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Enterprise Social Media: An investigation into the driving factors and the extent of use of the social media technology, Workplace by Facebook, in a large technology organisation

By

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A dissertation submitted in partial fulfilment of requirements for the degree
of Master of Research in Management

October 2018

Abstract

The phenomenon of social media has taken hold in the 21st century, as people move their social networks online, expanding and enhancing them. Social media has also extended to the organisation and co-workers ‘connect’ using social media software. In recent years, social media technologies have also been used to support communications and collaboration between co-workers within organisations. This study examines the use of one such technology, Workplace by Facebook, which replicates the operation and function of Facebook for work-related rather than purely social, purposes. Using survey data from employees, the Workplace application data, and semi-structured interviews, this thesis explores the extent of its use among staff in a large technology organisation and analyses what has driven that use.

This study argues that the organisation’s use of social media has the same factors of use and drivers as other organisational technologies. The study adopts a mixed-methods approach of quantitative and qualitative techniques. The Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, Morris, Davis, & Davis, 2003) is employed, and a survey was conducted based on that model. Further insights were gained from data collected in ten semi-structured interviews.

The study finds that the predictors derived from the UTAUT relate closely to the use of social media by the individuals in the organisation. The study therefore suggests that social media use in the workplace has similar drivers to those of traditional enterprise technology. In addition, findings suggest additional factors influence the use of enterprise social media, particularly factors based on external rather than internal social influence. This is a new and different aspect of organisational social media use compared to traditional enterprise technologies.

Acknowledgment

My grateful thanks are due to everyone who helped in the completion of this document.

To Paul for his supervision; your relaxed personal style and witty insights made this a journey rather than a trial. My husband, Greg, provided the pride and support necessary to every graduate student. Robin, to have a friend that understands the journey and provides wisdom in the friendship - I am very grateful. Tracy, who set me on my first successful career path, and now again on my second - thank you. My parents' continuing support has also been indispensable. Rose, for your loyal and continued unwavering support, thank you - I could not have completed this without you. To the many unnamed family, friends and support staff from the university, thank you.

Science and technology revolutionize our lives, but memory, tradition, and myth frame our response.

---Arthur Schlesinger

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.

Candidate: Jacqueline Dinklo

Signed: 

Date: 30th of November 2018

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Chapter 1 Introduction

This chapter introduces the research, establishes the area of research and identifies the research problem and how it will be addressed. There are six sections to this chapter. Section one provides the background to the research. Section two identifies the research problem, purpose and contribution. Section three offers the justification for this research. Section four identifies the methodology used in to answer the research questions. Section five discusses the limitations of the scope and key assumptions in the research. Sections six presents the conclusion.

1.1 Background to the Research

Social media is currently one of the most accessed technologies on the Internet (Pang, 2018), enabling people to connect and share content. The world's top three websites by use are Google, Youtube, and Facebook (Alexa.com, 2018). Two of these sites, Youtube and Facebook, are classified as social media sites (Ellison, 2007). The Facebook social media internet site was launched in 2004, to "bring the world closer together" (Facebook, 2017). Facebook reports there are 2.23 billion monthly active users as at June 2018, with 1.47 billion people using Facebook daily (Facebook, 2018a).

While social media was primarily developed and adopted for personal and social use, organisations increasingly use social media to enhance interaction with customers: 60 million companies have a Facebook page (Chaykowski, 2016). More recently, social media is taken up by organisations to enhance internal communications and information sharing (Kane, 2015; Leonardi, 2015a; Riemer, Overfeld, Scifleet, & Richter, 2012; M. Smith, Hansen, & Gleave, 2009; Treem & Leonardi, 2013). Its use alongside existing traditional communication and collaboration technologies in the organisation is now an accepted organisation technology known as enterprise social media (Leonardi, 2013). Metrics on enterprise social media expenditure are limited, but revenue for 2016 was forecast to exceed US\$1.2 billion (Statista, 2015). In 2018, organisations are forecast to spend \$US 3.7 trillion on information technology, with enterprise software increasing by 11.1 % from the previous year (Gartner, 2018).

To take advantage of opportunities within the business domain, Facebook launched a dedicated enterprise social media product in 2016, known as ‘Workplace by Facebook’ (WbF). Facebook describe the application as an “Online team collaboration tool using Facebook features for work” (Facebook, 2016) and reports 30,000 companies using the application (FacebookWorkplace, 2018). Unlike the public social media version of Facebook, this enterprise version is administered within the host organisation. Thus organisations control who can post, comment, share, and access information, avoiding the Facebook security concerns.

Given the costs associated with enterprise social media, organisations are keen to see benefits from these new technologies (Khechine, Lakhal, & Ndjambou, 2016). However, unlike traditional enterprise technologies which have specific operational purposes and needs, enterprise social media technologies play a more general role in intra-organisational collaborative and communication. In particular, benefits of enterprise social media are linked to the frequency and effectiveness of their use. This research, therefore, seeks to explore the drivers of employee use of Workplace by Facebook (WbF).

1.2 Research Problem, Purpose and Contributions

The research problem addressed in this research is stated below.

What are the drivers of use of the enterprise social media, Workplace by Facebook? How can variations in use be explained, and what factors increase employees’ acceptance and use in a large technology organisation?

This study has defined ‘use’ as the Workplace by Facebook (WbF) functions of ‘Liking’, ‘Commenting’ and ‘Posting’. This research draws on Venkatesh et al.’s Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) which identified the following factors: performance expectancy; attitude; effort expectancy; social influence; age, and sex. An industry report on enterprise social media use (LockLee, 2018) also identifies individuals’ management level as another determinate in enterprise social media use. These eight factors and three usage metrics identify influences and variances and the following specific research questions

will be answered to determine whether these factors really do drive an organisation's use of Workplace by Facebook:

- 1. To what extent is employees' use of WbF related to factors of performance expectancy, attitude, effort expectancy, and social influence?*
- 2. Is the management level of the employees a factor in the use of WbF?*
- 3. Does the personal use of Facebook correlate to WbF use?*
- 4. Does age have an impact on WbF use?*
- 5. Does sex have an impact on WbF use?*

The contributions from this research are both theoretical and practical. The theoretical framework of UTAUT is applied to enterprise social media, and practical implications of this research extend to the organisation, the developers of the enterprise social media software, and individuals in the organisation. Insights generated will help to tailor strategies for organisations to increase their use of enterprise social media, developers to improve the product, and for individuals benefits from enterprise social media.

