Apart from teaching and researching, he was also assigned many other roles, for example, fund keeper and secretary of the department's Trade Union, which in his words "requires serious investment of time" (Son, Int1), and sometimes even at the expenses of the time supposed to be devoted to his own family. The income from the university, nevertheless, never fully covered his expenditures. As the "bread winner" of the household, Son always had to teach extra classes outside the university, which may total up to 20 hours per week. As a result, Son hardly ever found enough time for doing "decent" research (Son, Int1). His fulfilment of the required annual research hours often resulted from compiling teaching materials or presenting at the department's experience sharing workshops. The research project Son was doing when providing data for the Study was individually initiated with solely his personal budget. It explores the perceptions of and knowledge about formative assessment among Vietnamese teachers of English and is expected to take about three months to finish.

The second participant, Hoa, 34, is in her mid-career stage, and can be characterized as a professional who takes a middle ground between an academic researcher and a classroom teacher. She had a university degree in English language, a Post-Graduate Diploma in English language teaching and was going to start a full-time PhD studies in New Zealand in the following year. At the time of the first interview, Hoa had reached her 12^{th} year of tertiary English teaching. Her academic schedule included 15 hours of weekly teaching, and 85 hours annually of doing research. Not being under as much financial pressure as Son, Hoa spent only 4 hours every week teaching extra classes, and has always managed to fulfil the required research hours by conducting "real" research projects. She had participated in so far five institutional-level projects, nine department-level ones, published one article in a domestic academic journal

and delivered one presentation at an international conference. Out of 10-point interest scale with 0 being no interest at all, Hoa rated hers at 8. She does research mostly out of her desire for enriching her knowledge and even an ambition for creating new knowledge in the English language teaching field. The research study Hoa was carrying out at the time of the first interviews explores how teachers can utilize library resources to enrich their teaching activities. It was an institutional-level project approved and funded by the university with a tentative timeframe of 1 year. The project was the first one in which Hoa played the role of a chief investigator.

The last participant, Dung bears many professional resemblances to Hoa, except for his underlying motives for doing research. At the same age, 34, Dung had also obtained a Bachelor in English and a Master of Educational Studies, and had been a university lecturer of English for 12 years. Working in same department, Dung teaches and researches for the same hours as Hoa, 15 per week and 85 per year respectively. Despite not being pressured by the bread-winner role, Dung still works an extra 12 hours outside the university and had participated actively in research. He has never failed to meet the research requirement, with five completed institutional level projects, several department-level research, and one presentation at an international conference. His interest in conducting research, however, is personally rated at only 6 out of 10; and his general motivation came mostly from his perceived responsibility as a lecturer, and the feelings of pride he experienced whenever he accomplished a big project. At the time of participating in the Study, Dung was leading a team of three teachers in the same department to conduct research on the advantages and difficulties of applying blended learning mode to an English for Specific Purposes course. Expenses of the project were met by Dung and the team members' own budget at that time, but they were applying for funding from their university and Oxford University Press. They planned to complete the research in the following 6 months.

In the process of studying these three cases, it became clear that there existed multiple initial motivations that triggered the participants' decisions to carry out their research, as well as a variety of factors that sustained or eroded their motivation thereafter. The relevant themes

emerging from the data are presented in the following two sub-sections with relevant excerpts from the interviews and diaries given to illustrate them.

9.2.2. Initial motivations to engage in research

Information concerning teachers' initial motivations for doing their research were collected through the interviews conducted at the beginning of each participant's own research project. In the interviews, the participants were asked what initially motivated them to carry out the research they were doing. Three themes emerged from the data about the participants' initial motivation: (i) meeting an external requirement (ii) an intrinsic interest in doing research, and (iii) satisfying a perceived need for professional development.

The first two motivations were each expressed by only one participant in a quite straightforward way. Hoa stated clearly that the minimum research hours imposed on her by the university drove her to do the research, while Son said that his love for research was the main reason:

> Hoa: I do it [the research] to firstly **fulfil the requirement**about the minimum research hours I have to do. (In1)

> Son: Another motivation for the research I mentioned to you is **purely my passion for doing research**. Or at least at the moment, my **major motivation** is still my **interest in research** […] I am **not really in the position of fulfilling the research requirement** from the university because my department is quite flexible. If teachers cannot fulfil their research hours by doing real research studies, they can still earn research credit by editing textbooks, writing textbooks, and can all satisfy the research requirement. Some teachers, like me, do research **purely out of personal interest**. (Int1)

The third strand of initial motivation, on the other hand, was noticed in all the three cases but varies in the ways it is indicated in each case. The needs for professional development (PD) that the participants mentioned as reasons for doing their research were either short-term or long-term in nature, and oriented by either a felt professional responsibility or a personal satisfaction contingency.

The short-term PD goals that served as an initial motivation for doing research included attending a conference, solving an immediate classroom problem, and having a chance for publication. Dung and Son shared the first one:

> Son: Everything has been planned. **This project is done so that I can use its result to present at a conference** in the South. The conference is in August, so I should start it from now, beginning with writing an abstract to submit to the conference. (Int1)

> Dung: The first motivation [for the project] is when I read the notification about the offer to fund some projects on blended learning and the authors can **present at a major conference**. I wanted to **do this research** on blended learning **so that I can be considered for the opportunity to attend that conference** as a presenter. (Int1)

Dung added the second and the third-- his concern about students' learning problem, and a goal of publishing in an academic journal -- as two other drives for his research initiative:

> Dung: The **second motivation** is related to **an issue** in my department that I have been **constantly concerned about**, which is how to encourage students to work harder, and become more active in class when teachers ask them questions during class time. They lack so much background knowledge of the subjects they learn that they don't know how to answer teachers' questions in class. I want to find some ways to make them more pro-active and to create a more supporting and relaxing learning environment for my students. […] Besides, I want to do this research **because it gives me a chance for publication**. If I complete the research, I can submit it to an academic Journal article.(Int1)

The long-term PD needs that drove the participants to engage in research can be seen in their wishes of improving six different aspects of their profession as university lecturer, namely qualification, knowledge, teaching practice, students' learning, professional network, and research experience. Four of them were present in Son's explanation for why he wanted to attend a conference – the main motivation for his decision to engage in his research:

> Son: I like to attend conferences because it is a good opportunity for me **to gain research experience**, which is required of a university lecturer. So I can say, my motivation for the current research is not only my interest in the research activity, but also attached to my need of **increasing research experience**. I can get advice from colleagues on my research and **gain useful insights** into different topics and research methodologies from others. Extended **professional network** at every conference may also be **useful for my teaching and researching** in the future when I need teaching materials or research participants. In short it is **good for my professional development as a university lecturer**. (Int1)

The gain of knowledge was especially highlighted when he talked about his motivations for research in general.

> Son: I do research because of **the knowledge** it can bring to me. It depends on the topics. If the topic is concerned with our profession, I will **understand** it more. […] Research about assessment will help me **acquire more knowledge** about

> assessment. […] By doing research, I cannot only **enhance my knowledge** but also evaluate what I and my colleagues are doing. (Int1)

Hoa shared similar expectations about her knowledge, teaching quality, research experience, and professional network before she initiated her project:

> Hoa: I did this project for many other reasons. First, as in any other research I have done, I want to **know more** about the topic I am studying; so I can **gain knowledge**. Second, I want to create a **positive change in my teaching method** by cooperating with different units in the university, for example, the library. Third, I will gain **more research experience**. I am quite a novice in doing research. I haven't got much research experience, and this is the first time I am a chief investigator of a team project. Finally, **my relationship** with the librarians and other departments of the university will also be **strengthened** because I will have the **opportunities to get closer** to them during the whole project. All these are **important for me** to develop my career as a university lecturer. (Int1)

Dung emphasized the teaching and learning improvement and his goal of attaining a higher qualification in the future as a driving force for him to do research in general and the project he was doing in particular:

> Dung: I want to find some ways to make them more pro-active and to create a more supporting and relaxing learning environment for my students. This is **important** because it helps **my teaching be more effective** and **improve my students' learning**. I gain **no financial rewards** from doing it [the research], I just find it **useful and practical** for **my students and myself**.
>
> I am applying for a scholarship to **pursue a PhD**. That's my wish at the moment and to realize that wish, I **must have strong research experience** to prove my research capabilities. It is thus **a must for me** to do research. (Int1)

Such professional needs originated from two distinct sources: a felt responsibility or an anticipated feelings of satisfaction. The former orientation is evident in the following comments:

> Hoa: You know, university lecturers **must teach well** and be **able to do good research**. The knowledge, research experience, good relationship with the librarian I gain from this project are all **important** for me **to do so**. (Int1)
>
> Dung: I don't find teaching sufficient for my professional development, so I **must do** research to meet my professional needs. (In1)

The other orientation, more personal, can be seen from Dung's claim that the anticipated positive feelings of pride and happiness was an underlying motivation for him to do research:

> Dung: If I don't do research, I have no chance for presenting at conferences. I **enjoy** traveling here and there presenting my research in front of an academic audience. I just **love this feeling**. […]

> When I have my research published in a Journal and can make some contribution to improving students' learning, I **feel proud** of myself. That **makes me happy**. […]
>
> Technology has always been said to be an innovation in teaching and learning, I will have a chance **to verify this assumption in a context**. If it is not effective, where are the problems? If it works, how can we improve it even further? **If I can do that**, I will **feel more happy and proud** of myself. (Int1)

Along with the initial motivation as such, it is interesting to also consider the motivation intensity and the anticipated motivational influences shown by the three participants at the start of their projects. When asked about the extent to which they believe they would complete their research and why, Hoa and Dung responded with a relatively high level of confidence and determination, which as they said, thanks to their familiarity with the research topic (Hoa and Dung), and the support they may receive (Hoa), and their subjective value of resoluteness (Dung):

> Hoa: **70%.** Because I teach and do research at the same time, so I **understand** the situation. And I also received **a lot of support** from many people: team members, boards of managers, and librarians too. […] They (the board of managers) gave me **approval** for doing research, and agree to **support** me in every way they can if I need anything. The librarians **support** me in the same way too. They said they'd be willing to **help out** with anything they might need. (Int1)
>
> Dung: **Of course** I believe I will finish it. **99%**! If I did not believe, I wouldn't have started it. I know there is a lot of work, but as long as I am **determined** to do it, I know I will make it to the end. The advantage is that the topic is **familiar** to me. I have **experience with it** in both my teaching and during the time I worked for Project 2020. (Int1).

These two participants expressed such determination in their awareness of potential difficulties in terms of research inexperience, time constraint, teamwork issues, and feasibility of the project they may encounter:

> Hoa: First, I **don't know much** about research policies and procedures at our university. This is because I **lack research experience**. I am getting stuck on how to form research questions without any guidance. Second, **my time** is another **problem**. I need time to read but I do **not have enough** time for it. (Int1)
>
> Dung: The **difficulty** is that the project requires **team member**s. When team members are **not very enthusiastic**, which is very much the case, I will have to do most of the work. One more difficulty is that the **students** might not spend enough time studying the online part as required by the project, and if this happens, the project will **never be completed.** […] Of course I'm **worried about the timing**. I will try to complete the project, but **not sure** whether in the time I expected. Given so many responsibilities I have to take, I'm **not sure I can spend enough** time I expect for the research. (Int1)

Reporting the same potential obstacles, the third participant, Son, however, showed a doubt in his ability to reach the end of his project despite his advantage in professional network:

> Son: To be honest, I **don't feel very confident** that I will make it (finish the research) because it depends on so many things: **my research ability**, **the participants**, my **time** allowance, and so on […] The obvious one (difficulty) is **time**. Time is the **biggest problem**. **My workload is huge**, I have to teach many hours and do other tasks. Family commitment is just one of them, other duties at work can consume a lot of time from my budget too. Even when I am not the person in charge, just being participant in an extra-curricular activity at the Department or University requires serious investment in terms of time. There are times when I have to sacrifice my family time to be at work. So the **biggest concern** is **time investment**, which is vital for reading the materials necessary for the research.
>
> […]
>
> My advantage is my **large network**. I can **recruit teacher participants** for my research **very easily** because I can approach many teachers I know, not only in this university but in other universities as well. I do socialize and network, attend conferences, and keep in touch with teachers I meet in case we need support from one another. (Int1)

9.2.3. Motivational influences during research engagement process

As the participants proceeded through the process of conducting their research, multiple factors had impinged on their motivation to stay engaged. Some factors appeared in more than one case but each case was unique in how the factors were acted out and intermeshed. Some are crucial in changing the nature of the teachers' motivation for and engagement in research. This section presents what three teachers reported to have sustained or diminished their motivation in the actual implementation of their research.

Data were collected via a total of 17 diary entries the participants (12 of two participants and 5 of one participant) provided over three months and the final interview conducted with them one week after the final diary entry. The themes generated from the data are organized into two major categories: (i) motivating factors and (ii) demotivating factors, which are presented in two sub-sections below.

5.1.3.1. Motivating factors

Five factors were reported to have sustained participants' motivation and engagement during the process of conducting their research, namely (i) the quality of the actual research experience, (ii)

external support, (iii) subjective values, (iv) action maintenance strategies, and (v) extrinsic demands.

First of all, the **quality of the actual research experience** prevailed as the common motivating factor across the three cases. Each of the participating teachers attributed their continued engagement in their research to one or more of the five reported aspects of their research experience: the *on-going research benefits*, the *relevance to personal needs*, the *pleasantness,* the *perceived progress*, and *reasonable level of task difficulty*.

In terms of the *on-going benefits*, the process of conducting research was reported to enrich all three participants' professional knowledge and skills, and enhance their collegial relationship, and assist the students participants' learning. Dung indicated in his diaries that he kept doing the research because he wanted to "learn and develop the problem solving skill" (DE2), to "get new ideas about teaching online and blended learning courses in the reference materials" (DE5). He also added the goal setting skills and online teaching techniques into what he had learned from pursuing his project in the final interview:

> Dung: Professionally, I **have learned** and **want to continue** to **develop the skill of setting feasible goals** and trying to achieve them. On working towards the goals, I have **drawn myself some useful conclusions** that online learning can create some excitement for learners but the vital factor is the constant care and involvement of the teacher on the online platform. […] That is **why I have gone this far** with the project. (Int2)

Similarly, Son recorded "**the knowledge** about formative assessment I **learne**d when reading for the research" (DE1) and "reading and **discovering** facts about the differences in teachers' perceptions and practices of formative assessment" under the part "What I enjoyed in the last two weeks" (DE2) in his diary. Meanwhile, Hoa acknowledged her gain in "**how to** synthesize and cite referenced information" (DE4) and "**new knowledge** about information technology" (DE1) when conducting her research. She summarised these benefits in her final interview:

> Hoa: What I **gained** is the **skills of doing research**. I **knew** what it is like working with data and reference information, and second, I **recognized** I must have a good communication skills to get help from people, research participants, team members and partners, all those involved. This is not to mention **a lot of new insights** into the

> application of information and communication technology in teaching English I **acquired** from the librarians (Int2)

In addition to such improvement in knowledge in skill, Dung mentioned the benefit concerning the relationship with his colleagues the final interview:

> Dung: I had the chance to spend more time **working with my colleagues**, which was funand **helped me understand them** more and let them understand me more. […] **Relationship** with colleagues is generally **improved**. (Int2)

A possible improvement of the learning experience for his students is also another boost to his motivation to continue the research:

> Dung: What I **liked the most** about the last two weeks was students' active involvement in the course. They spent time online frequently, did their homework, and contributed to the discussion forum. This is **very motivating** because it means the course might be useful for them and benefit their English learning in some way. (DE4)

Much as these on-going benefits were an important motivating factor to the participating teacher researchers, so too was *their relevance to the participants' personal needs*. Although his application for funding had just been rejected by the university, Dung still continued the project because he was "still curious about the answers to the research questions" (DE3). Son remained in his research because it was still pertinent to his "practical and professional goals of attending the conference" and "extending (his) knowledge about formative assessment in Vietnam" (DE1), and the whole process would satisfy his "personal need for academic development" generally (DE2). He repeated this point in the final interview when being asked to give an overall reflection on his motivation to do the research:

> Son: My **main motivation** throughout the whole process is **to learn more** about the topic because it would widen my perspectives and approaches in teaching. If I can't apply it into my teaching, at least I know what formative assessment is, or in other words, I **can enrich my professional knowledge**. The **motivating factor** was at the beginning and has always been **my quest for knowledge**, my **personal need to get updated** on a new term in our field. (Int2)

The pleasantness of the research experience also appeared to contribute to the participants' continuation of their project. Dung described his time working with his team as "fun" (Int2), and Hoa frequently expressed her joy in her teamwork when reflecting upon the positive side of her research experience:

> Hoa: I really **enjoyed** working with the library team. It is **so different** from my **usual** teaching environment. They are so knowledgeable in information technology (IT), and are always willing to share with me their IT knowledge. (DE1)
>
> Hoa: What I **liked** about the last two weeks is working with my team. It is a **unique** one, which includes one library staff member and one studying overseas. (DE5)
>
> Hoa: (What I enjoyed the most is) working with the team and getting new ideas from them. I got support from them too, but simply spending time with them discussing the research is **enjoyable and motivating** to me. (DE6)

The participants were also motivated to keep engaged in their research by the perceived progress they achieved. In fact, they generally showed higher level of satisfaction with their overall research experience when more of their goals had been achieved. For instance, on a scale of 7 (with 7 being "very satisfied"), Dung consistently chose 5 for the periods when 60-80% of his goals were completed (DE3, 4, 5), and lower scores of 3 and 2 for 30% and 20% of goal completion (DE1, DE6). He found it 'relieved" to be able to collect data for the project:

> Dung: Students started to participate and provide the project with the first data. I felt very **relieved** about this because without data, the project **could not proceed**. (DE2)

In Son's case, his poor progress shown in his three last consecutive entries (30%, 20%, 0%) corresponds to a declining satisfaction level (3, 2, 1) and ultimately a termination of his unfinished project. In her overall appraisal of the whole process, Hoa accredited the positive progress over time for her continued research motivation:

> Hoa: I found everything **flowed smoothly**, literature has been reviewed, participants have been recruited. Everything **went the way I expected**. Generally, I am **satisfied** with the research experience up to now and **definitely will** stick to the end of it. (Int2).

The last factor related to the quality of the research experience that contributed to goal achievement, and accordingly participant's on-going motivation was the level of task difficulty. Though out the process of doing his research, Dung noted this factor under his causal attribution of his progress:

> Dung: The tasks set for the last two weeks were **achievable**: meeting, identifying problems and solutions in groups. (DE1).
>
> Tasks were **easy**: uploading the content on to the website, encouraging the participants to participate. (DE2)
>
> The tasks were all **familiar and doable** for all team members: creating discussion forum, monitoring students' participation, reading the literature. (DE3)

> The level of difficulty of tasks: achievable. Not very time-consuming, no conflict with members' timetable, all familiar. (DE4)
>
> The tasks were **simple**: Collecting more books, journal articles, reading and summarizing them. (DE5)

The *second* factor that sustained participants' motivation for their research is **the support** they received from those involved in the process, specifically the team members. For both Hoa and Dung who was carrying out a team research project, the cooperation from teammates were frequently mentioned as the reasons for their research progress. Under their reflection on what moved their projects forward, Dung wrote down the following information: "**team** always showed up on time for meetings", "everybody was **enthusiastic** in **contributing** ideas" (DE1), "**teamcompleted** all assigned tasks on time" (DE2), "**support from team**. They **actively** uploaded materials online and encouraged students to participate" (DE3), "**frequent help from team** with uploading materials, replying students in discussion forum" (DE4), while Hoa recorded: "**support** from **team**. They were all willing to share their insights into the topics and contribute ideas to solve the research difficulties" (DE3) "get **help from team**. They shared experience and research materials" (DE4); "**help** from others, especially **team members**. They are all actively involved" (DE5). She described in details how the cooperation of her team helped the project go forward in the first diary entry:

> Hoa: We **coordinated** our strengths and made up for each other weaknesses. For instance, one from overseas will take care of the reading materials, and one at the library shared the knowledge about learning activities that can take place at the library.We **achieved our goals because of this cooperation** (DE1)

Third, **action maintenance strategies** did play a role in keeping the participants from quitting the project in the midst of difficulties. When his research funding application was rejected by the university, Dung refuelled his motivation by thinking about the potential values of the research, including his professional development and students' learning. His third diary entry wrote:

> Dung: What **motivated me to continue** the project was **the aims of the project**. We did not do it not for financial benefit but to **know more** about blended learning, to **improve our teaching** with the application of information and communication technology. **Only by finishing** the project can we achieve these. Besides, I am also **motivated** by students' active participation so far. It seems like this pilot course has done **some good for them** and **would be a valid choice** for teaching the ESP subject

> in the **future**. That's **another motivation** for me and the team to keep working. (DE3)

Another strategy that participant used to maintain their motivation for their research was keeping an active engagement in the research tasks. Except for the first one, all of Hoa's diary entries included "my activeness" in her accounts of what had helped her attain the due research goals. Despite various types of hindrances she encountered, this participant often tried to keep her project alive in one way or another. In DE3 for instance, when her "child's health was not good for one week" and she "was sick for another week", she "did more simple tasks like collecting reference documents, assigning work among group members, keep emailing a team member until she replied". When being "unable to concentrate on reading", Hoa "analysed the data and wrote the easy parts of the research report" (DE6). Dung was found to adopt the same strategy, but on a less frequent basis. In DE5, Dung managed to attain 80% of his research goals for the previous two weeks of "busy schedule with another university project and travel time with family" by "working with simple tasks: collecting more articles to update the literature, read them and highlight relevant sections".