1.3 The justification for the Research

Enterprise social media is one of the newest technologies available to the organisation and is rapidly expanding in terms of both benefits and dimensions. Yet to date, limited research has been conducted in this area (Schubert & Glitsch, 2016), and so this research extends the current literature on enterprise social media use by investigating a large organisation which has implemented WbF.

To date there is little research that identifies what drives the increasing use and acceptance of this software (Leonardi, 2013; Leonardi & Neeley, 2017). Industry metrics identify much scope for increasing workplace use of social media, as only 54% of employees use it (LockLee, 2018). The application of this research's findings can be used to enhance productivity by increasing the effectiveness and efficiency of workplace social media.

1.4 Methodology

A mixed-methods approach is taken in this research, using both quantitative and qualitative methods for data collection and analysis. The Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) is a widely accepted model in understanding the adoption and use of technology and innovation (Khechine et al., 2016; Taiwo & Downe, 2013; Wu & Du, 2012). The use of this model in existing literature is discussed in Chapter 2, and the modifications to it for this study are outlined in Chapter 3. Objective usage data from WbF is also used in the quantitative analysis and is outlined further in Chapter 3 along with discussion of semi-structured interviews as the qualitative methods.

1.5 Limitations of the Scope and Key Assumptions

A number of limitations are immediately evident: the study is limited to a single organisation, and Workplace by Facebook is just one of several popular enterprise social media available. Nevertheless, the location and organisation are typical of organizations in the anglophone developed world and the application, Workplace by Facebook, is typical of enterprise social media technologies.

1.6 Conclusion

This research concludes that individuals' use of enterprise social media is influenced by some of the same factors as other enterprise technology systems. That is, that drivers associated with the UTAUT, are relevant in understanding the use of WbF. However, the use of WbF is also influenced by personal experiences and attitudes associated with personal social media, Facebook.

This chapter has established the foundations of this study. It has introduced the research problem and identified the contributions that the thesis will make to the body of existing research. The methodology for the research has been established along with the reasons for its use. On these grounds, the Master of Research thesis will proceed.

Chapter 2 Literature Review

This chapter reviews the major literature on social media use within organisations, particularly the factors that drive and influence this use. This chapter has five sections. Section one reviews the literature on enterprise social media: its history, definition, and evolution in the organisation. Section two reviews literature on the benefits of enterprise social media. Section three reviews the drivers of organisational and individual use of traditional enterprise information systems. Section four reviews the theory used in the investigation of social media, enterprise social media, and technology use within organisations. Section five outlines and discusses the hypotheses in this study.

2.1 Evolution of Enterprise Social Media

To understand the concept of social media, many researchers have provided various definitions (Ellison, 2007; Kaplan & Haenlein, 2010; Rooksby et al., 2009; Schniederjans, Cao, & Schniederjans, 2013). The common themes of these definitions centre on two components: first is the evolution of the Internet and the invention of hardware and software with the capacity to support the Internet's functions. The second is the software functionality allowing users to create and share content with any other registered user. Some researchers' definitions of social media include email and document sharing technologies (Kaplan & Haenlein, 2010). However, email and document sharing systems are generally seen as collaboration systems and therefore different to social media, so they are not included in the category (Ellison, 2007; Leonardi, 2013). Email technologies require the naming of the recipient of the email, however social media 'posts', 'comments' and 'likes' are general unnamed and potential unknown recipients.

Social media's popularity derives from a fundamental human need to associate with others and to form relationships (Karahanna, Xu, Xu, & Zhang, 2018). Social media connects people already known to each other and allows them to connect with those who have similar interests (Chui et al., 2012; Ellison, 2007) Using social media and connecting with people fulfills a human need for belongingness (Gangadharbatla, 2008; Tardini & Cantoni, 2005). Social media easily

facilitates the ability to connect with, or ‘friend’ someone (Ellison, Vitak, Gray, & Lampe, 2014) and use this connection to widen the social circle.

Skeels and Grudin (2009) show that social networking sites first started appearing before the start of the 21st century: SixDegrees.com was launched in 1997 (Ellison, Gibbs, & Weber, 2015), and popular sites early in this century include Friendster launched in 2002, Myspace 2003 and Facebook 2004 (Ellison, 2007). Early challenges for social networking sites included lack of robustness in the technology to support the service, and the insufficient volume of users with adequate internet access and knowledge (Ellison, 2007). Social media sites which have met the needs and demands of users by embracing technology improvements have grown exponentially (Chui et al., 2012).

It is almost two decades since current social media sites have been identified as unique technologies; and accordingly, social media technologies are now used and researched in the workplace. Skeels and Grudin (2009) suggest that social media moved into the workplace as students moved from the university to the workplace, as students are identified as the early adopters and high users of social media. The integration of work and social lives could also contribute to the convergence of social and workplace networks (Rooksby et al., 2009). Charoensukmongkol (2014) notes that the first significant research on social media in the workplace was Moqbel, Nevo, and Kock (2013), although many studies were published during the same period (Gardner, 2013; Leonardi, 2013; Leonardi, Huysman, & Steinfield, 2013; Meske & Stieglitz, 2013).

The launch of the Apple iPhone in 2007 (Apple, 2007) followed by other smartphones, made social media even more accessible to the individual: it could now be accessed at work by employees (Raento, Oulasvirta, & Eagle, 2009). This personal access via mobile telephones removed the control of access to social media from the organisation and allowed further adoption.

Investigating the extent of social media use in the organisation, Frampton and Child (2013) found 86.4% of employees had received a social media friend request from a co-worker, 90.5 %

had accepted the friend request. Weidner, Wynne, and O'Brien (2012) advise that 25% of people are connected via social media with their direct manager, and 60% have one or more co-workers as their friends. To accommodate co-worker networks, social media sites have been established with the sole purpose of connecting co-workers. Research has calculated that 72% of organisations use social media to communicate with employees (Leonardi & Neeley, 2017). Social media technologies are now available for use and supported within the organisation, to further facilitate co-worker connections.

Leonardi et al. (2013) defined the term Enterprise Social Media (ESM) as:

Web-based platforms that allow workers to (1) communicate messages with specific co-workers or broadcast message to everyone in the organisation; (2) explicitly indicate or implicitly reveal particular co-workers as communication partners; (3) post, edit, and sort text and files linked to themselves or others; and (4) view the messages, connections, text, and files linked to themselves or others; and (4) view the messages, connections, text, and files communicated, posted, edited and sorted by anyone else in the organisation at any time of their choosing (Leonardi et al., 2013, p. 2).