The *forth* factor seen to sustain participants' motivation for completing their research was their own subjective values. Each participant brought with them certain working principles and behaviour standards and their continued engagement in the research can be partly ascribed to their commitment to these dispositions. The determination to finish what is started expressed by Dung in the initial interview (see section 5.2.1.) was consistently enacted in the following three months Dung actually carried out the research. He wrote "Plan has been made, we will stick to it", "Never will I be a quitter", "I want to finish what I started", "I don't want to quit anything I started" "I must keep going because that that is what I am: never be a quitter" in his DE1, DE2, DE3, DE4, DE6 for the reasons why he still remained in his project at those points. He reconfirmed a strong commitment to this working principle in his final interview:

> Dung: **My working principle** has **forced me to go on**. I would feel very **dissatisfied** with myself if I **quit** something I started. I **feel a necessity to complete** the project to avoid this bad, bad feeling. **Finishing it** will make me feel **more confident and more motivated** to do other projects in the future. So, there **will be a finish** for what

> we start. Once I decide to take the trip, I will **make sure to reach the destination**. (Int2)

The motivation sustainment value of this principle can also be seen in Hoa's case. When asked why she "definitely will" continue the project given a 0% completion rate of what she had planned, Hoa noted:

> Hoa: It was simply because I have already started it. Once I have started, I want to finish (DE1)

Apart from a determined mind, the participants were also found to tie themselves with research with a felt responsibility to keep promises to themselves or others. Hoa, the leader of a team project, felt the must to move on because of her commitment with team members and boards of university managers who approved and funded her research even at the time when she had "nothing to enjoy" (DE2) in the process:

> Hoa: Besides, it (the research) is also **related to other people**. I work with 4 other teachers in the team, and I am the team leader. One of them is studying in Australia, agreeing to join the project despite her busy schedule. I **don't want to quit as I have made a promise** to the team that the project will be a success. (DE2)
>
> Hoa: The **factor that kept me** is my **promise** with the Uni (University) and the team. The project has been approved and funded by the university. Accepting the funding is **making a promise** to the university. (DE3).
>
> Hoa: (The factor that kept me in the project up to this point is) My promise with the board of managers of the university. (DE4).
>
> Hoa: (The factor that kept me in the project up to this point is) I want to **keep the promise** with the team. If I quit at this point, everyone will be affected. (DE6).

Son, who did a non-registered and individual project, was on the other hand, urged to move on by a promise to himself:

> Son: It only made me **ashamed of myself** for having the plan to do it but **not being able to finish it**. I will **therefore continue** the project to **prove to myself** that I am not that kind of person whose words are louder than actions. This is something to do with my personal characteristics rather than what the poor progress of the project did to me. Not only the last project but also any other one that I **promised to myself** that I would complete makes me feel determined to **continue my pursuit**, by one way or another, not necessarily on the same scale, but at least **until I can finish it**. I **still want** to do this project, not really have given up on it (Int2)

One more personal value that appeared to impel this participant's research engagement was a respect to the academic standard of a tertiary lecturer. Son noted in his diary:

> Son: I decided to continue also because of **my commitment** to doing research, a task that **all university teachersshould** frequently engage in. It is my **personal will** to **stick to** this requirement although it is not urgent and there are other alternatives, such as taking on more teaching hours. (DE3)

He especially highlighted how the negative feeling of shame resulting from a potential failure to comply with the standard urged him to resume the project after he had decided to terminate it:

> Son: I felt **so ashamed** of not being able to complete one research project a year **as expected of a university lecturer**. I felt even **more ashamed** of **not being updated** on a common academic term in my own field, English language teaching. So I am **determined** to pay the debt, and to understand more about "formative assessment" (Int2)

The final motivating factor, external demand, was reported by only one participant, Son, also the only one who showed an intrinsic interest in research as the initial motivation (see section 5.1.2. Initial motivations -- Son (Int1)). After deciding to terminate the research in the DE5, he stated in the final interview that it was then the top-down requirement from the university that made him resume the project:

> Son: This year, all teachers in my department have to really do research. So I have **no choice** but to continue the project. In other words, I am **forced to** do it. […] I have to mention again that the **motivation for me to redo the research** is that I am **required** to. I **have to** complete the minimum research hours the University imposed on us, which is, I don't remember exactly but perhaps 280 hours per year. One teaching hour is converted to three research hours, and by teaching only one extra class, we can make up for an entire year of research hours. But this is not the case this time, so everyone in my department is rushing to find every way to do research. I must say that there is more **impositionon me** this time. (Int2)

Not only did such external demand help Son to regain his research motivation, it would seem to even motivate him to be more research active in the future according to his accounts:

> Son: That current change in the policy that I mentioned to you earlier is really a **huge nudge** not only for me but also other teachers in the department. It made us rethink about our purpose of doing research.[…]. So I have to say the new policy is a kind of **motivation** for me to get **engaged in research more often, more seriously**. Although it is some kind of **imposition**, it makes me **more active** in doing research. (Int2)

5.1.3.2. Demotivating factors

Besides the motivating forces as such, a number of demotivators can also be noted from the three participating teachers' description of their on-going research experiences, their attribution of the

research progress and their overall reflection upon the three-month period of conducting their research in the diaries and final interviews. In general, factors that thwarted teachers' on-going research motivation were derived from multiple sources: not only directly from the actual research experiences and the teachers themselves and but also indirectly from various non-research encounters.

The *first* group of demotivating factors, which are external to teachers but inherent in their actual research experience included **poor support**, **unexpected technical issues**, **limited resources**, **absence of formal recognition**, **slow progress**, and **potential inapplicability of the research results**. Concerning the first one, Dung found it difficult to work without team cooperation, while Hoa was demotivated by the negative and unconstructive criticism on her research ideas from her dean:

> Dung: I have been **working alone** for quite a while and this is **difficult**. **No one shared** with me the work load, no one contributed an idea. All other members have been busy with something else and **refused to help**. (DE6)
>
> Dung: One more **difficulty** is that the **team members** are **not very well motivated** to do the project while I don't know how to encourage them to. They got busier and busier with their own business and kind of **left me alone** in the middle of the project. (Int2)
>
> Hoa: I felt **quite discouraged** when asking for feedback from **Dean** Ha (this is a pseudonym). I **did not know why** she thought my topic was not feasible. She just said so without pointing out specifically why and how I can fix it. I'm under the impression that her initial feeling for all my ideas is always "I'm **not interested**". I don't know whether she was really not interested in the topic or she actually **does not want to support me**. I did **not feel motivated**. (DE1)

Beside poor support, Dung also complained about unexpected technical problems, which were an obstacle for his project to proceed as planned, and thus a cause for his decreased motivation:

> Dung: The important goal of training students to use Moodle failed due to a **technical issue:the website did not work** in the day students had classes in the computer lab. I was a little bit **upset** because this means some other following goals will be **put on hold** for another week (DE1)
>
> Dung: It turned out **the online courselacks** relevant content related to language of computer science (somehow it had not been uploaded by the time they had the lessons), so the computer science students were not impressed or interested. The goal of getting feedback from them on this part of the course is therefore not achieved yet. Losing such important data because of a simple technical error is **disappointing.** (DE2).

> Dung: The process has been interrupted by **problems with the online part** as I have mentioned in the diaries, so the student's motivation and participation in the course was negatively affected. I **feel demotivated** too because these technical issues prevented me from gathering sufficient feedback from student in the first time running the course. (Int2).

Scarcity of resources was furthermore reported to have a negative impact on the participating teachers' on-going research motivation. Among the difficulties concerning research resources, limited research budget prevailed in all the cases. For Dung and Son who self-supported their research, their study easily lost priority and attention over other tasks that yielded immediate financial benefits for them. They explained the delayed progress of their research this way:

> Dung: While my project is **not funded**, I still have to carry on with **making a living**, which always consumed more time and I can spare for it. For example, I taught 4 hours of **evening classes** but actually had to spend the whole day before to prepare the lessons. This **left me little time** for the project. (DE4)

> Son: I planned to get the questionnaire ready to hand out to the teachers when the coming school year starts, but then my income was affected when the summer vacation came. As doing the **research gains me no money**, I had to **sacrifice** the time I intended for it to take extra classes to **top up my income**. (Int2)

Even for Hoa, whose project was officially funded by her university, the research allowance still did not suffice to maintain her motivation throughout the process. This can be seen in her sharing about what she did not like about her actual research experience:

> Hoa: It is **difficult** to do research without financial support. The allowed **budget** is **negligible** compared to the time and effort required by the project, and I have to wait until the end of the project to get it. It is so **hard to be devoted all the time**. (DE1)

She further specified that financial constraint from the academic job (which includes research activities), forced her to work extra hours outside the university and thus she could not pay due attention to the project:

> Hoa: I had to teach, earn extra money for a living outside the university when I was doing the research. Balancing these two jobs at the same time is **quite a challenge** for me, and **research** often **loses priority** because of its **poor financial promise.** […] I **definitely cannot live** on the teacher's salary and **have to make extra money** to cater for my living expenses, then lesson plans, etc. All these **left me little time** to focus on the research (Int2)

Reference materials was an important research resource that was reported lacking and affecting one teacher's on-going research motivation. Although not appearing in the diary entries, this

issue has been mentioned in Hoa's final interview as one demotivator for her in the process of doing her research:

> Hoa: One more **difficulty** is **reference materials**. It has been **so hard** to find reference materials for my research. The university library **does not help much**, there are very few books that concern my research topic, and of course no journal subscription. The whole team has to rely on the member studying overseas for reference materials. I also had to ask around to get what I wanted, from colleagues and people I know. (Int2)

Another demotivating factor related to the research experience was an absence of formal recognition. Dung started the project before lodging the funding application to his university; and when he was informed about the negative outcome of the application in the fourth week of the project, what disappointed him was not the consequential lack of funding, but a definite loss of academic entitlement for the year:

> Dung: The project was **rejected by the university**, which means the time I invested in the research will **not be officially counted** into my research hours for the year. I **may be considered "not fulfilling my academic requirements**" if I cannot earn enough research hours by any other way. I'm not worried about the research funding because the university research budget is not much anyway. Still continue the project but **motivation clearly decreased**. (DE3)

The next factor concerning the participants' actual research experience that was discouraging to them was the slow progress of the research project. While a feeling of goal accomplishment added an extra driving force for the teachers to move on with their project (see 5.1.3.1. above), a prolonged delay was reported to harm their on-going motivation. When asked about what he enjoyed in the previous two weeks, Dung answered in his diary:

> Dung: (I enjoyed) **Nothing**, because **the progress is so slow**. I have never completed 100% of the fortnightly goals I set, and work gets accumulated over time. There is still **too much** more work to do at this point **than I expected**. (DE6).

Final in the list of demotivators that came from the research itself was the potential inapplicability of the research. When the student learning management system at her university was about to change, Hoa was worried that her research results might no longer apply to practice and considered this as a hindrance to her motivation to pursue the research any further:

> Hoa: Another **obstacle** is that I am **not sure** whether my research results will **still be applicable** to the learning and teaching practice at the uni (the University) when it

> adopts the new credit systems. Investing time and effort into something that does not help you much in your job is not worth it, and that really makes me **concerned about** whether I **shouldcarry on** with **the project**. […] It (the research) is doable and potentially useful for certain contexts, it is only its **future applicability** to my own teaching that **concerns** me. (Int2)

Secondly, concerning the negative motivational influences that reside internal to the teachers, their **limited perceived coping potentials**, and **too high research autonomy** emerged from the data. The former one, which denoted teachers' lack of confidence in their ability to cope with the requirements of the research tasks, were noticed in all three cases through their concerns about a lack of desirable skills and conditions for full engagement in research. Among the coping deficiencies reported to have deterred research progress, poor time management skill were shared by all the participants:

> Dung: I have been having a busy schedule, but what **dissatisfied** me most was my **poor time management skills**. I **could not make sufficient time** to spend on the project. I should have finalized the course content by now **if I had worked smarter**. (DE2)
>
> Hoa: My **time management skill** is **not good**. Although I was not too busy, I **could not manage** to spend enough time to read all the materials I planned to read. That's **disappointing**. (DE4)
>
> Son: It was **my poortime management** that **held me back**. I have been **overwhelmed with loads of work** to do and **did not knowwhich one** to do first. Other non-research tasks kept arising and I **did not know how to** get the research goals done along with others. I mean I kept being interrupted, so I am still in the middle of everything: a bit of reading, a bit of outlining, and I am not even sure about the research questions. (DE2)
>
> Son: **Time management** (prevented me from achieving the research goals in the last two weeks). I **did not balance well** the work of a bread winner and that of an academic. I **could not invest sufficient time** and energy in the research as planned (DE3).

A part from this common issue, each participant was discouraged by their own unique problem in their coping potential. Dung's on-going motivation was negatively affected by his improper preparation for the research. He stressed this as an obstacle for his research progress in his appraisal of the whole research process

> Dung: Things never turn out the exact way we expect them to be. […] To keep the project going until we get to a final product really requires a lot more effort and passion, and I was clearly **not well prepared** for it.[…] The preparation time was too short, so the research questions were not very feasible at first and have been changed several times afterwards. The lesson learned is that I **should have done a better**

> **preparation** for the project, read more, understood more before forming research questions and running the pilot course. By so doing, I would not have had to rewind the wheel from time to time.[…] It is **a waste of time**, and sometimes makes me very **demotivated**. […] Preparation time really matters. I think I **will be more careful** with this matter in the future projects.
>
> […]
>
> I felt that I **did not prepare myself** a theoretical background that is strong enough for me to run the course well at the first place. I **had too little time to prepare** for the course. I did **not do a decent preparation** at the first place, so everything was kind of **in a hurry**, **immature** and not based on a strong theoretical background. This **caused a lot of troubles** for me when the course was piloted. (Int2)

Hoa faced the difficulty of research inexperience, which she had foreseen in her initial interview (see section 5.2.1.) and later referred to as a hurdle for her motivation when she actually carried out her research. She blamed her limited research experience for her poor progress in the first two weeks and then, in the final interview, stressed her lack of knowledge about research policies as an important difficulty that discouraged her in the research process. It was also her perceived inexperience that led to her worry about the research feasibility and thus a decreased level of motivation:

> Hoa: I **felt overwhelmed** with so many tasks to do. I **felt a little bit unconfident** because I **don't have much research experience**. I tried asking around but still there are **so many things I am not sure about**, like whether the methodology I chose is right, the scale of the project is doable in 1 year (DE1).
>
> Hoa: I am **not sure** whether my project is really doable. I cannot find any similar one in the literature and I am **still a novice researcher**. Opening a new path that no one has even walked past makes me feel **nervous.** Sometimes I even thought I **should quit** the project (DE3)
>
> Hoa: I **did not understand clearly** the university research policies. For instance, my project involved asking the library staff to teach a training session for my students but I **don't know** how to call this in the application for budget to submit to the university. I **don't know much** about the policies and had to spend a lot of time reading and asking around for information, which was **tiring**, **time-consuming**, and sometimes made me even **more confused**. **If I had done more research** before, I wouldn't have been in **that much trouble**. (Int2)

Son dealt with the demanding role of a breadwinner for his family, the pressure from which imbued his diary entries as one reason for his increasing dissatisfaction in the periodical research progress and ultimately for his premature abandonment of his research project. As soon as six weeks after the beginning of the research, Son's level of satisfaction with the research progress had gone down to the lowest, his determination to continue the research switched from

"definitely will" (DE2) to "don't know" (DE3), and his degree of motivation "decreased significantly" (DE3). In the two following diary entries, he stayed "very unsatisfied" (DE4, 5) with his research experience and chose "probably won't" (DE4), then "definitely won't" (DE5) for the question of whether he planned to continue the project. Below are the extracts from his reflection on this scenario:

> Son: It is quite **harsh** to admit that with a low salary, I, like any other Vietnamese teacher, **have to** take extra jobs (teaching evening classes, tutoring) to **earn enough income** so that my family life could be maintained. That **significantly diminished my motivation** for continuing the research […] Sometimes **the work of a breadwinner** is **so hindering** that I cannot find myself enough energy and cannot lend myself into the realm of doing research in real sense. […] In this summer holiday, I have **very little income** from the university, so I need to spend time on **teaching extra classes to have enough money** for daily needs. […] I **like doing research**, **but** I also need time to **work for a living**. (DE3).
>
> Son: What **prevented** me from achieving the research goals are mostly the **arising plans for making enough money** to feed the family members. […] I **decided to stop** doing the research **because of demands of the money making duty** I have to shoulder. Research is important, but **earning a living** for me at this summer time is **more urgent**. I think **if I were in a more pleasant condition**, say, if I were still single and did not have kids to support, I **would be more available to conduct the research**. (DE4)
>
> Son: I had **much more pressure to work to earn money** than to do research. (DE5)
>
> Son: The **biggest difficulties** are the **time constraints** and **financial pressure**. It is true and I have already written it down in the diary entries […] To alleviate the financial pressure put on me as the **primary bread winner** for my family, I had to take extra classes, which already took much extra time away […] To be honest with you, to **earn extra income**, I have taken some other paths as well. […] like opening a small shop to earn some extra money. This job **requires me to spend time** researching for information about how to open, decorate, and run a shop, everything. It is still **financial pressure**, and it **takes away pretty much time** from my schedule and leaves me **almost no time for research**, which **yields no money** at all for me in the short term (Int2).

In his description of the downside of his research experience, Son also revealed one more interesting deficiency in his ability to cope with the requirement of the project: his static orientation to non-urgent tasks like research. In other words, Son was not motivated to act on the research simply because it is not urgent for him to do so. This is evident in the following diary notes:

> Son: My motivation **seems to be fading away** as research is **not an urgent task** for me at the moment. At the beginning, everything was fine, I made the detailed plan

> and was determined to stick to it, but things then **got faded and missed** among other arising tasks and regular chores that have a certain deadline. (DE2)
>
> Son: What I **disliked** the most about the last two weeks is my "being in a stall". I mean I **have a desire** to carry on my research but I still **cannot force myself** to move on with it, like what I often do with other **non-urgent, non-obligatory** tasks. I don't have much time, that's true, but I suppose, the **biggest problem** here with me is that I **don't see any immediate momentum** for me to have to do it. In other words, I **comfort myself** with the idea of "well, I will **do it later**, **research can wait**, I **still have a lot of time** for it in the future". Just like that, I let all the other more urgent stuff like earning a living take priority over the project. (DE3)

In the final interview, he mentioned this twice as the reason why he kept delaying the project:

> Son: Because **research can wait**, I **kept delaying** it. […] I had to **put off** my research to **focus on more urgent** tasks. (int2)

Also related to the personal teachers, research autonomy was found to negatively affect the participants' on-going research motivation. Hoa signalled anxiety in the role of a sole decision maker for her research, while Dung found doing the research "alone" a difficulty that he had to overcome to achieve the research goals:

> Hoa: What I **did not like** about the last two weeks is having to manage everything **on my own**. **No supervision**, no encouragements from others. I had to **decide everything**, **initiate all** the tasks, and the team just followed me. If I stopped, they won't do anything. I mean I have been **all on my own** without even knowing whether I am going in the right direction. (DE1)

The *third and the final* category of demotivating factors, the non-research encounters, comprised **distracting influences**, and **availability of research alternatives**. Hoa, a female researcher, was constantly distracted from her research work by domestic affairs:

> Hoa: My **motivation** for research tends to **decrease** because it has been **so difficult**. I found it **so difficult** for me to do research. So many things have got in the way and **distracted** me. [….] I had to do **many tasks at home**, helping the kids with homework, keeping my house in shape. You know when they are sick, I cannot even go to class, let alone sit down and spend hours reading and writing. (Int2)

Dung's and Son's research project was interrupted by unexpected circumstances from both family and work.

> Dung: I have been **carried away** by so **many trivial things** in the last two weeks: mending my house, supervising exams in the province, etc. They are all **unexpected** and I cannot avoid doing them. (DE3)
>
> Dung: **Other goals, priorities and urgent tasks** came up and took most of my energy. I was assigned the 2020 **summer teaching duty** that I could not refuse. I had

> to **repair the house**, which cannot wait. In the mean time, I still have to run the two **evening classes**. I felt really **burnt ou**t and **cannot concentrate on the research** work (DE6)
>
> Dung: **So many other tasks** has come and taken priority over my project and I sometimes had to **delay** my project for one or two weeks, which then made it very **difficult** for me to be back on track again. […] These include the **examination supervision**, **designing** other ICT courses, **extra teaching hours** that the department assigned to me, and **housework**, like renovating my house, things that I could not foresee (Int2)
>
> Son: There are some things that cannot be delayed like attending a funeral, weddings. Such things just popped up **without notice** and **out of my planning**. I therefore had to **put aside the research** to deal with these **unexpected** circumstances. […] I cared about the research but I **kept being carried away** by so many **distractions**. Things kept rushing through my schedule and I did **not have any time left** to finish the project […] I am also responsible for some extra curriculum tasks like taking care of the trade union activities, like funerals, weddings. And then summer vacation trips for staff, where to go, what to do, and the preparation for the trip cost me time too, I had to put off the project for a week. Then the evening classes, examination supervision. To be fair, I had only two weeks free during the whole summer vacation, the rest of my time was spent at the Uni, for exam preparation, training courses, exam supervision, etc. All these **trivial things** made me **keep putting off** my research[…]. And now it is nearly time for the new school year to start, I have started to be **preoccupied** with syllabus revision, lesson planning. (Int2)

Distractions in Son's schedule was so interrupting that it caused Son to leave the project unfinished:

> Son: I **decided to sto**p the project because I am now **too busy** with the **preparation for the new academic year**: teaching materials, syllabus, lesson plans. I am also taking on some tasks from the Trade Union (planning the Union activities for the whole semester such as organizing the Vietnamese Women's day, Teachers' day, etc.). I literally have no time for research (DE6).

The availability of research alternatives concluded the list of demotivating factors in the process the teachers implemented their own research. In his final interview, Son referred to the flexible research policy at his university an indirect excuse for his inactive engagement in research for the previous three months:

> Son: I think the previous policy that allows us to use extra teaching hours, or other activities like revising textbooks, designing extra teaching materials, etc. to make up for the research hours was […] also **a disadvantage**. It **makes us lazier** in doing research. Some teachers can make some minor amendment to an existing textbooks to deal with the policy. In my case, I **kept postponing** my research because I think "Well, I can still make up for it by teaching more hours next year, easy!". (Int2).

9.3. Connecting the quantitative and qualitative results

Connecting the quantitative and qualitative data, the results showed both the width and the depth of motivation towards research held by the participants in the study.

Quantitatively, "identification" was found to be the dominant underlying regulations of Vietnamese EFL teachers' research that is teachers do research because it can help them obtain other important professional goals. This is followed by external requirements and intrinsic interest in research. These three types of motivation also correlated significantly positively with the actual frequencies of doing research that participants reported, and the relationship is the strongest in integrated regulation (i.e. when the values of research have been fully internalized into one's sense of self). Introjected regulation (i.e. teachers do research to avoid bad feeling) also positively associate with how often teachers said they did research, but the strength of the association is very small. The other two non-self-determined motivations, external motivation and amotivation do not exhibit any significant relationship with the level of teacher research engagement. The slightly-above-average total score for research motivation indicated a self-determination profile of the sample although the level of self-control they had over their research activities is not very high.

Qualitatively, three case studies also revealed "external requirements", "intrinsic interest in research", and "the perceived need for professional development" as the initial motivations for them to do research. These consistently corresponded to three most common types of motivation demonstrated by the survey participants. As teachers advanced in their research journey, their research motivation were found to "wax and wane" due to a wide range of factors, in which (i) the quality of the actual research experience, (ii) external support, (iii) subjective values, (iv) action maintenance strategies, and (v) extrinsic demands were the motivators while *(a) poor support, (b) unexpected technical issues, (c) limited resources, (d) absence of formal recognition, (e) slow progress, and (f) potential inapplicability of the research results* did the opposite.

Overall, a mixture of external expectations and internal self-determination were found to motivate Vietnamese EFL teachers to do research. It was, nevertheless, mostly the internal regulations, not the external ones that correlate significantly with the reported level of research engagement. Besides, teachers' motivation for research also changes over time under the influences of various factors.

PART III: DISCUSSION, IMPLICATIONS, AND CONCLUSION

This part discusses the results presented in part II above, draws implications, and concludes the study. It consists of two chapters. Chapter 10 focusses on the discussion of findings and the implications of findings. Chapter 11 summarises the study, its major findings, implications, and provides the concluding remarks.

Chapter 10. Discussion

This chapter discusses the results presented in the previous chapters in light of the four central research questions. The first four sections in the chapter provide a critical reflection on the results presented in Chapter 6 through 9 in relation to each of the four main questions with references to the Vietnamese context and the broader English language teaching literature being made where necessary. The final section of the chapter integrates the findings of all the research questions and comments on their contributions to the common theoretical framework.

The chapter begins with the discussion of results in relation to the first central research question below.

10.1. Central question 1: What is the current status of English language teachers' research engagement at Vietnamese public universities?

This question aims to explore the current state of research engagement among EFL teachers at Vietnamese public universities. The results presented in Chapter 6 reveal several significant points that warrant discussion.

First of all, the analysis of data generated from different sources and by different methods all consistently point to the moderate level at which teachers engage in research. In response to the teacher questionnaire, just over 69% of the participating teachers claimed that they did research at least "sometimes"; the rest (nearly 31%) reported never or rarely doing research. The overall mean score for the level of frequency of doing research was 3.44, just over the mid-point on the five-point scale ranging from 1 (never) to 5 (very frequently). In addition, only 24% of the participants completed at least one project per year, and a negligible proportion (16%) said they spent at least 10 hours per week for their last research projects. Given that doing research is a mandatory task for all tertiary teachers, and that they are furthermore required to allocate at least 10 hours for research activity (see Chapter 4 – Context of the study), these figures clearly imply that a large proportion of EFL teachers at Vietnamese public university are not as research active as they are supposed to be. The interviewed department heads also generally agree that their EFL

teaching staff do not meet the "satisfactory" level of research engagement. This picture adds to the common conclusion in the literature that research remains a minority activity among even high-qualified English teachers (Borg, 2007a, 2008, 2009, 2013; Borg & Liu, 2013). Looking at the majority of participants (92.4%) indicating their intention to do research in the future, however, it may be reasonable to believe that the research culture will become more widespread in the Vietnamese tertiary EFL teaching context.

As modest as it may seem, the level of teacher research engagement as shown above still compares favourably to that reported in previous studies in other contexts. The percentage of teachers who reported doing research at least "sometimes" in the present study (69%) is much larger than the figure reported in Borg's (2013) study with 1,349 teachers of mixed teaching background worldwide (58.4%). This may be unsurprising since Borg (2013) also surveyed the professionals working in non-tertiary institutions where research engagement is not compulsory. Compared to the results of the studies conducted in comparable higher-education contexts in other countries, the level of research engagement among Vietnamese tertiary EFL teachers in the present study is, interestingly, still higher. Examples range from Cambodia – a South East Asian developing country very similar to Vietnam in terms of educational and economic conditions (62.5% of 40 public university EFL lecturers reported doing research at least "sometimes", Moore, 2011a); to Turkey (39%, Kutlay, 2013), or the Netherlands (47.2%, Borg, 2008), the Western nations with more advanced educational systems. Only in the Chinese context did the past equivalent studies report a more positive picture of teacher research engagement. In Borg's and Liu's (2013) study with 725 Chinese college English teachers, and Xu's (2014) with 104 Chinese university teachers, the number of teachers who claimed to do research sometimes comprised roughly 79% of the total participants (as compared to 69% in the current study). It is, however, not really possible to conclude that Chinese tertiary EFL teachers really do research more often than the Vietnamese counterparts for two reasons. First, it is unknown as to whether the Chinese participants in the two previous studies excluded research conducted for their formal studies from their reported frequencies of doing research. Second, whereas the present study also

generated examples of "research" teachers actually did (see Section 6.2.1.) and found a high congruence between these examples and the way "research" is commonly defined (see Section 1.3.2), such insights were not provided by the other two studies as a means to validate their results.

A closer look at the studies focusing on the higher-education sector reveals one more noteworthy point. That is, both Chinese and Vietnamese tertiary EFL teachers are expected to do research while no such requirement is mentioned in the other tertiary English language teaching contexts (e.g. Moore, 2011a, Borg, 2008). In China, "research activity has in recent years become increasingly important in the appraisal of CETs [college English teachers] and a criterion which determines their career advancement" (Borg & Liu, 2013, p.272). In Vietnam, research has been made mandatory for all university teaching staff (see Chapter 4). This may explain why the present study and the two previous ones in the Chinese higher-education contexts reported a higher level of teacher research engagement than those conducted in other countries. The explicit presence of an external requirement in more active research environments as in Vietnam and China's cases furthermore suggests that external pressures may play an important role in spreading the research culture more widely across the population of EFL teachers. Albeit its potential negative effects on teachers' job satisfaction and well-being (Tremblay et al., 2009), such kind of extrinsic motivation might be crucial in setting the ball rolling in the contexts where teachers have long been exposed to the teaching-focused tradition, as in the English Department within non-English major public universities that the current study is focusing on (see Chapter 4).

Regarding the kind of research teachers said they do, two points from the results presented in Chapter 6 are of particular interest. First, almost all the activities the teachers described in the qualitative data fit well in the broad definition of what "research" is (see Chapter 1). As can be seen in Section 6.2.1., out of 29 instances teachers accounted, 24 are action research, one is academic research, two were identified by the teachers as non-research but actually carry all the basic element of systematic inquiries. Only two activities do not fit in the definition of

"research" but both are explicitly characterised as so by the reporting teachers. Such a high proportion of "real" research appearing in teachers' accounts is a contrast to an overall dominance of "reflective practices" (many of which are not research in a strict sense) reported in previous comparable studies (Borg, 2009, 2013). This difference may be explained by the fact that the questionnaire in use in the current study included a note for participants about the types of activities that the current study counts as "research" (see Appendices 6 and 7), whereas the instruments in the comparable studies did not. Such results and observations make it reasonable to conclude that (i) the levels of research engagement teachers in the present study reported are reliable and legitimate; and that (ii) the inclusion of a clear definition of "research" in the data collection instruments is necessary in studies that aim to obtain a valid picture of teacher research engagement in a particular context.

Second, teachers tend to engage in the type of research that is short-term, practice-driven, of direct value to the immediate teaching practice, and conducted and shared within the boundaries of the institution where teachers work. In the analysis of the questionnaire responses (Section 6.1.2.2.), a majority of the most recent projects undertaken by teachers aimed to assess teaching practice or solve classroom problems, 70.7% of them were up to one year in length; and "written report published in the departmental research symposium" was the most commonly chosen method of publication. In the follow-up interviews, action research dominated the examples of research teachers said they had engaged in. These research practice patterns bear a striking resemblance to the content of the available teacher research manuals described in Chapter 2: mainly action research, practice-oriented, and primarily qualitative in nature (see Section 2.3.1). They, in addition, echoed the findings from most previous studies on English language teacher research. Barkhuizen (2009), for instance, found an overwhelming 61 out of 83 participating Chinese teachers focus their proposed research around practical classroom problems, while Borg (2013, p.110) reported a predominance of "evaluative" studies in the participating teachers' accounts of their research. In the only one study that reported a different pattern of research engagement (teachers derived their research topics from existing literature rather than their first-

hand teaching experience), most teachers were conducting the research for their formal study degrees rather than as a frequent professional development activity (McDonough & McDonough, 1990). Although the reasons why teachers did the types of research they reported have unfortunately not been examined in either the existing literature or the current study (due to its time and scope constraints), such a resemblance between teachers' actual research practice and the content of the available research manuals may indicate a certain impact of the literature on teachers' choices. It furthermore supports Farrell's comment that academia might have succeeded in manipulating the "research" teachers do with what they perceive as important and present to teachers (Farrell, 2017). This is not to say that action research or practice-oriented types of research are not useful for teacher professional development. In fact, thanks to its embeddedness in the teaching process, action research may contribute to alleviating the double burden of teaching and researching on teachers' lives. Freeman (1998) even considered practice-driven research as a sensible and active part of teaching, an option which makes researching a doable task for most teachers (Freeman, 1998). The issue here is that, the overemphasis on the practical "teaching" aspect and neglect of the equally important personal "teacher" side with all the motivational, ethical, emotional, spiritual dimensions may not be a completely sensible direction. This is because what may be efficient (and even effective) from a technical or methodological perspective may not be morally right for an individual teacher to maintain personal integrity and fulfilment (Farrell, 2017). That is to say, *who* a teacher is and wants to become, in fact, matters no less than *what* they should do in classrooms; and research that focuses on the teachers' self can facilitate teacher development even more than does the research that aims to fix some perceived problems in practice (Farrell, 2017; Kraft, 2002). What is needed, therefore, is the promotion of also the self-reflection type of research for teachers. This can be done by including examples of it in the research manuals or research training courses. The importance of it should also be made explicit in teacher research resources. In this way, teacher researchers will become aware of it as another important orientation for their research, apart from the practice-driven agenda that they have been more traditionally familiar with.

The results presented in Chapter 6 also revealed the barriers to Vietnamese tertiary EFL teachers from the perspectives of both teachers and departmental leaders. The chapter shows six major themes emerging from the interviews with these two parties: (1) research resource constraints; (2) ineffective research policies; (3) inefficient research organisational structure, (4) young research culture (5) the conduct of research and (6) teachers' personal limitations; and three striking points that merit discussion. First, many of the identified barriers are easily predictable from the objective context of EFL teaching at Vietnamese public universities, and also not difficult to find in the broader literature. The challenge in terms of time, funding, and teachers' research capabilities can be predicted from the high teaching workload normally assigned to EFL teachers for non-English major students (see Section 4.2.2), the unrealistically small amount of money allocated for a research project on average (see Section 4.3.2), and the low percentage of teachers holding higher degree research qualifications at Vietnamese public universities (see Section 4.1.2.). The findings also largely agree with previous studies' conclusions about the barriers to English language teacher research in other contexts. For instance, Barkhuizen (2009) (China) has already reported the challenges inherent in the research conducting process, the time and research resources constraints (p. 122), and Borg (2013) (worldwide) has already identified low research motivation, lack of necessary skills and knowledge, and the young research culture. Altogether though, the findings reflect the multilayered and complex nature of the difficulties that teachers may encounter when engaging in research. The obstacles belong to multiple levels (from personal to the education-system), come from various sources (from teachers, tangible contexts, to the shared abstract values), and possibly intermesh with one another (e.g. teachers' low motivation for research might result from the young research culture). The promotion of research activity to a large population of teachers, as this implies, is therefore not a simple task. It requires a comprehensive understanding of both the teachers and the contexts, and actions to be taken simultaneously at all levels.

There are two interesting aspects of the research policy that have not been listed elsewhere in the literature as hindrances to teachers' research engagement: the availability of the non-research

alternatives, and the insensitivity to teachers' needs. ***The first one***, non-research alternatives, allows teachers to make up for their annual unfulfilled research hours by taking on extra non-research tasks, a list of which can easily be found in the official documents of many universities (see Chapter 4). Although the purpose of this policy has not been explicitly stated or discussed anywhere in the literature, it is commonly understood as a strategy that Vietnamese universities adopt to introduce and gradually build the research culture among the ELT staff whose traditional academic role was more focused on teaching. As mentioned in Chapter 4, the research mission had not officially been introduced to all Vietnamese university teaching staff until 1992. Thus, teachers would find it easier to prepare for and adapt to such a new task if offered "more choices". In one participating department leader's words, allowing teachers to choose an alternative duty is "supposed to relieve the research pressure on teachers, thus encouraging them to gradually take on the research responsibility" (L5). Reflecting on the actual effects of this flexible policy on teachers' research engagement, both teachers and their leaders, however, disclosed an opposite result. One teacher said, since the alternative option at her university – teaching extra hours – is "so easy", she tends to choose it instead of doing research, and thus considers such flexibility in research regulations eventually "an obstacle to overcome" (T7). Likewise, one leader also noticed that teachers in her department "would rather teach more hours than do research because teaching is easier for them" and consequently "do not do as much research as lecturers in other departments". Such findings once again stress the importance of the role that external pressure may play in the promotion of a research culture among EFL teachers. As Borg (2009) also remarks, although the picture of teachers embracing the benefits of research engagement and concomitantly doing so for professional development seems realistic, such a scenario may never be enacted widely in reality among the EFL teaching population without strict and formal requirements that drive teachers to really start their research journey. ***The other*** point worth discussing is the lack of sensitivity to teachers' needs in the current research support policies. According to one interviewed leader (L6), the rewards offered for research productivity at Vietnamese public universities in general and her university in particular do not match the

common needs of the majority of EFL teachers, and therefore cannot motivate them enough to do research. Extra credits for promotion or for the attainment of a symbolic title with negligible financial benefit, this leader clarified, are the common examples of such rewards that most teachers "don't care" about and that are thus "meaningless" in encouraging the majority of teachers to be more research active. From the teachers' perspective, the research policies are available but appear to prioritize already research-engaged teachers. According to T16, various means of recognising research outputs exist, but no help is available for novice teachers in need of research skills, knowledge, and confidence to start the research journey. This finding, on the one hand, reveals that the problem with the research policies among public universities in Vietnam is not entirely concerned with the lack of support for teacher research as commonly acknowledged in the literature (see Le, 2017; Pham, 2006), but rather, the incompatibility of the available means to the common remuneration needs of the large population of the EFL teachers. On the other hand, the finding also provides additional support for the earlier observation that research promotion effort must be based on a comprehensive understanding of both the teachers and the contexts. Encouragement measures may have no expected effect if they do not correspond with teachers' desires.

Drawing on both the teachers' and the leaders' voices, the study was also able to detect several conspicuous incongruences between the two parties' perspectives on the hindrances to teacher research engagement. The first disparity is a list of flaws related to research policies and research organisational structure that appear in the leaders' interviews but are not voiced by any teachers. The list includes a lack of detailed guidelines on "what exactly teachers have to do" and "what research looks like" (L13); a limited range of opportunities for teachers to have their research activities formally recognised (L16); research rewards which are insensitive to teachers' need (L12); and the absence of evaluation committee that is specifically qualified to judge ELT research or even a support unit with expertise in linguistics (L14, L16; L23). Two possible scenarios might lead to such discrepancy. First, teachers are aware of these systemic short-comings, but their research effort is not significantly thwarted by them. The assistance provided

in other areas such as time, budget, infrastructure, collegial support, is all they need to be an active researcher. Second, the interviewed teachers can be divided into two groups who either *have* or *have not* been engaged in research to the extent to which such structural short-comings can have any effect on them. For instance, experienced teacher researchers may not be bothered by the lack of guidelines on how to do research while the completely inexperienced ones are very likely to be unaware of the absence of a qualified research evaluation unit. In either case, the same potential risk is evident: a mismatch between the kinds of support provided by the leaders and what teachers really need for their research endeavour, which may result ultimately in the ineffectiveness of the whole research promotion effort. The extra insights from the leaders of the present study, however, may inform teachers of the potential research difficulties that they may not yet be aware of, and enrich the findings in the existing literature that draws solely on teachers' self-report. Such merits, then confirm the value of the triangulation technique incorporated in the research methodology of the present study.

One more important point emerged from the results regarding the variations in the reported level of research engagement according to teachers' research training background. The results in Chapter 6 showed that teachers who had been formally trained to do research reported a statistically significantly higher level of research engagement than those who had not. This is understandable since research training helps to equip teachers with necessary knowledge and skills, as well as adequate confidence to do research. As a result, research-trained teachers may encounter fewer difficulties in the research conducting process and are more likely to engage in the activity than those who are completely research-novice. The provision of structured guidance for teachers is thus necessary in the efforts to promote teacher research (Borg, 2013).