2.2 Enterprise Social Media Use

Investigations of the use of enterprise social media have identified two main functions. The first is to develop and maintain relationships; the second is receiving or giving information (Schmidt, Lelchook, & Martin, 2016). Through the use of the enterprise social media relationship and the sharing of information, weak ties between people can be made stronger (Ellison, 2007). Borgatti, Everett, and Johnson (2018) advise that social media networks are no different to any other network in that they are established for the benefit of the people in them.

Variances in usage levels of the social media outside the organisation are driven by individual's socio-psychological attributes (Ngai, Tao, & Moon, 2015; Rogers, 2010; Ross et al., 2009). Many studies identify extroversion and the need for popularity as a driver for high usage of social media (Blackwell, Leaman, Trampusch, Osborne, & Liss, 2017; Correa, Hinsley, & De

Zuniga, 2010; Hughes, Rowe, Batey, & Lee, 2012; Seidman, 2013; Utz, Tanis, & Vermeulen, 2012). The individual's self-esteem is also a strong predictor of Facebook use (Ellison et al., 2014; Krämer & Winter, 2008). Limited research has been conducted on the drivers between co-workers in organisations, as it is a relatively new technology.

The demographic factor of gender has also been identified as influencing the use of social media outside of the workplace (Ahmadi, Khanagha, Berchicci, & Jansen, 2017). Earlier studies (Correa et al., 2010) identify younger adults and females as more likely to use social media. More recent investigations, represented in Table 1, identify that the usage of social media is still influenced by sex in 2018. However, in a review of the career networking social media service, LinkedIn, there was little difference in the level of use between men and women. Facebook, a more personal social media site, was used eight percent more by females than males (A. A. Smith, M, 2018).

Table 1 Social Media Usage in USA at March 2018

	Facebook Use	LinkedIn Use
Gender		
Men	62%	25%
Woman	74%	25%
Age		
18 - 29	81%	29%
30 - 49	78%	33%
50 – 64	65%	24%
65+	41%	9%

Pew Research Center, Social Media Use in 2018, (A. A. Smith, M, 2018)

Table 1 also reveals a difference across age categories: young adults, 18- 29 years of age are more likely to use Facebook, while use of LinkedIn is highest for adults 30 to 49 years of age. Both Facebook and LinkedIn report that adults over the age of 65 years have the lowest level of usage. While these areas of age and sex are popular in the study of general social media, little research has been published on age and sex influence on levels of use in enterprise social media. Venkatesh et al. (2003) argue that age and gender are indeed significant, while others suggest that it is not (Dwivedi, Rana, Jeyaraj, Clement, & Williams, 2017).

2.3 Benefits of Enterprise Social Media Use

Influences on individuals' use of social media in the workplace are unclear but recent academic research has identified many benefits of enterprise social media use. Primarily, it is seen to increase productivity (Alimam, Bertin, & Crespi, 2015); indeed, Chui et al. (2012) identify potential productivity increases between co-workers of between 20% and 25%. This increase is based on the increased communication which enterprise social media facilitates (Kwahk & Park, 2016; Leonardi et al., 2013) and may be related to the relationships and collaboration between co-workers which it enables (Ellison et al., 2014; Meske & Stieglitz, 2013; Treem & Leonardi, 2013). Research into social media as an organisational tool is expanding too (Bharati, Zhang, & Chaudhury, 2015; Duan, 2013; Ellison, 2007; Leonardi & Vaast, 2017; Vitak, Lampe, Gray, & Ellison, 2012).

Social networks in the workplace had long existed before the technology that supported them – social relationships between people are crucial to organisational function, as they facilitate end-oriented collaboration (Cross, Cross, & Parker, 2004). Collaboration is the key to solving complex problems like those problems found in the workplace (Gajda & Koliba, 2007). Improved economic and financial status correlate highly with those who have more diverse social networks in general (Stopczynski et al., 2014). Burt (2004) suggests that co-workers with more connections between groups collaborate and innovate more effectively, thus bringing higher value to the organisation. Tasselli, Kilduff, and Menges (2015) advise that it is the co-evolution of individual and social networks which produce the benefits and characteristics of networks in organisations.

Collaboration between individuals in the organisation can also be improved via the use of enterprise social media (Leonardi & Neeley, 2017) as co-workers draw on their relationships to obtain resources to fulfill their work tasks (Ellison et al., 2014). Enterprise social media can also improve learning through these relationships within the workplace (Bharati et al., 2015; Shepherd, 2011). Social media in the workplace also increases knowledge management, including organisational learning (Bharati et al., 2015; Giboney, Briggs, & Nunamaker Jr, 2017; Leonardi,

2015b). Enterprise social media can aid in connecting diverse sources, hence aiding knowledge creation (Kane, 2015). Bharati et al. (2015) have shown that knowledge quality in the organisation is positively impacted when it is also managed and supported by the organisation. Some research has identified that “enterprise social media provides a unique complement to traditional strategic knowledge management” (Archer-Brown & Kietzmann, 2018b, p. 2). Leonardi et al. (2013) describe two types of learning: instrumental knowledge, and meta-knowledge, which result from the use of social media in the organisation.

Another significant area of research into social networks is that of social capital (Borgatti & Foster, 2003; Ellison, 2007; Pang, 2018). Social capital in the network is the asset which individuals obtain from having a connection with another in the network (Kwon & Adler, 2014). Relationships between individuals are valuable for information-sharing in both economic and non-economic terms (Coleman, 1988). Social capital can be highest where the person is part of a close network group but is also a member of, or connected to, other close network groups (Burt, 2004). Social Media and Facebook are efficient methods to build social capital as they require minimal effort to create and maintain relationships (Ellison et al., 2014).

The presence of social networks such as Facebook in the workplace correlates positively to job satisfaction and job performance (Charoensukmongkol, 2014; Hanna, Kee, & Robertson, 2017). Co-workers leveraging relationships in the organisation have higher performance levels (Huang, Singh, & Ghose, 2015) likely because their performance has been enhanced through social media’s knowledge-sharing functions (Archer-Brown & Kietzmann, 2018a).