The question remains, however, that whether merely exposing teachers to research training is a guarantee of their subsequent research engagement. This query was previously raised by McDonough and McDonough in 1990, and has been answered in the negative by Christenson and colleagues in 2002. Following 19 teachers who completed a research methodology course and explicitly indicated a future plan to do research, the authors found only two actually doing so

six months later and both of them were completing the research for their Masters' degree (Christenson et al., 2002). It was then concluded that teachers need "more than one course" as well as the continuing collaboration and support from colleagues and leaders at all fronts in order to solidify their learned research skills and knowledge, and to be able to translate them into actual research activity (Christenson et al., p.272).

Finally, when the specific types of research training, which include *research conducted for a formal degree, non-credited small-scaled student research projects, and research methodology courses*, were examined, the first of these, also the most intensive and structured form of training, was surprisingly the only one that did not significantly differentiate teachers in terms of how often they do research. This result is at odds with Borg's (2009), Phipps' (2006), and Watkins' (2006) projection that research done to complete a formal degree would provide a supportive and structured route for teachers to become evidence-based practitioners. It instead reinforces an existing doubt in the literature about the potential of dissertations in stimulating teachers to incorporate research into their subsequent professional life (Reis-Jorge, 2007, Allwright, 1997; Wallace, 1996). The reason for such doubt is that, research for dissertation is too time-consuming and expertise-intensive in nature to represent the accessible and doable type of inquiry that teachers can continue to conduct beyond the completion of their formal studies (Reis-Jorge, 2007). This is not to mention that the strict academic criteria on which research for a formal degree is evaluated may furthermore fuel the feelings of uncertainty among teachers about the credibility of the research they are able to do in the workplace. On these grounds, it can be concluded that high-degree researching training might be of little value in fostering a sustainable research practice in a teacher's long-term professional agenda (Reis-Jorge, 2007). Short courses on methodology, non-credited, small-scale student projects - the less structured and intensive forms of training which focuse on the type of research that most teachers can continue doing at their workplace – would be the alternatives that teacher trainers may instead prioritise in order to encourage the evidence-based practice in their future graduates.

10.2. Central question 2: How do cognitive factors relate to the level of research engagement teachers reported?

The second central question aims to examine the relationships between each of the five cognitive factors: teachers' conceptions of research, research self-efficacy, context beliefs about doing research, and attitudes towards research, ***and*** teachers' reported level of research engagement. The results of Central question 2 are provided in Chapter 7 and 8 and now discussed under the headings of the five cognitive constructs of interest, starting with teachers' conception of research below.

10.2.1. Teachers' conceptions of research

Teacher's conceptions of research were explored via their ratings of the 10 scenarios in the questionnaire and the explanation for their responses in the subsequent interviews. The results displayed in Chapter 7 exhibit three important points that need discussing.

To start with, both teachers' scenario ratings and subsequent explanations clearly indicate a wide diversity in teachers' understandings of what research is. Specifically, only two scenarios (Scenario 2 and 4) attracted a clear agreement among the participants on whether they were describing "research"; the remaining eight scenarios, in contrast, received much less of a consensus, and sometimes contesting views. Scenario 9, for instance, was rated "definitely not research" by 21.6% of the participants, and at the same time assessed as "definitely research" by a roughly similar 19.5%. When explaining why they rated a particular scenario as they did, teachers also disclosed various criteria based on which they decide the extent to which one scenario constitutes "research": the presence of the perceived research components (e.g. data collection, data analysis, drawing conclusion and implication for practice), the research attributes (e.g. objectivity, rigorousness), and the research purposes (e.g. practice evaluation, problem-solving, or self-development). The chosen criteria differed from one teacher to the other; none of them dominated the data, and no teachers comprehensively used all the three groups of criteria.

Such a diverse conceptualisation of research distinguished Vietnamese EFL teachers from the foreign EFL teacher samples of other studies, who usually demonstrate a common tendency in the ways they view research, being for instance the dominance of the standard, conventional

scientific research (Borg, 2008, 2008, 2013; Moore, 2011a), or a centrality of experimental research with a problem-solving function (Gao, Barkhuizen & Chow, 2010). While a narrow sense of research in the other studies was said to possibly hinder teachers from doing research by restricting the research approaches that teachers can knowingly choose from (e.g. Borg, 2013), the diversity found in the current study, on the other hand, might have a positive impact on Vietnamese teachers' research engagement efforts. That is, with a broad and open view of what constitutes "research", Vietnamese EFL teachers can easily welcome the less formal and more personal kind of research as a valid and valuable form of inquiry, which could otherwise be delegitimized if they held a rigid definition of research as a work of strict objectivity and highly-structured academic format. As a result, they may have in mind a wider range of types of research they can conduct and find it easier to choose one that suits best their own situation. Evidence of such influence can in fact be seen from the pool of activities ranging from academic research to action research that teachers of the present study reported undertaking (see Chapter 6).

The diverse conceptions of research reflected by a single sample, nevertheless, might also a have different implication. In the context whereby teacher research engagement been mandated, the wide variations in how teachers conceptualise research can equally be seen as reflecting a worrying weakness in the Vietnam higher education system: a lack of clarity and uniformity in the official guidelines for teachers concerning what research should constitute. This issue has been mentioned in the context of the study (Chapter 4), and in the interview with participating leader (Chapter 6). Now that it reappeared in teachers' voices, we can safely say that after more than two decades of attempting to build a research culture across all the universities, the Vietnam higher education system is still silent as to how the research mission can be implemented at the individual level, not only among the academic staff in general (Nguyen 2013a), but also among the EFL instructors in particular. Although this may mean more autonomy for teachers as discussed in the previous paragraph, the lack of clarity on what research really is can at the same time make the research journey ambiguous for teachers who lack research skills and knowledge

(Borg, 2013), and clearly pose a considerable challenge for universities in the monitoring and evaluation of research quality (Nguyen, 2013a). This suggests a clear definition of research, and a set of criteria based on which research quality is judged be included in the official research policy documents of Vietnamese higher education sector might also be of value, despite the possible advantage of an open view to research as mentioned above. At a wider level, the results support Borg's (2013) suggestion that there should be a greater lucidity in what research precisely means in the general context of teacher research engagement.

The exact definition and criteria of teacher research to be encouraged among teachers, however, must be selected with care and caution. Discussing this matter, Allwright (1997) pointed out that an imposition of academic standards is unlikely to result in a sustainable level of research engagement among teachers because the majority of them are simply not provided with sufficient working conditions or sufficient research capability to be able to indefinitely maintain the amount of effort required for conducting academic research of decent quality. The application of "less demanding" definition of research, in contrast, can reduce the risk of early abandonment and increase the sustainability of the research activities to teachers, but then poses a further threat to the quality of the research produced (Allwright, 1997, p.368). To reconcile the "sustainability" and "quality" conflict, Allwright (1997) suggests employing "a research perspective rather than research in its usual sense – a search for local understandings rather than for incontrovertible findings and universalistic theory" (p.369). Research, in this case, will be something that is worth doing in the first place, and can thus be sustainably integrated into a teacher's normal workload. If the integration is successful, the research outcomes can then at least meaningfully satisfy local needs, and improve local learning and teaching quality although the quality of the research done may not yet fully meet the academic criteria (Allwright, 1997).

Finally, although the data did not allow for a statistical confirmation of a relationship between teacher conceptions of research and their research engagement patterns, the possibility of such association can still be inferred from the comparison between the two relevant groups of data. Similar to the questionnaire responses which show that "to evaluate the current practice", "to

learn more about some aspect of learning and teaching", and "to solve a classroom problem" (Figure 6.1., Section 6.1.2.2.) are the three most popular aims of the last projects the participants conducted, "evaluation", "teaching practice improvement", and "problem-solving" also emerged as the three functions of research in teachers' explanation for their scenario ratings (Section 7.2). Just as teachers' conceptions of research dissemination are predominantly associated with the formal, written form of publications (T5, T4, Section 7.2.), so too was such the most common way teachers chose to publish their last research projects (Figure 6.2). These observations are in line with Tavakoli and Howard's (2012) previous findings that teachers tend to actively engage in the type of research they know, appreciate, and find useful, and reiterate Lantolf's (2008) assertion that research is *praxis*, i.e. practitioners engage in research in their own ways and to their own ends and needs. That is to say, teachers' conceptions of research may leave a certain impact on their research engagement, and understanding them, as Borg (2013) concluded, is important in the attempts to engage teachers in research. In this respect, the restricted view on how research can be disseminated may make research a less viable activity for teachers with limited access to the opportunities to formally publish their research, or those who are not confident with their written communication skills. Initiatives to further teacher research engagement in language teaching may benefit from raising teachers' awareness about all the possible dissemination methods, providing them with various kinds of platforms to communicate their research results, and crediting also the research outputs of less formal, less academic, less conventional categories.

10.2.2. Teachers' research self-efficacy, context beliefs about doing research, and teachers' attitudes towards research

One more important objective of the central research question 2 was to explore three other cognitive factors (research self-efficacy, context beliefs about doing research, and attitudes towards research) that may help to explain teacher research engagement practice. The findings are expected to contribute to the debate regarding the possible relationship between teacher cognition and teacher practice. This section critically comments on the relevant results of data analysis presented in Chapter 8.

The results firstly help develop the sample's cognitive profile surrounding the research concept. As reflected in the results presented in Section 8.1 through 8.3, a typical Vietnamese EFL teacher at a public university would be moderately self-confident about his/her overall ability to conduct an independent research project without assistance, would strongly believe in the possibility of active research engagement in their institution, and would hold moderately positive attitudes towards the research mission. When different aspects of self-efficacy, context beliefs and attitudes are concerned, this typical teacher would feel less certain in his/her ability to perform the research main tasks than the research planning and supplementary activities. S/he would also believe that the degree of availability of the contextual factors favourable to teacher research engagement is significantly lower than the degree of their importance. S/he is moreover highly positive about the usefulness of doing research, moderately enjoys doing it, but becomes fairly anxious when thinking about conducting the activity on his/her own. Many of these features are not unusual in previous studies. Bai and Hudson (2011) for instance have found an overall lack of confidence in doing research among EFL teachers, and Yayli (2012) reported that the main tasks of the research process in particular were the most troublesome for even teachers holding post-graduate degrees. Teachers' positive attitudes towards the potential of research engagement for professional development, and the doubts about the actual practicability of teacher research were also consistently reported in a series of other studies (McDonough & McDonough, 1990, Rainey, 2000; Doan & Nguyen, 2006; Pham, 2006; Allison & Carrey, 2007; Bai &Millwater, 2011; Borg, 2013; Bai, Millwater& Hudson, 2014).

By considering simultaneously and comprehensively several cognitive factors in relation to teachers' behaviour and the surrounding context, the present study, nevertheless, is able detect both the congruencies and disparities among the different "layers" of a teacher's professional world, from which further insights into the current situation of teacher research engagement can be inferred. In terms of the alignment, teachers' awareness of the benefits of doing research agrees with the external expectation from the higher education system for them to be research active. A match to a certain extent can also be seen in the contextual factors teachers need to

engage in research and what they believe is available at their institutions. In light of the main insights provided by the Onion Model (see Section 3.1.2.), such alignments suggest that overall, the teachers participating in the present study might be doing research with inner self-satisfaction; and the research mission, despite being currently undertaken at a moderate degree, is potentially a sustainable professional development activity for Vietnamese tertiary EFL teachers. This may explain why nearly all of the participants (92.4%) said they would do research or continue do to so in the future (see Section 6.1.2.3).

Several frictions among the cognitive, behavioural, and contextual "layers", however, can be noticed from the results. First, the extent to which the contextual supporting factors are available at the universities where the participants work does not equate to the level of importance teachers believe they have in helping them to be research active. Such a mismatch is the most pronounced in three factors, namely "reasonable teaching workload", "sufficient funding", and "availability of the reference materials" (see Section 8.2.1.2). This result is consistent with the findings about the obstacles to teacher research engagement discussed earlier (Section 10.1), further explaining why the participants reported an overall modest level of doing research. The second discrepancy is between the perceived significance of the research task in teachers' professional life and teachers' perceived ability to perform the task. As the results show, while the mean score for teachers' perception of the usefulness of research is quite high (Mean=4.30 on a five-point scale), the mean for their level of confidence in doing research is only moderate (Mean=69.20 on a 100 – point scale). Such a tension may be one cause of a high level of anxiety teachers feel about doing research themselves (Mean=3.13 on a five-point scale). The tension might also have led to the earlier reported situation in which teachers tend to opt for the non-research alternatives to fulfil the research requirements, making it difficult for the research culture among them to develop (see Section 6.2.2.). In this respect, one insight of the Onion Model rings true that the friction between the layers of a teacher's inner world can cause negative feelings, which may then jeopardize the sustainability of the professional development activity in pursuit.

Another noteworthy contribution of the current study is the determination of the existence and extent of the impact each individual cognitive factor may have on teachers' level of research engagement. As the result in Section 8.4 indicates, collectively, a teacher's research self-efficacy (comprising of three sub-components), context beliefs about doing research and attitudes towards research (consisting of three sub-components) form a 7-factor cognitive model that statistically significantly predicts 19.8% of the variance in the frequencies of doing research which teachers reported. Among the seven components of the model though, only three, namely teachers' self-efficacy in the main research task, teachers' overall context beliefs, and teachers' research anxiety contribute uniquely and significantly to the overall predictability of the model. Specifically, a *higher* level of self-confidence teachers demonstrate in the performance of the research main tasks (e.g. collecting data, analysing data), a *stronger* belief that active research engagement is possible in their institutions, and a *lower* level of anxiety teachers feel about research are associated with a *higher* level of frequencies of doing research teachers report. The magnitude of impact ascends from research anxiety, self-efficacy about the research main tasks, and the overall context beliefs, in that order. The remaining four components – teachers' self-efficacy in research planning and supplementary tasks (e.g. identifying research questions from teaching practice, understanding typical research issues like plagiarism, ethics), teachers' perception of research usefulness, and teachers' positive research predispositions (e.g research enjoyment) do not significantly predict teachers' level of research engagement. That is, the teachers who feel able to conduct the research preparation stage and research quality enhancement activities, are aware of research engagement benefits, and enjoy the research activities are not necessarily the research-active individuals in the context of the current study.

The above findings indicate that initiatives to promote teacher research should incorporate efforts to (i) boost teachers' self-efficacy in performing the main tasks, (ii) support teachers' beliefs in the possibility of active research engagement in their working environments, and (iii) reduce teachers' research anxiety. Since these cognitive "layers" are interdependent and influence each other (Korthagen, 2004), the three above-mentioned solutions would probably be

most effective if applied simultaneously. One comprehensive solution would be equipping pre-service teachers with adequate knowledge and skills for conducting research, providing the in-service ones with professional development opportunities by which they can continue to reinforce their research capacity, share their research experiences, and seek help with their research problems.

In order for the benefits of each task to be optimized, several observations from the literature should be noted. Regarding teachers self-efficacy, Bandura (1997, p.82) stresses that confidence gains do not simply occur as a result of exposing teachers to more research knowledge, skills and practice, but require also "compelling feedback that forcefully disrupts the pre-existing disbelief in one's capabilities". Initiatives to promote teacher research via improving their self-efficacy should therefore include the chance for teachers to showcase their research and to receive experts' encouraging comments on their research ability. Concerning the context belief, since the construct comprises the dual elements of "enabling" conditions and "likeliness" of their occurrence in a given context, efforts to strengthen this type of belief in teachers must involve both improving all the contextual conditions for teacher research and assuring that teachers are fully aware of all the available sources of support for their research engagement. Finally, research anxiety, which negatively affects teacher research engagement, can be alleviated by introducing a conceptualisation of research as a doable and manageable activity which teachers can build into their normal working lives (see also Borg, 2013; Allwright, 1997).

The final point worth discussing is the total variance of teacher research engagement level explained by the cognitive model. Although statistically significant, the value of the result is small, at 18,7%. This indicates the co-existence of other factors in shaping teachers research practice apart from those included in the model. These might be the cognitive features that the model is yet to cover (for instance, teachers' conceptualization of their professional identity), or non-cognitive ones that also exerts similar significant influence on teachers' behaviour (for example, teachers' motivation). This opens up possible directions for future research, which will be discussed in details later in Chapter 11. The following section will now discuss the possible

impact of one powerful non-cognitive factor on teachers' research engagement – teachers' motivation.

10.3. Central question 3: What is the relationship between teacher motivation and their reported level of research engagement?

The third central question the current study seeks to answer is concerned with which types of motivation underlie teachers' engagement in research and to what extent each type relates to teachers' reported level of research engagement. Results from relevant data analysis were presented in Section 9.1, Chapter 1, and are now reflected upon in this section.

In terms of teachers' reasons for doing research, the questionnaire responses suggest that they were primarily intrinsic (pedagogical and professional) in nature rather than instrumental. Item 5.3. "research helps me to obtain career objectives that I feel important" was rated the highest among the six types of motivation, and teachers' (optional) open-ended comments all point to the professional development and teaching improvement goals that doing research can help them achieve. Extrinsic motivation in the form of employer's requirements, however, was the second-ranked reason, and also appeared in the qualitative data. This is at odds with findings from studies in the contexts where research is not explicitly made mandatory for teachers (Borg, 2008, 2009) but echoes exactly those of studies conducted in contexts where research engagement is strongly expected of EFL teachers (Borg & Liu, 2013; Gao et al., 2011a). Gao and colleagues (2011a) for instance, found that even in primary schools, teachers of English do research largely because research activities and outcomes are structured into "the top-down performance review systems of school and teachers" (p.74). The prevalence of extrinsic motivation, on the one hand, may indicate that the pressure of doing research to satisfy a job requirement can overshadow teachers' genuine interest in the research they do. At the same time though, the results may suggest a formal professional demand may be just as forceful as the professional drivers in motivating EFL teachers to do research. That said, external demands must still be aligned with teachers' internal values and personal needs to be effective. This can be seen in, once again, the top-ranked position of the identified motivation in the questionnaire responses. This echoes the conclusions of all the previous comparable studies, which found that teachers do research mainly

because the activity can benefit them professionally whether or not research engagement is mandated (e.g. Borg & Liu, 2013; Borg, 2013).

The second part of the results is concerned with determining the relationship between teacher motivation and their level of research engagement as reflected in the reported frequencies of doing research. The results unsurprisingly reveal a significant positive relationship between the level of self-determination in teachers' overall motivation profile and the extent to which they say they do research. That is, the more volitional teachers are in doing research, the more active and engaged they tend to be. In the same vein, teachers' reported frequencies of doing research also correlate more strongly with the more self-determined types of motivation for research. The *r* value increases from a-motivation (-.05) to external motivation (.03) to introjection (.16) to identification (.19) and integration (.38). Such a pattern of results is consistent with the self-determination continuum, in line with the original scale development studies (Fernet et al., 2008; Tremblay et al., 2009), and therefore support the Self-Determination motivational typology (Deci & Ryan, 2000, 2002).

It is interesting though to notice from the results that intrinsic motivation, the most autonomous type of regulation, is less strongly correlated with teachers' frequencies of doing research than integration (its predecessor in the self-determination continuum). Such a result could be related to the unfavourable working conditions that could prevent even teachers with a genuine interest in research from devoting themselves fully to the research task and may have mitigated the effect of intrinsic motivation accordingly. As Chapter 4 and 6 consistently revealed, severe constraints in terms of time and funding face Vietnamese tertiary EFL teachers in their effort to even complete the minimum research requirements. In such a situation whereby doing research for purely personal satisfaction seems unrealistic, the role of intrinsic motivation may have been mitigated and become less significant in impacting teachers' overall level of research engagement. Instead, integration - the most autonomous type of extrinsic motivation, which represents a perfect harmony between external requirements and personal interests and values, is unsurprisingly the most powerful factor in encouraging teachers to do research. Such a result

once again testifies to the important role of external drives and their congruence with teachers' personal values in the promotion of teacher research engagement.

Finally, extrinsic motivation was found to have no statistically significant link to teachers' reported level of research engagement. Such a finding is actually not unexpected since the same insignificant connection between extrinsic motivation and job commitment was once recorded in the literature (Tremblay et al., 2009). Latham and Pinder (2005) also try to explain the situation by emphasizing the fact that external forces do not originate from an individual's self-determined goals, and that the latter are crucial in transferring personal values into action. Extrinsic motivations are thus not likely to garner the necessary levels of effort and persistence in an individual to commit to an activity and consequently do not have a significant impact on the long-term sustainability of the action (Latham & Pinder, 2005). When combined with the previous remarks about the potentially important role of external requirements in the promotion of teacher research, such a result and explanation has two important implications for practice. First, the findings of this study indicate that external pressure alone cannot create positive changes in teachers' research activeness. Second, it should only be considered as a preliminary measure to initiate a research culture among EFL teachers. The promotion of a sustainable research culture among them must still be based on enhancing the extent to which teachers' professional needs are satisfied through doing research, and increasing the degree at which they self-determined their participation in the activity.