While the organisation can benefit from enterprise social media, so too can individuals, despite different motivations for participation (Huang et al., 2015). Positive reactions to comments on social media improved feelings of self-esteem and wellbeing (Valkenburg, Peter, & Schouten, 2006). Schmidt et al. (2016) propose that enterprise social media can assist with an individual’s ability to manage their professional impression and profile within the organisation and Ellison et

al. (2015) have shown how enterprise social media can assist employees meeting their professional and professional objectives.

2.4 Traditional Enterprise Management Systems Use

We can compare existing enterprise applications such as enterprise collaboration systems with enterprise information systems. Similarities and differences exist between these three types of organisational technologies: differences include the maturity of the technology, its function, and its implementation in the organisation. The advent of enterprise information systems had a major impact on organisations in the 1990's, enabling integration of departmental processes through their use (Panetto & Cecil, 2013). Enterprise information systems can be defined as “commercial software packages that enable the integration of transaction-oriented data and business processes throughout an organization” Markus and Tanis (2000, p. 176). Now in their fourth decade, enterprise information systems have a maturity within organizations which allows fruitful comparisons with enterprise social media systems just out of their first decade of use.

Traditional organisational technology structures the processes and operations of the organisation, compared with enterprise social media applications which are inherently flexible, voluntary and undefined in operation and process. Fui-Hoon Nah, Lee-Shang Lau, and Kuang (2001, p. 286) reveal the benefits of enterprise information systems, arguing that they deliver “improved processes and decreasing of cost” for the organisation (2001, p. 286). Enterprise information systems construct rules about processes and “preserve these rules by constraining the actions of human agents” (Gosain, 2004, p. 151). Because of their automation, enterprise information systems unify business process, and through their mandated use, limit operational variations (Gosain, 2004). Enterprise information systems are complex and require many aspects of training, support and job function changes to implement them successfully (Sykes & Venkatesh, 2017). Alternatively, enterprise collaboration systems are unstructured and more voluntary (Schubert & Glitsch, 2016).

By contrast, enterprise collaboration systems are defined as “technologies... provided for the functions of communication, cooperation, content, coordination or facilitating ‘joint work’ (Schubert & Glitsch, 2016, p. 44). While social media use has some of the features of enterprise collaboration systems, Leonardi et al. (2013) and Archer-Brown and Kietzmann (2018a) argue that social media differs from other workplace collaboration technology such as email and should not be categorised together. Alternately, Alimam, Bertin, and Crespi (2017) argue that enterprise social media should not be distinguished from other organisational software applications.

All organisational technology can be subject to varying outcomes in achieving the goals of its implementation. Success or failure can be attributed to the use or non-use of the system by staff within the organisation (Markus & Tanis, 2000). Understanding the influences that determine the use of technology can be critical in achieving the advantages that can be obtained from the technology (Wagner, Beimborn, & Weitzel, 2014). A great deal of research has been carried out on the use of technology due to the expenditure by organisations on enterprise systems (Gartner, 2018; Venkatesh et al., 2003) and the value that can be obtained by their use (Markus & Tanis, 2000). While organisations can implement technologies, if employees are not using them as required, the expected outcomes from the technology will not be achieved (Kane, 2015).

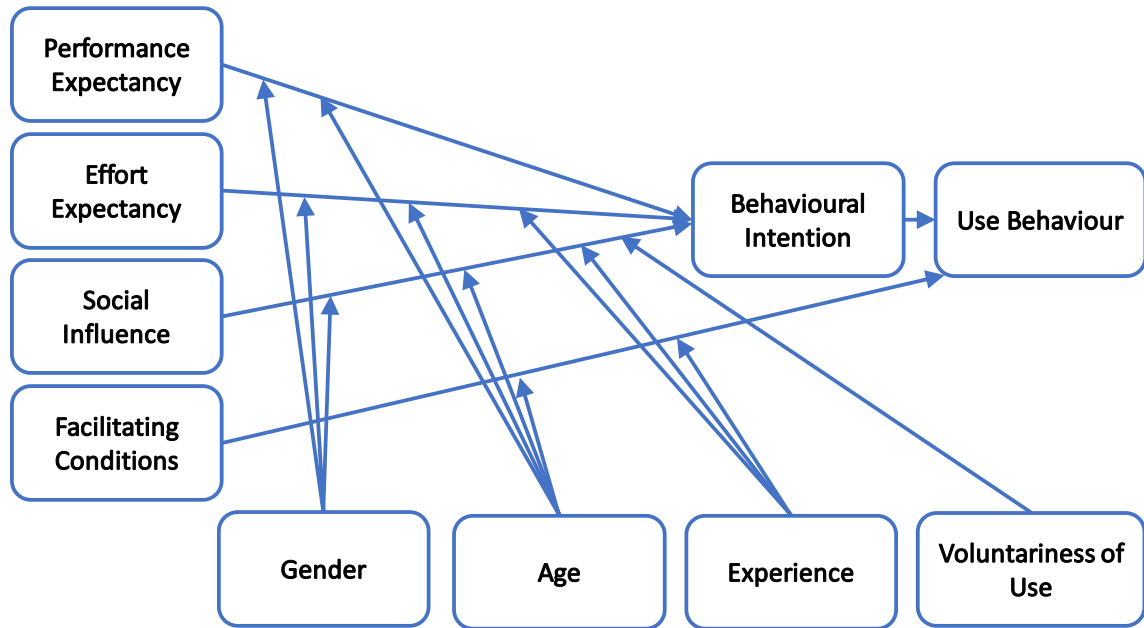
The implementation of enterprise collaboration systems evolved, and they have been used on a voluntary basis (Kuettner, Diehl, & Schubert, 2013). However, training is critical to the use for both enterprise information systems (Fui-Hoon Nah et al., 2001) and enterprise collaboration systems (Schubert & Glitsch, 2015). Goodhue and Thompson (1995) identify how well the technology meets the required task as a major driver for the use of enterprise systems. Kuettner et al. (2013) show that leadership and management support was critical to the technologies’ broader use in the organisation. The staff advice network, therefore, cannot be separated from the general use of enterprise systems (Sykes & Venkatesh, 2017).

We can therefore see that common influences such as the support of management, the task-fit, and the co-worker influences all have an impact on the use of all enterprise technologies.

2.5 Investigating the Use of Enterprise Social Media with Theory

As enterprise social media is a new technology within the organisation, limited frameworks exist for the study of its use and further study is required (Leonardi, 2013; Sykes & Venkatesh, 2017; Venkatesh et al., 2003). Of the existing theories, Venkatesh et al.'s Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) is a widely accepted and the most accurate predictive model in understanding the adoption and use of technology and innovation (Khechine et al., 2016; Taiwo & Downe, 2013; Wu & Du, 2012) since it successfully explains 70% of variances in behavioural intention (Venkatesh et al., 2003). The model combines eight existing models for predicting technology use (Venkatesh et al., 2003) and over 525 studies have used the UTAUT model to explain the use of technology and information systems (Dwivedi et al., 2017).

Figure 1 The Unified Theory of Acceptance and Use of Technology



Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003)

As figure 1 shows, the model has four major determinants that predict use (Venkatesh et al., 2003). Performance Expectancy refers to the individual's anticipation that the technologies will assist them in carrying out their job. Effort Expectancy measures how much work the individual will expend when using the technology to get the task completed. Social Influence expresses how co-workers view the system and their projected beliefs, or how their beliefs are perceived by the individual technology-user. Facilitating Conditions measures whether the environment (the required hardware and software, knowledge and training) allow the technology to be used successfully by the individual. The theory includes moderating factors of gender, age, experience and voluntariness which impact upon the other major determinants (Venkatesh et al., 2003).

Researchers using the UTAUT model have established that the predominant driver for traditional enterprise management systems is Performance Expectancy (Taiwo & Downe, 2013; Venkatesh et al., 2003). Khechine et al. (2016) and Dwivedi et al. (2017) propose that Performance Expectancy and Effort Expectancy are related to, and influenced by, the actual technology,

Facilitating Conditions and Social Influence. Khechine et al. (2016) identify that Facilitating Conditions and Behavioural Intention are the lowest predictor of Use Behaviour

The original research of Venkatesh et al. (2003) calls for further research on the effects of the moderating factors, especially gender and age. However, Dwivedi et al. (2017) propose that the moderators of Age, Gender, Experience, and Voluntariness are not useful in all studies and propose a further refined model of UTAUT, placing greater emphasis on attitude. These moderating factors are omitted in many studies using UTAUT (Dwivedi et al., 2017; Khechine et al., 2016; Venkatesh, L. Thong, & Xu, 2012). The meta-analysis of the UTAUT by Khechine et al. (2016) does not investigate the relationship of the moderating variables, since these have been omitted from so many studies – for instance, age, gender were found not to influence the use of social media in higher education (Esteve Del Valle, Gruz, Haythornthwaite, Paulin, & Gilbert, 2017).

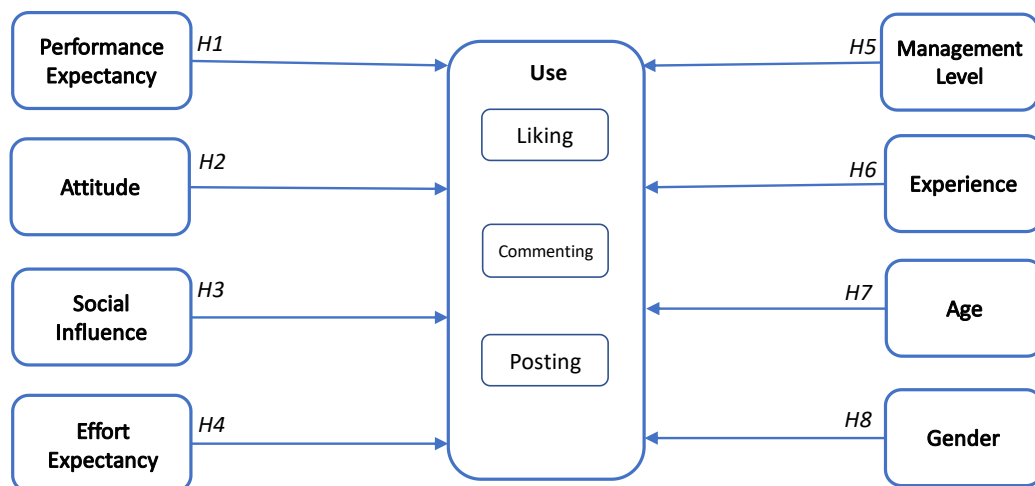
Research is required to test whether the Unified Theory of Acceptance and Use of Technology is still relevant for new technologies such as social media. (Khechine et al., 2016; Venkatesh et al., 2003). Requests for further research into the theory include studies to investigate different technologies in different contexts to validate further and understand the UTAUT model and to study facilitating conditions and behavioural intention (Khechine et al., 2016).

Khechine et al. (2016) and Dwivedi et al. (2017) show that behavioural intention is the most commonly-used dependent variable, thus confirming that the other factors of Performance Expectancy, Effort Expectancy, and Social Influence are valid predictors of intention. However, Dwivedi et al. (2017) extend the model by noting that the factor of attitude was critical to predicting behavioural intention and system usage. Wu and Du (2012) and Khechine et al. (2016) find that UTAUT's inclusion of Behavioural Intention is not a good substitute for predicting actual user behaviour or technology usage, though many studies use it (e.g. Burton-Jones and Straub Jr (2006).

2.6 Hypotheses

In this research project, we investigate the influences on employees' use of WbF exploring the factors outlined in the Unified Theory of Acceptance and Use of Technology (UTAUT). We have modified the model to reflect and accommodate WbF's already in use within the organisation; the factors of Performance Expectancy and Effort Expectancy have been changed to Performance Perception, and Effort Perception and Behavioural Intention has been removed. The moderating factor of Voluntariness is also eliminated for this study as the use of this technology within the organisation is voluntary. Attitude has been added to the model as research has indicated that it is also a high predictor of an individual's technology use (Dwivedi et al., 2017). The modified model, including factors and functions of WbF, is shown in Figure 2.

Figure 2 Proposed Model



The existing literature identifies benefits, both for the individual and the organisation, but limited research has been conducted on the individual's conscious motivation for using enterprise social media. While the primary cause of individuals motives for using enterprise technology is to perform their job with greater efficiency and effectiveness or increase their productivity. This study proposes that enterprise social media use between co-workers is motivated by the perception that its use will not only meet psychological needs but will bring benefits to their job performance.

Workplace by Facebook has several major functions including, 'Posting' content, 'Commenting' on a post, and 'Liking' (FacebookWorkplace, 2018). This study explores the

different factors predicting an individual's use of enterprise social media by investigating the different functions available in WbF.