10.4. Central question 4: What motivates teachers to do research and what factors affect teachers' motivation during the process of doing research?

The final central question of the study aims to add an in-depth description of teacher motivation for research to the snapshot profile developed in the answers to the previous research question by qualitatively exploring the motivational processes of three individual case-study teachers engaging in research.

The data, in general, has portrayed a vivid picture of how the three tertiary ESL teachers' research motivation was initially ignited and then "waxed and waned" due to a range of contextual and personal factors. Important themes emerging from the data are discussed below.

The first main part of the data reveals three teachers' initial motivations for conducting the research they were doing. The main reasons as shown in the data were:

1. to meet an external requirement
2. to satisfy perceived needs for professional development (which can be long-term or short-term, and driven by a felt responsibility or a personal satisfaction contingency).
3. to pursue an internal interest in doing research

Such motivations were predicted by the participants to possibly strengthen or abate depending on their knowledge of the research topic, professional network, collegial support, time constraint, and research inexperience.

The first motivation, (i) to meet an external requirement, is clearly instrumental and extrinsic, and can be easily understood by the fact that doing research is a compulsory task for academics at the institutions where all the three participants work. The second motivation, on the other hand, was expressed via various professional and personal goals that research can help the participants to obtain, be it a conference presenting opportunity that makes one proud, or approaching the image of a university lecturer with both quality teaching and research capability that one idealizes. With the last intrinsic motivation taken into consideration, this points to a possibility that these three teachers' subjective values and interests have coincided with external expectations and such congruence has motivated them to take the first step into doing research.

One more interesting point can be furthermore drawn from the specific needs the participants expected to fulfil via doing research. Although varying in nature (i.e. short-term vs. long term; responsibility vs. self-satisfaction orientation), the listed needs fall into three basic categories as suggested in the premise of the Self Determination Theory: the need for competence (e.g. to enhance professional knowledge), the need for autonomy (e.g. to solve one's own classroom

problem independently) and the need for relatedness (e.g. to improve the relationship with other staff in the institution). Because of the expectation that research would help in satisfying these needs, one teacher even considers doing research as an indispensable part of her image as a lecturer, i.e. she internalizes the research task to the point that it becomes part of her professional identity. Such findings, on the one hand, confirm one important insight provided by the SDT that a behaviour is intrinsically motivating to an individual when it promotes his/her competency, autonomy, and relatedness. In other words, the participating teachers were drawn to the research not only because it is compulsory for them, but also because doing research may, in their opinions, make them advance their professional knowledge, academic independence, and enhance their collegial relationships. Further ruminating on the ways teachers relate to the research benefits on the other hand, it can be seen that they did not only identify with the benefits of conducting research but also internalized the research values to the point of assimilating them with their sense of self. Such identification and integration then motivated them to initiate their research endeavour. Since these regulations are all located on the self-determination half of the motivation continuum in light of the SDT, it can be concluded that the participating teachers must have started their research on a voluntary basis despite an extrinsic expectation imposed on them at the outset.

Concerning the factors speculated on by the participants as possibly affecting their on-going motivation, two important points are worth noting. First, the role of teachers' perceived autonomy, relatedness, and competence in motivating them to do research once again prevailed. Specifically, while "familiarity with the research topic", "the existing large professional network", and "worries about research capabilities" reflect aspects of teachers' ability to control the outcome of the research activity (i.e. competence and autonomy), "the collegial support", "worries about team member contribution", represent respondents' sense of connection to a larger group or community (i.e. relatedness). Combined with the point made in the previous paragraph concerning the identified regulation of teacher research engagement, such result suggests that it is not only a *future* benefit in terms of professional knowledge, academic

independence, and social belongings that doing research can promise, but also a sense of the *current* self that owns to certain degree of these qualities that is important in motivating teachers to instigate a research activity. The competence concern, together with the time constraint in particular, which was commonly raised by all the three participants as possible obstacles for their research endeavour, moreover, reflects a dilemma faced by many EFL teachers. That is, they may be fully aware of the merits of doing research, they may have a true interest in being a teacher researcher, but their initial effort to engage in the activity is still hindered by their insufficient research knowledge and skills, and the unfavourable working conditions (Burns, 2009; Yuan &Teng, 2016).

10.1.4.2. Research question 4b

Question 4b aims to explore the factors that were reported by the participating teachers to have mediated their motivation during the actual process of conducting research.

Concerning the factors that sustained participants' engagement in research, the items found in the data can be summarised as follows:

1. Quality of the research experience in terms of the actual research benefits, relevance to the personal needs, pleasantness, perceived progress, the reasonable level of task difficulty, and support from the team members
2. Subjective norms and values, including personal resoluteness, commitment to promises, and a respect for academic standards
3. Action maintenance strategies
4. An external demand

Compared to the initial motivations discussed in the previous section, the above list first demonstrates a change in the participants' underlying motivation for engaging in the research, and the nature of their research activity seemed to switch to being less voluntary accordingly. Starting with a mixture of extrinsic, integrated, and identified regulation, Hoa gradually redirected her research motivation to mainly introjection, i.e. pursuing her research to maintain

his face with others to whom she had made a promise. Dung appeared to sustain the identified regulation of his research activity throughout the process, but finally disclosed an introjected motivation for continuing his project in the final interview. Notably, Son shifted from the most self-determined type of motivation, intrinsic, to the opposite extreme, extrinsic regulation after three months carrying out his research. Intrinsic motivation, in this case, was interestingly not sufficient to help this teacher maintain his initial level of effort and engagement. Overall, while the inceptive motivations for the teachers to embark on their research projects derived mostly from the internal world of the teachers (a personal interest in research, an identification of the research benefits with subjective values, and even an integration of the research importance into the sense of self), the locus of causality for their continuation of research resided mainly in factors external to them. In theoretical terms, this result confirms the temporal characteristic of motivation as suggested in general educational psychology, and fits well in particular with the process model of motivation, which emphasizes the longitudinal evolution of motivation over different stages of an action. At the practical level, the changes demonstrate a decline in the self-determination degree inherent in the research activity, meaning that the teachers have apparently lost interest in the research and/or the research itself has not benefited them to the extent initially expected.

The findings, furthermore, re-emphasize the importance of a person's needs for autonomy, competence and relatedness in guiding his/her behaviour, as argued in SDT. It can easily be seen that the actual process of doing research was motivating to the teachers at a certain stage because it enhanced their relationships with colleagues and assisted their personal growth at that time. There was, however, at other times, a mismatch between the benefits teachers expected to obtain and the advantages that they actually reaped from doing the research. By the time of the final interviews, only the gain in professional knowledge and skills, and collegial relationship were reported; the fulfilment of some other goals mentioned by the participants in the first interviews as their motivation to start the research (such as attending a conference or improved teaching practice) were not yet acknowledged in either the diaries or the final interviews. An

improvement in teachers' autonomy as a result of doing research was equally absent. It is clear that the actual research experience, although still motivating to teachers, did not fully meet their initial expectations or adequately accommodate their three basic needs, and this might be the reason why they were more tuned to the external sources of motivation towards the end of their research, as pointed out in the previous paragraph. It also explains the mention of an external demand as a crucial factor in keeping the bond between the researchers and their projects alive. In fact, the new policy that strictly imposed the research hours on Son at his university was the main motivation for him to resume the project, which he had decided to terminate two weeks earlier.

Regarding the demotivating factors, the following themes emerged:

1. Poor support from team members, managers, and participants
2. Unexpected technical issues
3. Absence of formal recognition
4. Limited resources (budget and access to reference materials)
5. Slow progress
6. Potential inapplicability of the research results
7. Teachers' low coping potentials (in terms of time management, preparation, previous research experience, pressures from other roles, and a static orientation to non-urgent tasks like doing research).
8. Distracting influences
9. Availability of research alternatives.
10. Too high research autonomy

Most factors in the list are predictable and have already been reported in the literature. Limited resources and teachers' limited coping potentials, for instance can easily be seen from the context of the study and the personal circumstances of the three cases. These also concur with various authors' findings that unsupportive working conditions and teachers' lack of research knowledge and skills were limiting teachers' engagement in research (e.g. Borg, 2013; Gao,

Barkhuizen & Chow, 2009). The presence of "autonomy" as a demotivator is, however, striking. Acknowledged as one important need that an activity has to support in order to be intrinsically motivating to an individual, autonomy as experienced by the participants, in contrast, was reported to be detrimental to their research progress. This may imply that autonomy, when combined with a limited coping potential and unfavourable working conditions, may be a threat to motivation. This echoes Borg's (2009) findings that although the notion of teachers autonomously designing, conducting, and sharing research projects is appealing, the lack of support, and the structured guidance which such situation involves may at the same time hinder the completion of quality pieces of teacher research. The availability of research alternatives also emerge as a noteworthy demotivator. In fact, the flexibility and ease in the research policy that allows teachers to make up for the unfulfilled research hours were acknowledged before by both teachers and their leaders as an obstacle for teacher research engagement (see Section 6.2.2, and 6.3.2.). Reappearing now as a critical factor that even terminated one teacher's on-going effort in doing research, the results once again demonstrate the importance of external demands in driving teachers to do research. Not only does a formal and strict requirement on research engagement represent a strong initial force that can introduce research widely to the population of the EFL teachers, and motivates teachers to actually start to do research, it is also a necessary factor that can prevent teachers' early abandonment of their research projects in times of difficulties.

10.5. Integrating four main research questions: A connection to the Onion Model

The above discussion has portrayed the current state of EFL teacher research engagement at Vietnamese public universities, and reflected upon the cognitive, motivational, and contextual factors that may contribute to the found scenario. Figure 10.1 integrates all the findings in a format that takes account of Korthagen's (2004) Onion model of levels of changes that the current study adopts as the overarching theoretical framework (See Chapter 3).

In the original model, six "layers" are suggested as different standpoints from which a teacher's behaviour can be looked at (see Section 3.1, Chapter 3). At the core is the "*mission*", which refers to the teacher's innermost inspirations or motivation; then come the three layers of

"*identity", "beliefs",* and *"competencies*", which collectively belong to the teacher's cognitive system. Next to them is located "*the behaviour"* – the observable professional practices that the teacher demonstrates, and finally the "*environment"* at the outermost, which includes the factors external to the teachers but exerting certain impact on the teacher's professional work.

The findings of the study, as can be seen from Figure 10.1, enable us to reconstruct the original model into a new one with four layers which accommodate all the specific concepts that the current study chose to investigate in light of the original Onion model (see Section 3.2, Chapter 3). As the figure shows, teachers' research practices (behaviour) is simultaneously influenced by their motivation (mission), teacher cognition (the combination of the "identity", "beliefs" and "competencies" in the Onion model), and the specific context where teachers work (environment).

Corresponding to the "mission" layer of the original Onion model, teacher motivation was chosen to provide insights into teachers' research engagement, a specific teacher "behaviour" of interest. The findings show that teachers' needs for autonomy, competence, and relatedness are the underlying drive for them to start to do research and sustain their engagement in the activity. Both quantitative and qualitative results show that teachers do research generally because they expect research engagement to benefit them professionally (i.e. satisfying their need for competence). The qualitative data analysis further indicates that teachers initiate a project, commit to finishing it or terminate it all because of the extent to which the actual research experience would help them improve: their teaching (the need for competence), their ability to solve their classroom problems and conduct future research on their own (the need for autonomy), and/or their collegial relationships (the need for social belonging). The significance of teachers' three basic needs are also manifested in the interesting findings about the role of two opposite types of motivations: intrinsic interest in research and extrinsic drives. External pressure, one kind of non self determined motivation, which is consistently reported to show no significant relationship with teachers' behaviour in the literature (Tremblay et al., 2009; Latham & Pinder, 200) as well as in the analysis of the quantitative data of the current study (Section

10.3), emerges as an important factor to encourage teachers to both start and continue their research journey. An important reason behind this is a congruence between the external demands and teachers' inner needs. Intrinsic motivation, on the other hand, did not appear in the list of the on-going motivating factors although it has been widely acknowledged as the most optimal form of motivation for the sustainment of a person's behaviour in the literature (Deci & Ryan, 2000; Tremblay et al., 2009), and was actually mentioned as one main source of initial motivation for the participants of the present study to start their research and to significantly correlate with teachers' reported level of research engagement overall. Although the unfavourable working conditions may partly explain this finding, the mismatch between teachers' expectations regarding their gains from doing research and the actual research experiences, as the qualitative data implies, once again plays a crucial part. In other words, even the significance of the most powerful form of motivation in maintaining a teacher's behaviour can be mitigated if the behaviour cannot satisfy their needs to the extent that the teacher expects.

Figure 10. 1. A synthesis of the study findings in light of the Onion Model

Next to "motivation", the "cognition" layer of the newly constructed model consists of four chosen concepts: teacher conceptions of research, teachers' attitudes towards research, teachers' research self-efficacy, and teachers' context beliefs about doing research, which provide four other standpoints from which teachers' research practices can be understood. Results of analysis of both quantitative and qualitative results imply possible relationships between teacher research engagement patterns with all the four cognitive factors. Specifically, the diversity in the ways teachers conceptualise research may have explained the wide variety of the types of research teachers reported doing. As discussed above, such diversity can be considered as an advantage for Vietnamese EFL teachers since it may allow them to welcome less conventional types of research and have more choices in terms of research designs for their own projects. It may reflect, on the other hand, a weakness in the Vietnamese HE system – the lack of clarity in research guidelines for teachers and institutions to follow regarding what research is and how research quality can be judged. Concerning the three other cognitive factors, teachers' confidence in performing the main tasks, and their beliefs in the possibility of a research active environment in their institutions are found to significantly and positively correlate with the frequencies of doing research teachers reported. Teachers' level of anxiety, by contrast, exhibits a significant and negative relationship with the degree of engagement in research that teachers claimed. Such findings pointed to the possibility that the modest level of research engagement that Vietnamese EFL teachers reported is attributed to their perceived moderate ability to carry out the research main tasks, the high level of anxiety they feel about doing research without assistance, and the limited availability of several important supporting contextual factors such as time or research funding in their universities. Other attitudinal and self-efficacy aspects that did not yield significant associations with teacher research practice include teachers' confidence in performing the research planning and supplementary tasks, teachers' perception of the research usefulness and their perceived positive research predispositions. That is, a teacher who believes that s/he is able to plan a research project (e.g. identifying research questions), fully aware of the benefits that s/he can gain engagement in research (e.g. research is good for career

advancement), or tend to relate positively to research experiences (e.g. doing research is interesting), is not necessarily an active teacher researcher.

These findings, on the one hand, confirm the influence of teacher cognition on teachers' practice suggested by Korthagen's (2004) Onion Model and the larger literature on teacher cognition (e.g. Borg, 2006; Barnard & Burns, 2012). On the other hand, they open a new debate about the varying roles that different cognitive factors play in affecting a certain type of teacher behaviour in a certain context. In the context of contemporary Vietnamese higher education, different aspects of teacher cognition are not equally correlated with their engagement in research. In fact, some are found to be significant correlates (e.g. teacher anxiety) while some are not at all (e.g. teachers' perception of research utilities).

At the outermost layer, several contextual conditions emerge from the results as possible influences on teachers' research engagement. These include external requirements, sensitiveness of research support policy to teachers' needs, availability of research resources, and teachers' actual experience of the research activity. These contextual factors were found to either directly impact teachers' research practices (e.g. the heavy teaching workload and the financial constraints), making the research requirements imposed on teachers only sound in theory; or indirectly do so by first influencing teachers' motivation, which then causes the changes in their on-going engagement in research (e.g. the external requirement as an on-going motivator for teachers to continue their research projects). Such findings once again reiterate two main insights of Korthagen's (2004) Onion model: (i) similar to teacher cognition and motivation, the surrounding environment influences how teachers professionally act; and (ii) different layers are not independent but interact with one other, and in fact, it is such interactions themselves that may act as an influence on teachers' behaviour. The findings, furthermore, clarified the specific environmental elements that may affect teachers' research activity – one particular professional behaviour that a teacher potentially engages in.

In short, the findings as shown in Figure 10.1 generally support the relevance of the Onion model for the current study. It was acknowledged in Chapter 3 that the underlying premises of the model have been found to consistently occur in the advanced education systems in the West, but have not been explicitly applied to a significant extent, if not at all, to the less developed ones by the literature to date. Reporting the interactions between different "layers" of the model, which are similar to the findings of previous studies, the current investigation has demonstrated that Korthagen's (2004) frame of reference continues to be relevant to studies contextualized in less educationally developed regions like South East Asia. Indeed, the model with its main insights has proven to be of great value in illuminating not only the specific motivational, cognitive, and contextual factors that may explain how often teachers are engaged in research, but also the interaction between these factors which offer extra accounts for teacher research engagement.

Chapter 11. Conclusion

This final chapter crystallizes the whole investigation by synthesizing the major findings and making the concluding remarks. The chapter is organized into four main parts. The first one summarizes the study, its findings, and the implications of findings. The second section acknowledges the limitations of the study. The third section outlines possible directions for future research. The final one recap the whole thesis with the cocluding remarks.

11.1. Review of the study, its major findings, and implications

As mentioned in the Introduction, the initial motivation to conduct the present study originated from the author's interest in understanding why research engagement has been anecdotally acknowledged to benefit EFL teachers in so many ways but in practical terms remains a minority activity in both global and local contexts. Attempting to explain such a tension in a setting where teachers are required to do research, it was anticipated that the study would assist stakeholders in approaching the questions of whether and how the research role should be promoted among the ELT professionals.

The identification of gaps in the existing relevant literature further helped to define the context of the study, the substantive focus, the theoretical lens in use, the specific research questions, and the design of the present study. Specifically, the needs established in the literature for large-scale but context-specific studies into the research practices of tertiary EFL teachers, coupled with a lack of up-to-date research of this type conducted in Vietnam led the researcher to choose Vietnam's higher education sector as the context of the study. The lack of comprehensiveness in the way existing literature approached teacher cognition and teacher motivation – two possible significant determinants of teacher behaviour – induced the researcher to narrow the scope of the study to these two individual-difference factors in the attempt to understand teachers' engagement in research. The need to tackle the complex nature of these two constructs resulted in the choice of mixed-methods design for the present study. Finally, Korthagen's (2004) Onion model of change was selected as the theoretical lens to guide the whole investigation because it provides a comprehensive framework for the study to reflect simultaneously on teachers'

behaviour (i.e. research practice), teachers' personal factors (i.e. motivation and cognition) and the context (the specific working conditions that may affect the extent to which teachers do research). With such defined scope and theoretical framework, the investigation was undertaken to explore the current status of research engagement among tertiary EFL teachers at Vietnamese public universities, and the cognitive, motivational, and contextual factors that may shape the situation. Such objectives were translated into the following research questions:

Central research question 1: What is the current status of research engagement among EFL teachers at Vietnamese public universities?

1a. How often do teachers say they do research?

1b. What kinds of research do they do?

1c. How do they publish their research results?

1d. How do the demographic factors relate to the reported level of research engagement?

Central research question 2: How do teacher cognition correlate with teachers' level of engagement in research?

2a. What conceptions of research do teachers have?

2b. Which kind of self-efficacy, attitudes, and context beliefs about doing research do they hold?

2c. How do teachers' self-efficacy, attitudes, and context beliefs about doing research correlate with their reported level of research engagement?

Central research question 3: What is the relationship between teacher motivation and their research experience?

3a. How much are teachers motivated to do research?

3b. How do specific behavioural regulations correlate with the reported level of research engagement?

Central research question 4: What initially motivates teachers to do research and what factors affect their research motivation?

4a. What initially motivates them to do research?

4b. What factors sustain/erode their motivation in the process of doing research?

The answers found to the above question are expected to add Vietnamese insights into the global picture of EFL teacher research engagement, enriching the comparable evidence base which is useful in informing many stakeholders, including policy makers, teacher educators, and teachers on matters related to teacher research in the language teaching field. The applicability and usefulness of the chosen conceptual framework also has important implications for other future research.

The actual conduct of the study involved (i) the participation of 568 EFL teachers selected with the simple random sampling method, and 27 department heads from 27 public universities all over Vietnam, (ii) the use of four data collection instruments: survey questionnaires (for teachers), interviews (for teachers and department leaders), and documents (from teachers and the universities), and (iii) the assistance of the data triangulation technique (whereby different types of data collected from different sources with different instruments are compared to draw the final findings). Quantitative data (survey questionnaire responses) was gathered and analysed first to provide answers to the descriptive and relational research questions (Central question 1, 2, 3). Qualitative data (interviews and documents) collection and analysis followed to enrich, explain, or triangulate with the quantitative data.