2.6.1 Hypothesis 1

We expect that the use of WbF will be determined by the level of performance expectation, or the measure of benefit that the user assesses they will obtain by using the system (Khechine et al., 2016). Performance expectation is a high predictor of traditional enterprise systems' use (Khechine et al., 2016; Taiwo & Downe, 2013; Venkatesh et al., 2003). To reflect that WbF has been in use for some time by the organisation and the individuals surveyed, 'Performance Expectation' has been renamed 'Performance Perception'.

H 1: Performance Perception has a positive correlation with the WbF functions of 'Liking', 'Commenting', and 'Posting'.

2.6.2 Hypothesis 2

The individual's attitude towards using technology is based on the social psychology of human behaviour and can be represented by the theory of reasoned action (Venkatesh et al., 2003) which argues that an individual's positive or negative emotions towards an action impacts the ensuing action (Sheppard, Hartwick, & Warshaw, 1988). The use of technology in the organisation is strongly related to the user's attitude (Dwivedi et al., 2017). The WbF functions of 'Liking', 'Commenting', 'Posting' and in Workplace will have a higher use when the individual's attitude is positive towards using WbF.

H 2: Attitude has a positive correlation with the WbF functions of 'Liking', 'Commenting', and 'Posting'.

2.6.3 Hypothesis 3

Research suggests that social influence also affects the individual's likelihood to use an organisational technology (Dwivedi et al., 2017; Khechine et al., 2016; Venkatesh et al., 2003).

Social Influence measures the effect that others in the organisation have on the individual's use of technology (Venkatesh et al., 2003). Management and peer influence within the organisation can be significant, with both positive and negative influences impacting an individual's use of enterprise technologies (Sykes & Venkatesh, 2017). We hypothesize that social influence will affect an individual's use of WbF.

H 3: Social influence has a positive correlation the WbF functions of 'Liking', 'Commenting', and 'Posting'.

2.6.4 Hypothesis 4

Effort Expectancy is the perceived amount of effort the individual will spend when using Workplace (Venkatesh et al., 2003). Research suggests that it has little impact on the individual's use of an organisational system (Dwivedi et al., 2017; Khechine et al., 2016). WbF is very similar in functionality to Facebook, which is used by almost 70% of the global population (Alexa.com, 2018; Facebook, 2018b). Because WbF is available via a mobile application, is pre-provisioned for use by the organisation, has similar functionality to Facebook, little effort is required to use WbF. Thus, we hypothesize:

H 4: Low Effort Perception has a positive correlation the WbF functions of 'Liking', 'Commenting', and 'Posting'.

2.6.5 Hypothesis 5

Industry research identifies different categories into which that individuals can be grouped according to their type of WbF use (LockLee, 2018). We propose that different levels of management within the organisation correlate to different levels of function-use within WbF. Executive and senior managers are more likely to 'Post' as they have access to important organisation information, thus promoting their department and its achievements. Middle management is most likely to be commenting on posts, as they forward organisational information

from their senior managers to their teams and comment on their senior management's posts. Employees and contractors are more likely to use the 'Like' in Workplace as they read information from their management and peers.

H5: Management level has an impact on the use of WbF functions of 'Liking', 'Commenting', and 'Posting'.

2.6.6 Hypothesis 6

Experience in using technology is likely to impact an individual's use of that technology (Venkatesh et al., 2003). The model advises that the prior use of technology positively correlates with further use of technology (Venkatesh et al., 2003). Thus, the use of Facebook in the individual's personal life is likely to be a predictor of WbF use. Facebook advises customers that an individual's experience with Facebook assists and promotes the use of workplace by Facebook (FacebookWorkplace, 2018).

H 5: Experience of using Facebook in personal life has a positive correlation to the use of WbF functions of 'Liking', 'Commenting', and 'Posting'.

2.6.7 Hypothesis 7

Age is a factor in technology use (Venkatesh et al., 2003). Personal use of Facebook is highest amongst the 18 -29 years of age category, with 81% of people using it. Closely followed by the 30-49-year-old category with 78% using personal social media (A. A. Smith, M, 2018). Of those in the 50-64 years group, only 65% of the population use WbF, with the lowest usage of Facebook in the 65+ years of age category - 41% of the population using the application (A. A. Smith, M, 2018).

However, for the career-focused social media software, LinkedIn, the highest usage category is the 30 – 49 years old group at 33% of the population using the software, followed by

the 18 -29 years of age category at 29% using the software. The lowest age category of use was the 65+ year old, at 9% of the population using the LinkedIn Software.

H7: Age will have an inverse impact on the workplace functions, in that younger employees are more likely to use WbF.

2.6.8 Hypothesis 8

Sex also affects the use of technology in the organisation (Venkatesh et al., 2003). Personal social media use is higher for females - 74% use personal social media, while male use of personal social media is lower at 62% (A. A. Smith, M, 2018). Thus, we hypothesize that the use of WbF will be higher in females than in males.

H8: Sex is a factor in Workplace use; females are more likely to use Workplace than males for the functions of 'Liking', 'Commenting' and 'Posting'.

2.7 Literature summary

Technology in organisations has introduced many benefits. The introduction of enterprise management systems has enabled impressive productivity gains; without the acceptance and use of these technologies by the intended users these benefits would not be realized. Detailed understanding of new organisational technologies such as enterprise social media can assist in gaining the maximum benefits (Kane, 2015).

Some elements of the general public perception, have a negative attitude to social media, including Facebook. Academic research identifies issues such as managing friend requests with work colleagues (Vitak et al., 2012) and perceptions to enterprise social media being seen as “time wasters and security traps” (Turban, Bolloju, & Liang, 2011, p. 202). However, these concerns and risks are not specific to enterprise social media software, or WbF and can be applied to any technology or human interaction. As stated by Barnes and Barnes (2009, p. 29)

“From a business perspective, it is unwise to remain disconnected and on the sidelines” in regard to enterprise social media.

Enterprise social media is a new and growing concept. As an organisational system, it has similar factors to existing enterprise information systems and technologies but comes with unique attributes and benefits. Yet to date there is little research identifying what drives the use and acceptance of this maturing technology by the individual.

Use and acceptance of enterprise information systems are explained with the UTAUT model. The major factors identified in the literature are performance expectations, effort expenditure, attitude, and social influence. Demographic factors of age, experience, and sex are also factors. The investigation into factors driving its use could be beneficial in capturing the benefits that are afforded by enterprise social media use.