From the research findings presented in chapter 6 through 10, there are five important conclusions pertaining to the research questions and the relevance of the theoretical framework that can be made at this point. The ***first*** conclusion, which is related to Central RQ1, is that, Vietnamese tertiary EFL teachers are currently engaged in research at a modest level but the development of a strong and widespread research culture among them is attainable. The factors and circumstances needed to make this happen include stricter research requirements from the

universities (e.g. eliminating the non-research alternatives teachers can opt for to make up for their research hours); more practical support from policy makers (e.g. increased time and budget allowance for research activity); greater priority on less structured, less intensive forms of research training from teacher education programs. Educational leaders are also recommended to take simultaneous actions on all types of difficulties that teachers may encounter; and finally, self-reflection types of research should be added to the research manuals written by the academics to increase teacher research activity.

The ***second*** conclusion, pertaining to Central RQ2, is that teacher cognition in general exerts a significant impact on their research engagement practices; however, different cognitive constructs exhibit different degrees of influence. In the context of the study, teachers' conceptions of research were observed to play an important role in the types of research teachers decided to do. In addition, in descending order of impact, teachers' feelings of anxiety when thinking about research, their perceived confidence in performing the main tasks in conducting research, and their belief that a research-active environment is possible at their university, were found to be three significant predictors of teachers' frequency of doing research. Teachers' attitudes towards the usefulness of doing research, their positive predisposition, and their perceived ability to perform the research planning or supplementary tasks, on the other hand, were not found to predict the extent to which teachers engage in research. The comprehensive consideration of the whole cognitive system in studies that seek to explain teacher research engagement is therefore, demonstrated to be necessary.

At the practical level, teacher research promotion initiatives should put a central focus on equipping teachers with sufficient research knowledge and skills, and providing them with on-going opportunities to consolidate such skills and knowledge and to seek assistance with their research engagement issues. Universities should also establish research guidelines, which are clear and consistent in defining research and judging research quality to guide novice teacher-researchers, but also flexible enough to allow for the acceptance of the less conventional but more achievable and manageable forms of research among teachers.

The ***third*** conclusion, regarding Central RQ3,4, is that, teacher motivation is significantly associated with teacher research engagement, but both motivation and its influence on teachers' efforts in doing research constantly change and are mediated by teachers' needs for competence, autonomy, and relatedness, and the immediate context. Teachers are drawn to research activity when they believe it will result in their professional development, their improved ability to perform academic tasks independently, and enhanced relationships with their colleagues. Their engagement in research is sustained or discontinued in the same way. The contextual constraints, however, may mitigate the significance of the desirable type of motivation and create the needs for a less desirable one. Specifically, in the presence of too many difficulties, a teacher's genuine interest in doing research does not always suffice to maintain his/her engagement in a research project. On the other hand, external pressure is crucial in both initiating and sustaining a teacher's research journey. It is therefore recommended that both pre-service teacher education, and in-service professional development programs prepare teachers with a full awareness of not only the potential benefits of research engagement, but also the challenges inherent in conducting research. Universities should also make efforts to make teachers' research experience as positive as reasonably possible (e.g. reducing teaching), and maximize the chance that teachers can develop their competence, autonomy and social belonging from doing research (e.g. encouraging team research with a senior academic leader).

Situating all the above conclusions in light of Korthagen's (2004) Onion model, one final conclusion can be drawn. That is, this frame of reference overall works well as a conceptual map for analysing the interactions between teacher behaviour, teacher cognition, motivation, and the external environment in a developing country context. Not only did the model significantly inform the research design, especially in redefining the research questions, but it also guided the analysis and discussion of the data. The main insights of the model have also been confirmed by the results of the study. However, several limitations of the model as a theoretical lens for this study were identified. Being a general framework that guides the reflection on teachers' behaviour in general, the chosen Onion model did not suggest the specific cognitive,

motivational, and contextual constructs that deserve attention in examining teachers' research engagement. For instance, the "competencies" layer of the model mentions the "attitude" component but does not specify which attitudinal construct would matter in their research participation. This is important as the findings of the study pointed out that not all the attitudinal factors exert a significant effect on teachers' willingness and commitment to do research. Research anxiety does, but teachers' perception of research usefulness does not. For future research in teacher research engagement to be conducted more effectively, the reconstructed model that the current study suggests (Figure 10.1) might be considered. Alternatively, the cognitive, motivational, and contextual constructs should be chosen and operationalized carefully based on the existing literature that deals specifically with the topic of research engagement. Notwithstanding this limitation, the Onion model still works as a relevant and powerful device for advancing the understanding of the teachers' research practices in Vietnamese higher education.

In brief, the study has answered its research questions, and contributes to the previously limited understanding of teacher research engagement in the ELT field. The findings of the study, which were guided by a grounded conceptual framework and extensive review of existing literature, and resulted from empirical data analysis, are of significance to both practice and scholarly research.

11.2. Limitations of the study

Like any other research, the present study is subject to certain limitations. It is necessarily limited in its scope, its chosen theoretical lens, its methodology, and the measures in use to ensure the reliability and validity of its findings.

First, the study has a limited scope, and restricted substantive coverage is therefore unavoidable. The study confines its substantive focus to EFL teachers for students of *non-English majors* at Vietnamese *public* universities. Although such choice enabled the researcher to cover a majority of the tertiary EFL teachers in Vietnam, it follows that the findings and implications of the studies should not be generalised or extended to any other groups of teachers (e.g. lecturers of

English for English-major students) and beyond the public university sector (e.g. the private university sector) because the working conditions of different groups of EFL teachers vary and the functions of different educational sectors are not similar. Furthermore, because of time, space and logistical constraints, this study did not explore other individual-difference factors that fall outside teacher cognition and motivation, such as teacher personality traits or even the socio-economic backgrounds, which have been found to also affect teachers' professional behaviour (Johnson, 2006). The potential impacts of the outside environment on teacher research engagement were discussed, but the actual relationships between them were not statistically explored. The researcher is therefore aware that the study cannot claim to have fully accounted for all the reasons why teachers do or do not do research.

Second, the study is necessarily limited in its use of theoretical framework. Although carefully chosen based on their rigor and appropriateness, the Onion model (Korthagen, 2004) selected to guide the whole study, the Self-Determination theory (Deci & Ryan, 2002), and the Process model of motivation (Dornyei, 1998), selected to guide the analysis of teacher motivation, are only some of many possible usable models, among which superior ones may exist beyond the researchers knowledge. It is moreover worth noting that a good fit of the chosen theoretical framework to the empirical data in a study, as was the case in the present investigation, does not necessarily guarantee that it is the optimal theoretical lens to interpret the data (Hair et al., 2006). The use of an extra theory or a different model may have resulted in different insights into the multi-faceted and complex constructs of teacher motivation and cognition. The findings of the present study, nevertheless, do represent a meaningful addition to the currently meagre body of existing research into the same topic in the ELT field.

Third, the methodology of the present study has limitations. Although due consideration was given to methodological choices (see Chapter 5), multiple possible methodological options exist for any single research problem, and even the most carefully chosen methodology has its own limitations (Creswell, 2015). The correlational and regression statistical techniques used to analyse the quantitative data in the present study only allow for determining the existence of

possible associations between variables, not establishing the causal relationships between them. It is therefore unknown, for instance, as to whether limited research engagement leads to the anxiety feelings or vice versa, although the connection between them was found to be statistically significant. In addition, the use of self-report instruments (survey, interviews, diaries) may also limit the study's results. Drawn from self-report data, the findings of the study are only accurate to the extent of the respondents' honesty when providing the data. There is also a possibility that participants may have fabricated the results by disclosing the information that they thought would be what the researchers wanted, not their true perceptions (Gall, Gall, & Borg, 2007), or underreporting certain experiences (usually negative ones) due to people's natural inclination to deny involvement in socially undesirable actions (Tremblay et al., 2009). One more methodological limitation lies in the use of a single format of data collection instrument to gather data from multiple informants. Face-to-face format for instance, applied to all interviews, and paper-based questionnaires were used for almost all survey participants. Since different individuals inevitably vary in their preferences of data provision methods, such use of a single data collection format may have led to the so-called "common method bias", which occurs to the data provided by the respondents who are not completely comfortable with the given format, say for instance, face-to-face encounter with the researcher (Chang, Witteloostuijn, & Eden, 2010). Although serious efforts have been undertaken to address all these methodological issues (see Chapter 5), the current study acknowledges that "no procedures […] always yield sound data or (perfectly) true conclusions" (Phillips, 1987, p.21), and that potential threats to the reasonableness of the study's conclusions still exist due to the unavoidable limitations inherent in its methodology.

Finally, since this study was conducted by a single researcher, the data were mainly interpreted through the perspective of a single observer/analyst, who operates from a particular, often implicit frame of reference. The background and perspective of the researcher, as Bray, Adamson and Mason (2007, p.10) stress, are "of major significance", especially in the interpretation of qualitative data. A researcher can easily taint the findings simply by imposing a

particular attitude towards the participants (who usually represent a particular social group of people) when interpreting their personal experiences (Hujala & Puroila, 1998). Although the researcher of the present study has applied various strategies throughout the study, such as member-checking, the researcher's keeping a neutral view of the participants, constantly enlisting her supervisor's review and audit (see Chapter 5) to ensure the impartiality of findings, there is no absolute guarantee that the limitation of the single frame of reference was fully addressed.

11.4. Suggestions for future research

The findings, conclusions and limitations of the present study pinpoint several directions for future research.

First, the present study illuminated the topic of teacher research engagement in the set boundary of Vietnamese public university, and among EFL teachers for non-English major students. Future researchers are therefore invited to duplicate this study in other contexts and with different groups of teachers about which no empirical investigation has been attempted. The findings of these replicate studies will continue to enrich the understanding of teacher research practices from the perspective of teacher motivation and cognition, and to add to the larger "comparable evidence base" that is currently needed to inform context-specific policies on matters related to the promotion of teacher research (Borg, 2007a).

Second, teacher motivation and cognition are two hugely complex constructs, and plurality of research into them might benefit existing literature. A future study may (i) use other instruments (e.g. different measurement scales) to explore the chosen cognitive and motivational concepts of the present investigation (ii) choose other aspects of cognition and motivation to examine (e.g. teachers' conception of their identity), or (iii) use another theoretical model to analyse these two constructs. Findings of studies conducted in these directions will definitely yield additional insights into teacher research engagement from the cognitive and motivational perspectives, and probably help to reinforce or revise the new Onion model this study constructed based on its findings (Figure 10.1).

Third, the present research study has served to identify the cognitive, motivational, and contextual factors that may explain why EFL teachers do or do not do research, but no causal relationships have yet been statistically established. Future research may adopt an experimental design to ascertain the causal direction of the significant relationships reported in this study (e.g. teacher self-efficacy and frequency of doing research).

Finally, although the current study managed to shed light on the tension between the anecdotally reported benefits of research engagement for teachers and the actual modest level at which teachers take on the activity, it does not denote the end of the discussion. The existing literature suggests many antecedents of teacher behaviour other than teacher cognition, teacher motivation, and the professional context. Future research, therefore, should consider other factors beyond the scope of the present study in investigating the reasons behind teacher research practices. Some examples include teachers' personality traits, socio-economic backgrounds, or schools' size and major focus. The results of such studies, together with those of the current one, will help to expand the list of possible predictors of teachers' research activity.

11.5. Concluding remarks

In conclusion, this study has sought insights into the current status of EFL teacher research engagement in Vietnam from teacher motivation and cognition perspectives, and placed the findings in the developing comparable evidence base of the larger literature. Given the increasing interest in teacher research worldwide, and the determination of Vietnam to advance research and development culture across its higher education system, the implications of the investigation are of significance. Of most importance is the conclusion that the outcome of any research promotion effort in any context does not only depend on policy but also on its harmony with teachers' cognitive and motivational needs.

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APPENDICES

Appendix 1: Ethics approval from Macquarie University Human Research Ethics Committees for the Sub-study on teacher cognition

Gmail My Truong <truongthimy85@gmail.com>

RE: HS Ethics Application - Approved (5201500833)(Con/Met)
1 message

Fhs Ethics <fhs.ethics@mq.edu.au> Thu, Nov 19, 2015 at 12:19 PM
To: Dr Jill Murray <jill.murray@mq.edu.au>
Cc: Ms Thi My Truong <thi-my.truong@students.mq.edu.au>

Dear Dr Murray,

Re: "Considering teacher cognition and motivation in teacher research engagement: A case study of English language teachers at Vietnamese public universities"(5201500833)

Thank you very much for your response. Your response has addressed the issues raised by the Faculty of Human Sciences Human Research Ethics Sub-Committee and approval has been granted, effective 19th November 2015. This email constitutes ethical approval only.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

Dr Jill Murray
Ms Thi My Truong

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).

2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 19th November 2016
Progress Report 2 Due: 19th November 2017
Progress Report 3 Due: 19th November 2018
Progress Report 4 Due: 19th November 2019
Final Report Due: 19th November 2020

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/current_research_staff/human_research_ethics/application_resources

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Sub-Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the

Sub-Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/current_research_staff/human_research_ethics/managing_approved_research_projects

5. Please notify the Sub-Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

http://www.mq.edu.au/policy

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of approval to an external organisation as evidence that you have approval, please do not hesitate to contact the Ethics Secretariat at the address below.

Please retain a copy of this email as this is your official notification of ethics approval.

Yours sincerely,

Dr Anthony Miller
Chair
Faculty of Human Sciences
Human Research Ethics Sub-Committee

Faculty of Human Sciences - Ethics
Research Office
Level 3, Research HUB, Building C5C
Macquarie University
NSW 2109

Ph: +61 2 9850 4197
Email: fhs.ethics@mq.edu.au
http://www.research.mq.edu.au/

Appendix 2: Ethics approval from Macquarie University Human Research Ethics Committees for the Sub-study on teacher motivation

MACQUARIE University

THI MY TRUONG <thi-my.truong@students.mq.edu.au>

RE: HS Ethics Application - Approved (5201600169)(Subject to Condition/s)

3 messages

Fhs Ethics <fhs.ethics@mq.edu.au> Wed, Mar 23, 2016 at 11:30 AM
To: Dr Jill Murray <jill.murray@mq.edu.au>
Cc: Ms Thi My Truong <thi-my.truong@students.mq.edu.au>

Dear Dr Murray,

Re: "Considering teacher cognition and motivation in teacher research engagement: A case study of English language teachers at Vietnamese public universities"(5201600169)

The above application was reviewed by The Faculty of Human Sciences Human Research Ethics Sub-Committee. The Faculty Ethics Sub-Committee wishes to thank you for your well-written application. Approval of this application has been granted, effective 23rd March 2016. This email constitutes ethical approval only.

This approval is subject to the following condition/s:

1. Please forward the permission/approval from the Dean of Foundation Studies at Hanoi University to FHS Ethics for records.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

Dr Jill Murray
Ms Thi My Truong

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).

2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 23rd March 2017
Progress Report 2 Due: 23rd March 2018
Progress Report 3 Due: 23rd March 2019
Progress Report 4 Due: 23rd March 2020
Final Report Due: 23rd March 2021

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress Reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/current_research_staff/human_research_ethics/application_resources

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/current_research_staff/human_research_ethics/managing_approved_research_projects

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

http://www.mq.edu.au/policy/
http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of approval to an external organisation as evidence that you have approval, please do not hesitate to contact the FHS Ethics at the address below.

Please retain a copy of this email as this is your official notification of ethics approval.

Yours sincerely,

Dr Anthony Miller
Chair
Faculty of Human Sciences
Human Research Ethics Sub-Committee

Faculty of Human Sciences - Ethics
Research Office
Level 3, Research HUB, Building C5C
Macquarie University
NSW 2109

Ph: +61 2 9850 4197
Email: fhs.ethics@mq.edu.au

http://www.research.mq.edu.au/

Appendix 3: Written consent form for questionnaire survey participants

Department of Linguistics
Faculty of Human Sciences
MACQUARIE UNIVERSITY NSW 2109
Phone: +61 (0) 2 9850 8740

Fax: +61 (0)2 9850 9199

Email: lingadmin@mq.edu.au

Chief Investigator's / Supervisor's Name & Title: ____Dr. Jill Murray_____

Participant Information and Consent Form

Name of Project: Considering teacher cognition and motivations in teacher research engagement: A case study of English language teachers at Vietnamese public universities

You are invited to participate in a study of English as a foreign language (EFL) teachers at Vietnamese public universities. The purpose of the study is to examine the current research practices among these teachers and how cognitive factors such as teacher attitudes, assumptions, knowledge and belief may affect such practices.

The study is being conducted by Ms. My Truong (thi-my.truong@students.mq.edu.au) to meet the requirements of the Doctor of Philosophy in Linguistics under the supervision of Dr. Jill Murray, a lecturer in Linguistics, the department of linguistics, Macquarie University (jill.murray@mq.edu.au, tel: +61 2 9850 9605). If you have any ethical concerns about this research, you can contact Ms. Xuan Le, lecturer of English at Hanoi University (Cell: +84 1666 517 695 – Email: ngocxuan1512@yahoo.com)

If you decide to participate, you will be asked to complete a questionnaire (in either online or paper form depending on your convenience), which collects data about your research experiences, your knowledge, assumptions and beliefs about doing research as a means of professional development. The questionnaire will take approximately 25-30 minutes to complete.

If you complete the questionnaire, you may also be invited to take part in a 30-minute follow-up interview, which will be audio-recorded to ensure an accurate record of what was said. In the interview, you will be asked to confirm or clarify some of the answers you gave in the questionnaire. As a small token of appreciation for participating in the interview, participants will receive 6AUD (100,000 VND equivalent).

Please indicate your willingness to participate in each part of the research project by ticking (✓) the boxes below.

☐ Yes, I would like to participate in the questionnaire survey.

☐ Yes, I would like to participate in the follow-up interview

(Please leave your contact details: Email: ……./ Phone:……)

Any personal details gathered in the course of the study are strictly confidential, except as required by law. No individual will be identified in any publication of the results. Quotes from your interview may be used in the dissertation or resulting publications but they will be de-identified. Only the researcher and her supervisor (My Truong and Dr. Jill Murray) can have access to the data. If you wish to have a summary of the findings, please contact My Truong at the email address given above.

Participation in this study is entirely voluntary: you are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence.

I, *(participant's name)* _____ have read and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in this research, knowing that I can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep.

Participant's Name:_____

(Block letters)

Participant's Signature: _____ Date:_____

Investigator's Name:_____

(Block letters)

Investigator's Signature: _____ ___ Date:_____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

(INVESTIGATOR'S [OR PARTICIPANT'S] COPY)

Appendix 4: Written consent form for department head interviews

Department of Linguistics
Faculty of Human Sciences
MACQUARIE UNIVERSITY NSW 2109
Phone: +61 (0) 2 9850 8740

Fax: +61 (0)2 9850 9199

Email: lingadmin@mq.edu.au

Chief Investigator's / Supervisor's Name & Title: ____Dr. Jill Murray_____

Participant Information and Consent Form

Name of Project: Considering teacher cognition and motivations in teacher research engagement: A case study of English language teachers at Vietnamese public universities

You are invited to participate in a study of English as a foreign language (EFL) teachers at Vietnamese public universities. The purpose of the study is to examine the current research practices among these teachers and how cognitive factors such as teacher attitudes, assumptions, knowledge and belief may affect such practices.

The study is being conducted by Ms. My Truong (thi-my.truong@students.mq.edu.au) to meet the requirements of the Doctor of Philosophy in Linguistics under the supervision of Dr. Jill Murray, a lecturer in Linguistics, the department of linguistics, Macquarie University (jill.murray@mq.edu.au, tel: +61 2 9850 9605). If you have any ethical concerns about this research, you can contact Ms. Xuan Le, lecturer of English at Hanoi University (Cell: +84 1666 517 695 – Email: ngocxuan1512@yahoo.com)

If you decide to participate, you will be asked to attend a face-to-face interview about the current status of teacher resarch engagement at your department and the current policies applied to support teacher research.

Any personal details gathered in the course of the study are strictly confidential, except as required by law. No individual will be identified in any publication of the results. Quotes from your interview may be used in the dissertation or resulting publications but they will be de-identified. Only the researcher and her supervisor (My Truong and Dr. Jill Murray) can have access to the data. If you wish to have a summary of the findings, please contact My Truong at the email address given above.

Participation in this study is entirely voluntary: you are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence.

I, *(participant's name)* _____ have read and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in this research, knowing that I can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep.

Participant's Name:_____

(Block letters)

Participant's Signature: _____ Date:_____

Investigator's Name:_____

(Block letters)

Investigator's Signature: _____ ___ Date:_____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

(INVESTIGATOR'S [OR PARTICIPANT'S] COPY)

Appendix 5: Written consent form for participants in the teacher motivation sub-study

Department of Linguistics
Faculty of Human Sciences
MACQUARIE UNIVERSITY NSW 2109
Phone: +61 (0) 2 9850 8740

Fax: +61 (0)2 9850 9199

Email: lingadmin@mq.edu.au

Chief Investigator's / Supervisor's Name & Title: ____Dr. Jill Murray_____

Participant Information and Consent Form

Name of Project: Considering teacher cognition and motivation in teacher research engagement: A case study of English language teachers at Vietnamese public universities

You are invited to participate in a study of English as a foreign language (EFL) teachers at Vietnamese public universities. The purpose of the study is to examine teachers' motivations to conduct research for professional development, and the factors that may sustain and erode such motivations.

The study is being conducted by Ms. My Truong (thi-my.truong@students.mq.edu.au) to meet the requirements of the Doctor of Philosophy in Linguistics under the supervision of Dr. Jill Murray, a lecturer in Linguistics, the department of linguistics, Macquarie University (jill.murray@mq.edu.au, tel: +61 2 9850 9605). If you have any ethical concerns about this research, you can contact Ms. Xuan Le, lecturer of English at Hanoi University (Cell: +84 1666 517 695 – Email: ngocxuan1512@yahoo.com)

If you decide to participate, you will be asked to participate in two interviews, which collect data about your motivations for conducting a research project; and write fortnightly guided diary for three months, which collect data about the progresses of the research project you are doing and the associated reasons, including the difficulties and support you have. Each interview will last about 30 minutes while each fortnightly diary entry will take you about 15 minutes to complete.

As a small token of appreciation for participating in the interviews and the diary writing, you will receive AUD 25 (300,000 VND equivalent) for each hour you spent on these two activities. A total of AUD 62.5 (750,000 VND equivalent) may be given to you if you complete all activities.

Any information gathered in the course of the study are strictly confidential, except as required by law. No individual will be identified in any publication of the results. Quotes from your interviews or diaries may be used in the dissertation or resulting publications but they will be de-identified. Only the researcher and her supervisor (My Truong and Dr. Jill Murray) can have access to the data. If you wish to have a summary of the findings, please contact My Truong at the email address given above.

Participation in this study is entirely voluntary: you are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence.

I, *(participant's name)* _____ have read and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in this research, knowing that I can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep.

Participant's Name:_____

(Block letters)

Participant's Signature: _____ Date:_____

Investigator's Name:_____

(Block letters)

Investigator's Signature: _____ ___ Date:_____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

(INVESTIGATOR'S [OR PARTICIPANT'S] COPY)

Appendix 6: The Questionnaire for Teachers – The English Version

Questionnaire

Dear English Lecturers,

Sincerely thank you for agreeing to participate in this survey, which should take you approximately ***15 minutes*** to complete, but is an ***essential*** part of PhD research project into "Vietnamese EFL teachers' research engagement and its relation to cognitive and motivational factors**"** carried out by Ms. Truong Thi My, from Linguistics Department, Macquarie University, Sydney, Australia.

There are ***no right or wrong answers*** in this survey; and your identity will be kept ***confidential*** at all times. For your responses to be of use for this research, please complete ***all***parts of this questionnaire.

Thank you for your generous contribution!

SECTION 1: TEACHER'S PERCEPTIONS OF RESEARCH

Please read each description below and write ONE number that best indicates the extent to which you feel the activity is an example of research, using the scale provided below.

Definitely not research	**Probably not research**	**Probably research**	**Definitely research**
1	**2**	**3**	**4**

11. _____A teacher noticed that an activity she used in class did not work well. She thought about this after the lesson and made some notes in her diary. She tried something different in her next lesson. This time, the activity was more successful.
12. _____A teacher read about a new approach to teaching writing and decided to try it out in his class over a period of two weeks. He video-recorded some of his lessons and collected samples of learners' written work. He analysed this information then presented the results to his colleagues at a staff meeting.
13. _____A teacher was doing a Master of Arts course. She read several books and articles about grammar teaching then wrote an essay of 6000 words in which she discussed the main points in those readings.
14. _____A university lecturer gave a questionnaire about the use of computers in language teaching to 500 teachers. Statistics were used to analyse the questionnaires. The lecturer wrote an article about the work in an academic journal.
15. _____Two teachers were both interested in discipline. They observed each other's lessons once a week for three months and made notes about how they controlled their classes. They discussed their notes and wrote a short article about what they learned for the newsletter of the national language teachers' association.
16. _____To find out which of the two methods for teaching vocabulary was more effective, a teacher first tested two classes. Then for four weeks she taught vocabulary to each class using different methods. After that, she tested both groups again and compared the results to the first test. She decided to use the method which worked best in her own teaching.
17. _____A headmaster met every teacher individually and asked them about their working conditions. The head made notes about the teachers' answers. He used the notes to write a report which he submitted to the Ministry of Education.
18. _____Mid-way through a course, a teacher gave a class of 30 students a feed-back form. The next day, five students handed in their completed forms. The teacher read these and used the information to decide what to do in the second part of the course.
19. _____A teacher trainer asked his trainees to write an essay about ways of motivating teenage learners of English. After reading the assignments, the trainer decided to write an article on the trainees' ideas about motivation. He submitted his article to a professional journal.
20. _____The Head of the English department wanted to know what teachers thought of the new course book. She gave all teachers a questionnaire to complete, studied their responses, the presented the results at a staff meeting.

SECTION 2: TEACHER'S SELF-EFFICACY BELIEFS

*Below is the list of different **activities** involved in the process of conducting a research study.*

*In the column **Level of Confidence**, please rate how confident you are that **YOU** are **ABLE** to do them **as of now** by recording a number from 0 to 100 for each activity using the scale given below:*

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					Moderately certain can do					Definitely certain can do

		Level of confidence
2.1	identifying and formulating research questions from my teaching practice or existing literature	
2.2	judging the scope of a research project based on the research questions	
2.3	selecting appropriate research methodology for a research question	
2.4	planning a research project	
2.5	identifying available sources of support (e.g. fund, guidance)	
2.6	identifying available sources of reference information (e.g. books, journals, library)	
2.7	evaluating the reliability of reference information (e.g. books, journal articles, websites)	
2.8	analysing, synthesizing, integrating difference sources of reference information	
2.9	Collecting sufficient data to answer a research question	
2.10	Processing and analysing data	
2.11	Using data management and analysis softwares (e.g. NViVo, SPSS)	
2.12	Writing an academic research report	
2.13	Delivering an academic oral presentation reporting the research results	
2.14	Finding a suitable way to disseminate the research results	
2.15	understanding typical research issues such as plagiarism, ethics, ownership of information.	
2.16	co-operating with other teachers to conduct a group research project.	

2.17	My overall ability to do research	

SECTION 3: TEACHERS' CONTEXTUAL BELIEFS ABOUT DOING RESEARCH

*Listed below are a number of institution **environmental support factors** that may have an impact on a teacher's goal of becoming an active researcher.*

*In the first column, please circle a number to indicate **the extent to which** you believe each factor will **enable YOU** to be more **research-active**. In the second column, please circle the letter(s) to indicate **the likelihood** that each factor is currently **available** to you in YOUR university, using the scale provided below*

Column 1

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

Column 2

Very unlikely	Somewhat unlikely	Don't know	Somewhat likely	Very likely
VU	SU	N	SL	VL

		Column 1 *To what extent do you **agree** that the following factors will **enable YOU to be research active?***	**Column 2** *How **likely** is it that these factors are **available** to you in your university/institution?*
3.1	Decreased teaching workload	1 2 3 4 5	VU SU N SL VL
3.2	Sufficient funding	1 2 3 4 5	VU SU N SL VL
3.3	Support from other teachers (e.g. guidance, coaching, informal discussions, co-operation in team research)	1 2 3 4 5	VU SU N SL VL
3.4	Strong research culture (e.g. most colleagues frequently do research or care about research)	1 2 3 4 5	VU SU N SL VL
3.5	Availability of research materials (e.g. books, journals)	1 2 3 4 5	VU SU N SL VL
3.6	Co-operation from learners (e.g. they are willing to provide data to your research)	1 2 3 4 5	VU SU N SL VL
3.7	Encouragement and support from employers (e.g. free research training workshops, financial rewards for research publications, travel grant to present at local/international conferences)	1 2 3 4 5	VU SU N SL VL
3.8	Research engagement is made compulsory.	1 2 3 4 5	VU SU N SL VL
3.9	Availability of opportunities to publish your research results (e.g. research conferences, teacher research symposium)	1 2 3 4 5	VU SU N SL VL
3.10	Adequate infrastructure (e.g. computers, software, internet, own working space)	1 2 3 4 5	VU SU N SL VL
3.11	Formal recognition for research engagement (e.g. research publications are made a criteria for promotion or salary increase)	1 2 3 4 5	VU SU N SL VL
3.12	Involvement of a senior academic supervisor/team leader	1 2 3 4 5	VU SU N SL VL
3.13	Sufficient quality of research evaluation committee	1 2 3 4 5	VU SU N SL VL
3.14	Reasonable and supportive research regulations (e.g. funding application process, format of published research)	1 2 3 4 5	VU SU N SL VL
	Others (Please specify):…… ……	1 2 3 4 5	VU SU N SL VL

SECTION 4: TEACHER'S ATTITUDES TOWARDS AND MOTIVATION FOR DOING RESEARCH

*Using the scale below, please circle one number to each statement to indicate the extent to which you agree it describes **what you think about research**:*

strongly disagree 1	**disagree** 2	**neutral** 3	**agree** 4	**strongly agree** 5

4.1	Doing research is good for my career	**1**	**2**	**3**	**4**	**5**
4.2	Research is helpful for me in my job	**1**	**2**	**3**	**4**	**5**
4.3	The skills and knowledge I may acquire from doing research will be helpful for me in the future	**1**	**2**	**3**	**4**	**5**
4.4	Research should be an indispensable part of my job as a university EFL teacher	**1**	**2**	**3**	**4**	**5**
4.5	Doing research scares me	**1**	**2**	**3**	**4**	**5**
4.6	Doing research is stressful	**1**	**2**	**3**	**4**	**5**
4.7	Doing research makes me nervous	**1**	**2**	**3**	**4**	**5**
4.8	Doing research is difficult	**1**	**2**	**3**	**4**	**5**
4.9	I enjoy doing research	**1**	**2**	**3**	**4**	**5**
4.10	I find doing research interesting	**1**	**2**	**3**	**4**	**5**
4.11	Doing research is pleasant	**1**	**2**	**3**	**4**	**5**

Section 5. What encouraged /would encourage you to do research?

Please circle the number that best indicates the degree to which each statement corresponds to YOUR own motivation of doing research, using the scale provided below:

Does not correspond at all 1	2	3	**Corresponds moderately** 4	5	6	**Corresponds exactly** 7

I do research because…..

5.1. It is a fundamental part of who I am	1	2	3	4	5	6	7
5.2. I enjoy doing research	1	2	3	4	5	6	7
5.3. Research helps me obtain career objectives that I feel important	1	2	3	4	5	6	7
5.4. I will feel bad if I don't do it.	1	2	3	4	5	6	7
5.5. Because I am required to do so.	1	2	3	4	5	6	7
5.6. Because I can earn financial rewards from doing it (e.g. extra income, promotion)	1	2	3	4	5	6	7
5.7. I don't know, I don't always see the reason for doing research	1	2	3	4	5	6	7

Others (please specify:_____)

SECTION 6: TEACHERS' RESEARCH ENGAGEMENT

IMPORTANT NOTE: In this section, please count ***ONLY*** the ***Research*** *you have done/may do as part of your professional practice, voluntarily or compulsorily, individually or collaboratively on topics related to your teaching. Do **NOT include** research into other areas not related to teaching and learning and/or conducted as a compulsory part of your formal degree (e.g. Master or PhD study).*

*Please respond to the questions below by ticking the boxes that best describe **your research experience**:*

6.1. Have you **ever** conducted research during your work as an EFL teacher?

Yes No (Please go directly to **question 6.10)**

6.2. In the past **5 years**, **how many** research projects have you conducted? _____ projects

6.3. How do you rate your level of research engagement?

Rarely Sometimes Frequently Very frequently

6.4. The **length** of the last research project that you conducted: _____year _____months

6.5. The **number of hours** per week on average you spent on the last research project you conducted?_____hours

6.6. The **scale** of your last completed research project:

Ministerial Institutional Faculty/Department Personal and informal

6.7. The **major aim** of the last research project you conducted:

To assess the effectiveness of a teaching method/ technique/ material.

To learn more about one aspect of learning or teaching (e.g. students' attitudes, teachers' motivation)

To uncover and solve a classroom problem

To produce/compile new teaching material

Others (please specify):_____

6.8. How did you **publish** the results of your last completed project? (You can choose MORE THAN ONE option)

Written report published in department research symposium

Oral Presentation at department formal meeting.

Sharing the results on social networking websites (e.g. Facebook, Blogs)

Sharing the report with other teachers in informal meeting.

Published in a domestic Journal/magazines/forum

Published in an international Journal/magazine/forum

Presentation at a research conference beyond Departmental level

Oral presentation to the Evaluation Committee.

Others (Please specify):_____

Not published at all

6.9 How do you describe your **research experience** so far? (Please tick ONE option)

All projects are individual

Most projects are individual

Half are individual and half are collaborative

Most projects are collaborative

All projects are collaborative

6.10 Do you **intend** to conduct any research project in the **future**?

Definitely won't Probably won't Don't know Probably will Definitely will

SECTION 7: BACKGROUND INFORMATION

1. **Name of the University** where you are working _____
2. Your **age** _____
3. **Gender**: Male Female Other

4. What best describes your **current employment status**?

Permanent

full-time long-term contract with the university (3 years and over)

fixed-term renewable contract with the University (1 year or less)

Casual teacher

5. **Years of experience** as an English language teacher: _____years _____months

6. Your **highest relevant qualification** to English language teaching:

Bachelor's Master's Doctorate Other

7. The **type of students** you teach the most often

students majoring in English language studies (e.g. ELT, Translation, etc.)

students not majoring in English language studies (e.g. Computer Science, Accounting, etc.)

8. How were you **formally trained** to conduct research during your formal degree studies? (You can tick **more than one** answer)

Writing graduation thesis (e.g. Master thesis)

Attending research methodology courses

Conducting student-led research projects

Others (please specify):

……..

Is it OK if I contact you about participating in a follow-up interview?

Yes (Please leave your contact details: Phone:…… /Email:……..)

No

Thank you for your precious time! The information you provided will of valuable use for this PhD research. Should you have any concerns/questions, please feel free to contact My Truong via +84 988037333 or email thi-my.truong@students.mq.edu.au/truongthimy85@gmail.com

Please return the completed questionnaire to My Truong.

THANK YOU FOR YOUR GENEROUS CONTRIBUTION!

Appendix 7: The Questionnaire for Teachers – The Vietnamese Version

PHIẾU CÂU HỎI

Kính gửi quý Thầy/Cô,

Xin chân thành cảm ơn quý Thầy/Cô đã đồng ý tham gia trả lời phiếu câu hỏi này.

Tổng thời gian để trả lời toàn bộ phiếu câu hỏi này là khoảng ***15 phút***; thông tin quý Thầy/Cô cung cấp là một phần ***quan trọng*** của đề tài Tiến sỹ "Ảnh hưởng của các yếu tố quan điểm và động lực lên việc tham gia nghiên cứu của giảng viên tiếng Anh tại các trường ĐH Công lập Việt Nam" do nghiên cứu sinh Trương Thị Mỹ, khoa Ngôn ngữ học, Đại học Macquarie, Sydney, Úc thực hiện.

Xin nhấn mạnh rằng ***không có câu trả lời đúng/sai*** trong phiếu câu hỏi này; và danh tính của quý Thầy/Cô sẽ luôn được ***bảo mật tuyệt đối***. Để phục vụ mục đính nghiên cứu, xin quý Thầy/Cô vui lòng cố gắng trả lời ***tất cả*** các câu hỏi của phiếu câu hỏi này.

Xin chân thành cảm ơn sự giúp đỡ quý báu của Quý Thầy/Cô!

PHẦN 1: CÁCH NHÌN CỦA GIÁO VIÊN VỀ "NGHIÊN CỨU"

Xin quý Thầy/Cô vui lòng đọc các tình huống dưới đây và viết số (vào chỗ trống có sẵn trước mỗi câu hỏi) mô tả tốt nhất mức độ các Thầy/Cô cảm thấy mỗi tình huống có phải là "nghiên cứu" hay không. Xin vui lòng sử dụng các thang số từ 1 đến 4 như mô tả dưới đây:

Chắc chắn không phải "nghiên cứu"	**Có thể không phải "nghiên cứu"**	**Có thể là "nghiên cứu"**	**Chắc chắn là "nghiên cứu"**
1	**2**	**3**	**4**

1. _____Một giáo viên (GV) nhận thấy hoạt động mà mình sử dụng trong lớp không hiệu quả. GVnày nghĩ về vấn đề này sau buổi học, và ghi chú vào nhật kí giảng dạy của mình. GV này thử một hoạt động khác vào buổi học sau đó. Lần này, hoạt động mới đã thành công hơn.
2. _____Một giáo viên (GV) đọc được một cách tiếp cận mới trong việc dạy môn Viết và quyết định thử nghiệm nó trong lớp của mình trong 2 tuần. GV này ghi hình lại một vài tiết học của mình và thu thập một vài bài viết của học sinh. GV này sau đó phân tích các thông tin thu thập được, và trình bày kết quả phân tích trong một buổi họp Khoa.
3. _____Một giáo viên đang theo học một khóa học Thạc sỹ. GV này đọc một vài quyển sách và bài báo về việc dạy ngữ pháp, sau đó viết một bài luận 6000 từ để bàn luận về các điểm chính trong các tài liệu này.
4. _____Một giáo viên (GV) phát phiếu câu hỏi về việc sử dụng máy tính trong việc dạy ngoại ngữ cho 500 GV khác. GV này sau đó sử dụng các phép toán thống kê để phân tích số liệu thu thập được. GV này sau đó viết một bài báo về toàn bộ quá trình này trên một tạp chí khoa học.
5. _____Hai giáo viên cùng quan tâm đến vấn đề kỷ luật trong lớp học. Họ dự giờ lẫn nhau 1 lần 1 tuần trong suốt 3 tháng và ghi chép về cách người kia quản lý lớp của mình. Họ thảo luận các ghi chép của mình và viết một bài báo ngắn về những điều họ học được cho Bản tin của Hiệp hội các giáo viên ngoại ngữ trong nước.
6. _____Để tìm ra phương pháp dạy từ vựng nào hiệu quả hơn trong 2 phương pháp có sẵn, một GV trước tiên kiểm tra toàn bộ học sinh của hai lớp. Trong 4 tuần sau đó, GV này dạy từ vựng cho hai lớp theo hai phương pháp khác nhau. Sau đó, GV này kiểm tra hai lớp một lần nữa và so sánh kết quả kiểm tra lần này với lần thứ nhất. Dựa vào kết quả thu được, Cô đã quyết định sử dụng phương pháp hiệu quả nhất cho mình.
7. _____Thầy hiệu trưởng tổ chức gặp mặt từng giáo viên một và hỏi họ về điều kiện làm việc. Thầy ghi chép lại các câu trả lời của giáo viên, và dùng ghi chép này để viết một báo cáo nộp lên Bộ Giáo dục.
8. _____Giữa khóa học, một giáo viên phát cho lớp học có 30 sinh viên của mình một bản đánh giá. Ngày hôm sau, 5 học sinh nộp lại bảng đánh giá đã điền thông tin hoàn chỉnh. Giáo viên này đọc những bản đánh giá này và dùng thông tin đọc được để ra quyết định sẽ làm gì trong phần còn lại của khóa học.
9. _____Trong một khóa đào tạo giáo viên, giảng viên yêu cầu các học viên của mình viết một bài luận về các cách tạo động lực học tiếng Anh cho học sinh ở lứa tuổi thiếu niên.Sau khi đọc các bài luận của học viên, giảng viên này đã quyết định viết một bài báo dựa trên ý tưởng từ các bài luận này về "động lực học ngoại ngữ", sau đó nộp bài báo này cho một tạp chí chuyên môn.

10. _____Một Trưởng khoa tiếng Anh muốn biết giảng viên khoa mình nghĩ gì về một bộ giáo trình mới. Cô phát cho toàn bộ giảng viên trong Khoa một bảng câu hỏi để trả lời, sau đó phân tích thông tin thu được, rồi trình bày kết quả ở một buổi họp Khoa.