Academic research into the factors that explain levels of, and variances in, is limited and “the phenomenon of Social Media remains new to academia” (Ngai et al., 2015, p. 33). Continued research is needed to understand this emerging phenomenon (Duan, 2013; Kwahk & Park, 2016; Leonardi & Vaast, 2017). This study aims to address these gaps, and add to this body of knowledge on the use of enterprise social media.

Chapter 3 Methodology

This chapter outlines and justifies the methodology used in this study. There are five sections in this chapter. Section one outlines the research approach, strategy, source of data, and the application of these methodologies. Section two identifies the procedure of obtaining the data, detailing the research processes employed and the measures which will be obtained from the data collection. Section three articulates the ethical considerations and approval. Section four discusses the research's validity and reliability, and section five discusses the conclusion.

3.1 Introduction

This thesis aims to understand further the influences and drivers of individuals' use of enterprise social media. To understand this phenomenon and answer the research question, a mixed-methods approach has been taken.

3.2 Research Approach and Strategy

A mixed-methods study combines both quantitative and qualitative research to obtain a stronger understanding of the phenomena that is being studied (Creswell & Clark, 2017; Perry, 1998; Teddlie & Tashakkori, 2009). A variety of methods allows us to triangulate data and reduces the chance of errors (Johnson, Onwuegbuzie, & Turner, 2007). Ellison et al. (2015) say that a mixed-methods approach is suitable for understanding the use of enterprise social media, and more generally, for information technology research. (Creswell & Clark, 2017; Lee & Hubona, 2009; Venkatesh, Brown, & Bala, 2013; Venkatesh, Brown, & Sullivan, 2016).

3.2.1 Quantitative Research Design

In the mixed-methods employed, the primary method was a quantitative survey of employees; it was linked with usage data of WbF which provided the variables for analysis. Quantitative research is defined as that which requires numerical or statistical data to answer the research question (Williams, 2011). The items in the survey were obtained from several different sources: the foundation source is the Unified Theory of Acceptance and Use of Technology

(UTAUT) (Venkatesh et al., 2003); additional sources include demographic data and Facebook functions (Ross et al., 2009). The survey items are discussed in section 3.3.1.1 of this chapter and further detailed in Appendix A. Workplace by Facebook (WbF) data also used in this quantitative analysis is discussed in section 3.3.1.2 and detailed in Appendix B

3.2.2 Qualitative Research Design

The secondary method for analysis and data collection in this study was a six week qualitative investigation which provided further insights into the individuals using WbF, as Hove and Anda (2005, p. 1) have noted: “interviewing people provides insights into that world: their opinions, thoughts, and feelings”.

The sample size for the qualitative research was chosen based on research and recommendations from Marshall, Cardon, Poddar, and Fontenot (2013) and Perry (1998). Marshall et al. (2013) suggest between 15 and 20 interviews for single case studies. A Master of Research qualitative-only study requires between five and 35 interviews (Perry, 1998). Taking guidance from this literature, a total of ten interviews were undertaken.

The qualitative sampling strategy takes into account the participant’s source, and the inclusion and exclusions of participants (Boddy, 2016; Robinson, 2014). In conducting this research, purposive sampling strategies were employed (Robinson, 2014). This was to ensure that a senior executive was interviewed and participants with low use of WbF were also interviewed. Snowball recruitment (Atkinson & Flint, 2001) occurred in three instances when interviewees referred colleagues for interviews. The other seven interviewees responded to a request in the survey for candidates to take further part in the study.

3.2.3 Setting and Participants

The enterprise social media application under investigation was chosen as a result of a review of potential applications used in organisations. The search identified Facebook as the internet’s third-most popular site (Alexa.com, 2018). Investigation of the Facebook internet site identified a version of Facebook available for sole use between co-workers, known as Workplace

by Facebook (WbF). After further investigation into case studies of corporations using WbF, an Australian organisation was identified as one of the largest users globally of the product. The Organisation is a large national Australian, technology entity with approximately 6,500 staff. The organisation was contacted via their website. After an initial in-person meeting, the organisation consented to facilitate the research. A research proposal was created, submitted and approved by the organisation to allow the survey, interviews and application data to be conducted, collected and used. WbF had been in use within the organisation for approximately two years at the time of this data collection and its use is voluntary for all staff. The types of communications presented in WbF range from formal CEO messages to staff sharing social information about their pets.

3.3 Research Procedure

The research procedure identifies how the data is collected, and the measures that are used in the research. This section details the survey, WbF data and semi-structured interviews used in the data collection. The measures obtained from the data collected are defined and categorised into three groups: proposed drivers and influences; usage measures, and participants' demographic measures.

3.3.1 Data Collection

To investigate reasons for use and variations in use, three data sources selected. First, a survey collected views about participants' perceptions of WbF's use. Second was the usage data automatically tracked and generated from WbF. The email addresses of survey respondents were then used to obtain data about their use of the 'Liking', 'Commenting', and 'Posting' functions (further discussed below in section 1.3.1.2). The survey was also used to identify people who wished to be available for semi-structured interviews. The third data source came from responses to these interviews.

3.3.1.1 Survey

The survey comprised 39 items based on the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003). The UTAUT is comprised of six factors,

performance expectancy, effort expectancy, social influence, facilitating conditions and behavioural intention which predict the individual's behaviour with the technology. The usage factors of Performance Perception, Effort Perception, and Social Influence were adapted from the UTAUT model. The factor of Attitude was included due to the findings of Dwivedi et al. (2017) which assert that Attitude is also a predictor of technology use. These factors and their calculation are detailed in Appendix D. The factors of Facilitating Conditions and Behavioural Intention were removed from this study because previous research had indicated that they did not contribute to predicting technology use (Khechine et al., 2016; Taiwo & Downe, 2013) or were appropriate only when the technology has not yet been in use, respectively. As WbF had already been in use within the Organisation for some time, this factor was omitted from the survey and study.

The UTAUT also contains four moderating factors of age, sex, experience and voluntariness of use. The items relating to the factors of age and sex were added to the survey used in this study. The factor of experience was measured by the item "Do you use Facebook often?". The factor of voluntariness of use was omitted from the survey as the WbF use is indeed voluntary in this organisation. The additional items in the survey are related to the participant's department and level of management in the organisation, Facebook use and demographic details as shown in Appendix A.