PHẦN 2: MỨC ĐỘ TỰ TIN CỦA GIÁO VIÊN VỀ KHẢ NĂNG LÀM NGHIÊN CỨU

*Dưới đây là các **hoạt động** cụ thể có thể có trong quá trình làm nghiên cứu.*

*Trong cột **mức độ tự tin**, xin quý Thầy/Cô vui lòng viết một số mô tả tốt nhất mức độ Thầy/Cô tự tin vào **khả năng hiện tại của bản thân** trong việc thực hiện từng hoạt động, sử dụng thang đo lường từ 0 đến 100 cho sẵn dưới đây:*

0	10	20	30	40	50	60	70	80	90	100
Hoàn toàn không thể làm được					**Có thể làm được vừa phải**					**Hoàn toàn có thể làm được**

	Mức độ tự tin
2.1. Nhận diện và xây dựng câu hỏi nghiên cứu từ thực tế giảng dạy hay các tài liệu sẵn có	
2.2. Đánh giá phạm vi đề tài dựa trên câu hỏi nghiên cứu	
2.3. Lựa chọn phương pháp nghiên cứu phù hợp dựa trên câu hỏi nghiên cứu	
2.4. Lập kế hoạch thực hiện cho một đề tài nghiên cứu	
2.5. Xác định các nguồn hỗ trợ sẵn có (ví dụ: kinh phí, cố vấn)	
2.6. Xác định các nguồn tài liệu tham khảo sẵn có (VD: sách, tạp chí khoa học, trang web)	
2.7. Đánh giá được độ tin cậy của thông tin tham khảo (VD: sách, tạp chí khoa học, trang web)	
2.8. Phân tích, tổng hợp, sắp xếp các nguồn thông tin tham khảo	
2.9. Thu thập đủ số liệu cho một câu hỏi nghiên cứu	
2.10. Xử lý và phân tích số liệu	
2.11. Sử dụng các phần mềm quản lý và phân tích số liệu (VD: NVivo, SPSS)	
2.12. Viết báo cáo học thuật về kết quả nghiên cứu	
2.13. Thuyết trình kết quả nghiên cứu tại một hội thảo khoa học	
2.14. Tìm được cách phù hợp để công bố kết quả nghiên cứu	
2.15. Hiểu rõ các vấn đề điển hình trong việc làm nghiên cứu như đạo văn, đạo đức nhà nghiên cứu, quyền sở hữu các sản phẩm trí tuệ	
2.16. Hợp tác với các giáo viên khác trong nghiên cứu nhóm	

2.17. Khả năng làm nghiên cứu (nhìn chung) của quý Thầy/Cô	

PHẦN 3: ĐÁNH GIÁ CỦA GIÁO VIÊN VỀ CÁC YẾU TỐ ẢNH HƯỞNG ĐẾN MỨC ĐỘ LÀM NGHIÊN CỨU

*Dưới đây là các **yếu tố môi trường** có thể ảnh hưởng đến mức độ làm nghiên cứu của một giáo viên.*

*Trong cột thứ nhất, xin vui lòng khoanh tròn một số mô tả tốt nhất **mức độ đồng ý** của quý Thầy/Cô với việc từng yếu tố sẽ **giúp cá nhân Thầy/Côlàm nghiên cứu tích cực** hơn. Ở cột thứ hai, xin vui lòng khoanh tròn một chữ mô tả tốt nhất **mức độ sẵn có** của từng yếu tố trong trường/viện mà Thầy/Cô đang công tác.*

Xin sử dụng hai thang đo mô tả dưới đây:

Cột 1

Hoàn toàn không đồng ý	Không đồng ý	Không quyết định được	Đồng ý	Hoàn toàn đồng ý
1	2	3	4	5

Cột 2

Hoàn toàn không có	Có thể không có	Không biết	Có thể có	Chắc chắn có
CCK	CTK	O	CTC	CCC

	Cột 1	**Cột 2**
	*Quý Thầy/Cô **đồng ý** đến mức độ nào về việc mỗi yếu tố dưới đây sẽ **giúp bản thân quý Thầy/Cô tích cực làm nghiên cứu**?*	***Mức độ sẵn có** của từng yếu tố trong trường/viện mà quý Thầy/Cô đang công tác?*
3.1. Giảm giờ dạy	1 2 3 4 5	CCK CTK O CTC CCC
3.2. Đủ kinh phí làm nghiên cứu	1 2 3 4 5	CCK CTK O CTC CCC
3.3. Hỗ trợ từ đồng nghiệp (VD: hướng dẫn, cố vấn, hợp tác trong nghiên cứu nhóm)	1 2 3 4 5	CCK CTK O CTC CCC
3.4. Văn hóa làm nghiên cứu mạnh (VD: hầu hết các đồng nghiệp thường xuyên làm nghiên cứu, quan tâm đến nghiên cứu)	1 2 3 4 5	CCK CTK O CTC CCC
3.5. Nguồn tài liệu tham khảo sẵn có (VD: sách, tập san)	1 2 3 4 5	CCK CTK O CTC CCC
3.6. Hợp tác từ học viên (VD: sinh viên sẵn sàng tham gia cung cấp số liệu cho nghiên cứu)	1 2 3 4 5	CCK CTK O CTC CCC
3.7. Sự khuyến khích và hỗ trợ từ lãnh đạo (VD: tổ chức các khóađào tạo miễn phí về nghiên cứu, thưởng tiền cho mỗi nghiên cứu được công bố, hỗ trợ kinh phí tham gia hội thảo khoa học lớn)	1 2 3 4 5	CCK CTK O CTC CCC
3.8. Làm nghiên cứu trở thành nhiệm vụ bắt buộc	1 2 3 4 5	CCK CTK O CTC CCC
3.9. Sẵn có các cơ hội công bố kết quả nghiên cứu (VD: các hội thảo khoa học, kỷ yếu khoa học giáo viên)	1 2 3 4 5	CCK CTK O CTC CCC
3.10. Cơ sở hạ tầng đầy đủ (VD: máy tính, phần mềm, internet, chỗ làm việc riêng)	1 2 3 4 5	CCK CTK O CTC CCC
3.11. Có quy định chính thức về việc công nhận thành tích nghiên cứu (VD: thành tích nghiên cứu là một cơ sở để xem xét tăng lương hay bổ nhiệm)	1 2 3 4 5	CCK CTK O CTC CCC
3.12. Trưởng nhóm nghiên cứu là một giảng viên/chuyên gia có bề dày kinh nghiệm về nghiên cứu	1 2 3 4 5	CCK CTK O CTC CCC
3.13. Hội đồng nghiệm thu nghiên cứu có trình độ đủ cao	1 2 3 4 5	CCK CTK O CTC CCC
3.14. Các quy định chính thức về việc làm nghiên cứu (VD: quy trình xét duyệt kinh phí, nghiệm thu kết quả, định dạng của báo cáo khoa học) hợp lý và có lợi cho nhà nghiên cứu	1 2 3 4 5	CCK CTK O CTC CCC
Các yếu tố khác (Xin vui lòng viết rõ):…… ……	1 2 3 4 5	CCK CTK O CTC CCC

PHẦN 4: QUAN ĐIỂM VÀ ĐỘNG LỰC CỦA GIÁO VIÊN VỀ "NGHIÊN CỨU"

*Xin quý Thầy/Cô vui lòng khoanh tròn một số mô tả tốt nhất **mức độ đồng ý** của Thầy/Cô với mỗi câu thể hiện **quan điểm về việc làm nghiên cứu** sau đây. Xin vui lòng sử dụng thang số như mô tả dưới đây:*

Hoàn toàn không đồng ý	**Không đồng ý**	**Không quyết định được**	**Đồng ý**	**Hoàn toàn đồng ý**
1	**2**	**3**	**4**	**5**

4.1	Nghiên cứu có lợi cho việc phát triển sự nghiệp của tôi	**1**	**2**	**3**	**4**	**5**
4.2	Nghiên cứu giúp ích cho công việc giảng dạy của tôi	**1**	**2**	**3**	**4**	**5**
4.3	Kĩ năng và kiến thức tôi có thể học được từ việc làm nghiên cứu có thể có ích cho tôi trong tương lai.	**1**	**2**	**3**	**4**	**5**
4.4	Nghiên cứu nên là một phần không thể thiếu trong công việc của một giảng viên tiếng Anh	**1**	**2**	**3**	**4**	**5**
4.5	Tôi thấy sợ khi nghĩ đến "làm nghiên cứu"	**1**	**2**	**3**	**4**	**5**
4.6	Tôi thấy căng thẳng khi nghĩ đến "làm nghiên cứu"	**1**	**2**	**3**	**4**	**5**
4.7	Tôi thấy lo lắng khi nghĩ đến "làm nghiên cứu"	**1**	**2**	**3**	**4**	**5**
4.8	Tôi thấy "làm nghiên cứu" rất khó	**1**	**2**	**3**	**4**	**5**
4.9	Tôi yêu thích làm nghiên cứu	**1**	**2**	**3**	**4**	**5**
4.10	Tôi thấy "làm nghiên cứu" rất thú vị	**1**	**2**	**3**	**4**	**5**
4.11	"Làm nghiên cứu" mang lại cho tôi niềm vui	**1**	**2**	**3**	**4**	**5**

Phần 5: Động lực nào đã/có thể khuyến khích quý Thầy/Cô làm nghiên cứu?

*Xin vui lòng khoanh tròn một số mô tả tốt nhất **mức độ tương xứng** của các khía cạnh sau với **động lực làm nghiên cứu** của **bản thân** quý Thầy/Cô, sử dụng thang đo lường cho sẵn dưới đây:*

Hoàn toàn không tương xứng			**Tương xứng vừa phải**			**Hoàn toàn tương xứng**
1	**2**	**3**	**4**	**5**	**6**	**7**

Tôi làm nghiên cứu vì…..

5.1. Vì nghiên cứu đã trở thành một phần không thể thiếu trong cuộc sống của tôi	1	2	3	4	5	6	7
5.2. Vì tôi thích làm nghiên cứu.	1	2	3	4	5	6	7
5.3. Vì nghiên cứu giúp tôi đạt được những mục tiêu quan trọng trong sự nghiệp.	1	2	3	4	5	6	7
5.4. Vì tôi sẽ cảm thấy tồi tệ nếu không làm.	1	2	3	4	5	6	7
5.5. Vì tôi bị bắt buộc phải làm.	1	2	3	4	5	6	7
5.6. Vì tôi có thể được lợi ích về tài chính từ việc làm nghiên cứu (VD: thu nhập thêm, tăng lương, thăng chức)	1	2	3	4	5	6	7
5.7. Tôi không biết, tôi không hiểu vì sao mình phải làm nghiên cứu	1	2	3	4	5	6	7
Lý do khác (Xin vui lòng ghi rõ): _____	1	2	3	4	5	6	7

PHẦN 6: MỨC ĐỘ LÀM NGHIÊN CỨU

LƯU Ý QUAN TRỌNG: Trong toàn bộ phần 5 này, xin quý Thầy Cô vui lòng **CHỈ TÍNHnghiên cứu** mà Thầy/Cô đã hoặc sẽ làm như một hoạt động chuyên môn, tự nguyện hoặc bắt buộc, cá nhân hay theo nhóm, về những chủ đề liên quan trực tiếp đến chủ đề dạy và học. Xin Thầy/Cô **KHÔNG TÍNH** những nghiên cứu về các vấn đề nằm ngoài chủ đề dạy và học, và/hoặc làm như một phần bắt buộc của một bậc học của mình (VD: Thạc sỹ, Tiến sỹ)

Xin quý Thầy/Cô vui lòng trả lời các câu hỏi dưới đây bằng cách đánh dấu (✓) vào ô mô tả tốt nhất kinh nghiệm làm nghiên cứu của mình:

6.1. Quý Thầy/Cô **đã bao giờ** làm nghiên cứu trong quá trình làm giảng viên tiếng Anh chưa?

Rồi Chưa (Xin vui lòng đến thẳng câu **6.10)**

6.2. Trong **5 năm** vừa qua, quý Thầy/Cô đã hoàn thành **bao nhiêu đề tài** nghiên cứu? _____ đề tài

6.3. Quý Thầy/Cô **tự đánh giá mức độ** làm nghiên cứu của mình thế nào?

Hiếm khi Thỉnh thoảng Thường xuyên Rất thường xuyên

6.4. Quý Thầy/Cô làm đề tài gần nhất trong **bao lâu**? _____năm _____tháng

6.5. Quý Thầy/Cô dành trung bình **bao nhiêu giờ 1 tuần** cho đề tài gần nhất? _____ giờ/tuần

6.6. Đề tài gần nhất mà quý Thầy/Cô làm là đề tài **cấp gì**?:

Cấp Bộ Cấp Trường Cấp Khoa Cá nhân (không chính thức được xét duyệt)

6.7. **Mục tiêu chính** của đề tài gần nhất mà quý Thầy/Cô làm (Thầy/Cô có thể chọn **nhiều hơn 1** ô):

Để đánh giá hiệu quả của một phương pháp/hoạt động/tài liệu giảng dạy.

Để tìm hiểu thêm về một khía cạnh nào đó trong việc dạy và học (VD: thái độ học viên, động lực giáo viên)

Để tìm ra và giải quyết một vấn đề trong lớp học

Để biên soạn tài liệu giảng dạy

Mục đính khác (xin vui lòng viết rõ):_____

6.8. Quý Thầy/Cô đã **công bố** kết quả của đề tài gần nhất theo cách nào? (Thầy/Cô có thể chọn **nhiều hơn 1** ô)

Đăng bài trên kỷ yếu khoa học cấp Khoa
Trình bày miệng trong một cuộc họp nhân sự cấp Khoa.
Chia sẻ với các giáo viên khác trong các cuộc gặp gỡ không chính thức.
Chia sẻ trên các trang mạng xã hội (VD: Facebook, Blogs, vv.)
Đăng bài trên một tạp chí/tập san/diễn đàn trong nước
Đăng bài trên một tạp chí/tập san/diễn đàn quốc tế
Trình bày tại một hội nghị khoa học ngoài Khoa (cấp trường, cấp khu vực, vv.)
Trình bày trước Hội động Nghiệm thu công trình nghiên cứu khoa học
Cách khác (Xin vui lòng ghi rõ):_____
Không công bố dưới bất kì hình thức nào

6.9. Quý Thầy/Cô mô tả **hình thức** làm nghiên cứu của mình thế nào?

Tất cả các đề tài được làm một mình

Phần lớn các đề tài được làm một mình

Một nửa số đề tài được làm một mình; một nửa được làm theo nhóm

Phần lớn các đề tài được làm theo nhóm

Tất cả các đề tài được làm theo nhóm

6.10. Quý Thầy/Cô **có dự định** làm nghiên cứu trong tương lai không?

Chắc chắn không Có thể không Không biết Có thể có Chắc chắn có

PHẦN 6: THÔNG TIN CHUNG

9. **Tên trường/viện**nơi quý Thầy/Cô đang công tác: _____

10. **Tuổi** quý Thầy/Cô _____

11. **Giới tính**: Nam Nữ Khác

12. **Diện tuyển dụng** hiện tại?

Biên chế

Hợp đồng dài hạn với nhà trường (3 năm trở lên)

Hợp đồng ngắn hạn với nhà trường (từ 1 năm trở xuống)

Giảng viên mời giảng

13. **Số năm** kinh nghiệm: _____Năm _____Tháng

14. **Bằng cấp cao nhất** (liên quan đến giảng dạy tiếng Anh):

Cử nhân Thạc sỹ Tiến sỹ Khác

15. **Đối tượng sinh viên** quý Thầy/Cô giảng dạy **thường xuyên nhất**:

Sinh viên chuyên tiếng Anh (VD: Sư phạm tiếng Anh, Phiên dịch tiếng Anh)

Sinh viên không chuyên tiếng Anh (VD: Công nghệ thông tin, Kế toán,vv.)

16. Quý Thầy/Cô được **đào tạo chính quy**về kỹ năng nghiên cứu như thế nào? (Thầy/Cô có thể chọn **nhiều hơn 1** phương án)

Viết luận văn (VD: Luận văn tốt nghiệp Đại học, Luận văn Thạc sỹ)

Tham gia các khóa học bắt buộc về phương pháp nghiên cứu

Làm nghiên cứu khoa học sinh viên

Các hoạt động khác (Xin vui lòng viết rõ):

……

Chưa từng tham gia loại hình đào tạo chinh quy nào về nghiên cứu

Quý Thầy/Cô có sẵn lòng trả lời phỏng vấn thêm về một vài thông tin trong bảng câu hỏi này không?(Thầy/Cô hoàn toàn có thể từ chối tham gia tại thời điểm được liên lạc)

Có (Xin vui lòng để lại thông tin liên lạc: Phone:……

/Email:……)

Không

Cảm ơn quý Thầy/Cô đã dành thời gian trả lời phiếu câu hỏi này. Các câu trả lời của quý Thầy/Cô sẽ là nguồn thông tin quý giá đối với đề tài nghiên cứu này. Nếu quý Thầy/Cô có bất kỳ câu hỏi nào liên quan đến phiếu câu hỏi, xin liên hệ với nghiên cứu sinh Trương Mỹ theo số điện thoại +84 988 037 333, hoặc email thi-my.truong@students.mq.edu.au / truongthimy85@gmail.com . ***Xin vui lòng gửi lại phiếu câu hỏi đã được trả lời cho nghiên cứu sinh Trương Mỹ.***

CHÂN THÀNH CẢM ƠN SỰ HỢP TÁC CỦA QUÝ THẦY/CÔ!

Appendix 8: Sample follow-up interview questions for teachers

1. You chose “definitely research” for scenario 1, can you explain why?
2. You chose “definitely not research” for scenario 6, can you explain why?
3. Can you give a definition of “research” in your opinion?
4. Can you describe one piece of research that you have conducted before?
5. What are the difficulties facing you when you do research at your department/institution?”
6. How important do you think research engagement is to your professional development? Why?

Appendix 9: Sample interview questions for heads of departments

1. Could you please list all the measures that the department is adopting to encourage teacher research engagement?
2. In you opinion, how important is doing research to a tertiary EFL teacher?
3. What is the current status of teacher research engagement at your department?
4. Are you satisfied with such state?
5. What do you think are the difficulties facing teachers at your department when they engage in research?
6. As a department leader, do you wish that your staff will do more research?
7. Do you plan to apply any other policies in the future to encourage teachers at your department to do research?

Appendix 10: Interview questions for teachers of the motivation sub-study

Interview 1 (At the beginning of the data collection process)

General background information questions	1. What is your highest relevant degree to English language teaching?
	2. How many years have you been teaching English?
	3. Have you ever conducted research for professional development before? If yes, how many projects have you completed so far?
	4. How long have you been doing the current research project?
	5. What is your highest relevant qualification to English language teaching? Have you received any formal training on doing research?
The initial motivations for doing research	6. What is your initial motivation for starting the research project you are doing?
	7. What do you think are your initial advantages and difficulties?
	8. What is the major aim/topic of the research project?
	9. Why did you choose to focus on that aim/topic?
	10. Do you believe you can finish the project according to your plan?

Interview 2 (3 months after Interview 1 and at the end of the data collection process)

General flections about the 3-month process of doing research	1. What do you think about your research experience in the last three months?
	2. In general, are you satisfied with your current progress in the project?
	3. What have you gained from doing the research in the last three months?
	4. What are the main factors that contributed to your progress?
	5. What are the most notable difficulties you have faced?
	6. In general, do you feel more motivated to do research in the future?
Intention of doing research in the future	7. Do you intend to do another research project? When is the earliest?

Appendix 11: Guided Diary Entry for Participants of the Motivation Sub-study

Name:……

Date:……

1. **Overall progress**: (please circle the number that corresponds to your level of satisfaction about the current progress of your project)

Very unsatisfied						Very satisfied
1	2	3	4	5	6	7

2. **How many percents of the goals of the last two weeks have been achieved?**

3. **What has helped you attain these goals?**

4. **What are the <u>difficulties</u> you have <u>faced but successfully overcome</u> to achieve these goals?**

5. **Are there any goals you planned to achieve but did not? Yes/No**

6. **If yes, what prevented you from achieving these goals?**

7. **Are you planning to continue the project?**

Definitely won't	Probably won't	Don't know	Probably will	Definitely will

8. **What are the factors that keep you in or make you leave the project?**

9. **What do you enjoy the most in the project in the last two weeks?**

10. **What do you NOT like the most in the last two weeks?**

11. **How has your motivation for the project been affected at this point?**

Decrease significantly	Decrease slightly	Remain the same	Increase slightly	Increase significantly