The survey was validated for use by a group of academics, doctoral students and business professionals who confirmed that the items were understandable and applicable to the purpose of understanding the use of an enterprise social media platform. Based on the responses from this group some changes were made to the questions to enhance understanding, and these changes are detailed in the following paragraph. All proposed drivers and influencing factors were measured by a seven-point Likert scale as used in previous UTAUT research, where 7 = Strongly Agree and 1 = Strongly Disagree.

The survey was based on the original questions from UTAUT (Venkatesh et al., 2003) with several changes to reflect the application's current, rather than future, use and environment. A

number of words were changed in the items of the survey. The original survey used ‘System’ to represent the technology and this was changed to ‘Workplace’. Question 4 was altered from “If I use Workplace, I will increase my chances of getting a raise” to “Using Workplace, will increase my chances of getting a pay increase or promotion”, reflecting the Australian terminology for employment advancement.

The questions on behavioural intention, were removed as WbF was already in use and usage information could be obtained from the application itself, which is believed to be a more reliable variable (Burton-Jones & Straub Jr, 2006). Question 16 named the organisation, and Question 19 amended to remove the word ‘not’. Question 26 was changed from “I could lose I lot of information” to “I could share information that could be misinterpreted” to reflect the information-sharing function of WbF.

The survey was made available to all 6,500 staff via WbF, which was the organisation’s preferred method for distributing organisational communications. The survey was presented through Qualtrics survey software (Qualtrics, 2005) accessed via a URL link. The survey was available for completion by participants for seven weeks from the 17th of July 2018 to the 31st of August 2018. The survey is shown in Appendix A. At this time the organisation was undergoing significant organisation change in its operations and senior management and a new CEO instated. It is possible due to this organisational restructure and new leadership that participation in the survey was impacted.

3.3.1.2 Workplace Application Usage Data

WbF usage data was obtained from WbF which automatically captures the number of ‘Likes’, ‘Comments’ and ‘Posts’ issued by each user. Poirier (2018) defines the ‘Like’ feature in Facebook as “simple in nature” - “Users click “Like” to communicate what they think about anything”. The ‘Comment’ function allows an individual to comment on a ‘Post’ or another ‘Comment’ which they have seen (RocketMarketing, 2018). The ‘Post’ function allows an

individual to publish content for sharing with others, “It is a comment, picture or other media that is posted on the user’s Facebook page or ‘wall’” (ScriptedWriters, 2018).

WbF data to be used in the research was discussed with several sources to ensure that it was appropriate and obtainable. WbF data was validated by the organisation’s administrators of and an industry analytics organisation specializing in analyses, support, and operations of enterprise social media systems. Both organisations confirmed that the proposed data was a good measure of use of WbF and appropriate for research use.

To facilitate matching survey data and WbF usage data, the participants’ email addresses were captured in the survey and used as the unique identifier to match the user’s survey responses to their usage data from WbF.¹ The matching was undertaken by the organisation’s administrators of WbF. WbF usage data is detailed in Appendix B.

The workplace usage data was emailed to the researcher via a password-protected file. The WbF usage file was then stored on the University’s IT document cloud in a password-protected file, accessible only by the researcher. The WbF data was then transferred to the SPSS statistics software, merged with the corresponding participants’ survey data and the statistics calculated to test the hypotheses identified in Chapter 2, resulting in the analyses and results provided in Chapter 4.

3.3.2 Measures

This section details the measures used in this study to analyze drivers and influencers of WbF use, its actual usage, and the demographics of the participants. All scales used in the study are shown in Appendix A; WbF Data is detailed in Appendix B and the items that comprise the factors of the UTAUT are shown in Appendix D.

¹ The email address of the individual was only made available with the permission of the individual when completing the survey. The total number of email addresses provided were 107 from 147 survey responses, 73% of participants.

3.3.2.1 Proposed Drivers and Influences of Enterprise Social Media Usage.

The drivers and influences were measured indirectly by a survey based on the UTAUT model (Venkatesh et al., 2003). This model is widely acknowledged as having a high probability of predicting enterprise technology use (Dwivedi et al., 2017; Khechine et al., 2016).

The scales of performance perception, attitude, social influence, and effort perception are calculated from four items each in the survey (Venkatesh et al., 2003). The average score of the four items is calculated to provide the related variable, as shown in Appendix D. Experience in using (non-enterprise) Facebook was measured by the survey item, “Do you use Facebook often?” as shown in Appendix A. The data analysis performed on these measures includes Pearson Correlations and Multiple regression analysis, as detailed in Chapter 4, section 4.1.3.

3.3.2.2 Workplace by Facebook Usage Measures

System usage is defined by a user performing a task on the system or application, obtained from system logs as recommended by Venkatesh et al. (2003). Data on the actual use of the WbF’s functions was obtained directly from the application logs. WbF functions are defined as ‘Liking’, ‘Commenting’, and ‘Posting’. These functions meet the requirement of deep structural usage, that is, a measure for each task not just the duration of a task (Burton-Jones & Straub Jr, 2006). These variables are obtained from the organisation, from data collected automatically by WbF.

Liking is measured by the number of times the participant used the WbF function of ‘Liking’ of a ‘Post’ or ‘Comment’. Posting is measured by the number of times the participant used the WbF function of ‘Post’ to create content for others to see via WbF. To analyse this data Pearson Correlations and Multiple Regressions calculations were performed, as detailed further in Chapter 4, section 4.3.

3.3.2.3 Demographic Measures

Management level is measured by three categories, employee or contractor level, middle manager, and senior manager. These levels were confirmed by the organisation as being representative of their staff. Age was measured in years and divided into four categories, 18-29

year-olds, 30-49-year-olds, 50-64-year-olds and 65+ years of age. Sex was represented by a choice between male or female and self-selected by the survey participant (see Appendix A for the demographic items). The management level and sex analysis were conducted using a t-test; age data analysis was conducted using an ANOVA, and details of the data analysis are provided in Chapter 4, sections 4.3.7 and 4.3.8.

3.3.2.4 Semi-structured Interviews

The semi-structured interviews were conducted with survey participants who had consented in the survey to participate further. The first 10 respondents were selected and interviewed. They were asked by email to participate in a one-hour interview at their office or in a nearby public place. In some instances, participants were in another capital city and Skype was used to conduct the interview. The snowball technique was also employed as several interviewees were obtained via recommendation from already interviewed participants (Atkinson & Flint, 2001). Interviewees that were obtained via the snowball technique were asked and verified via the Survey software that they had completed the survey before being interviewed.

The interviews were summarised and partially transcribed. In the transcribing process, the interview recordings were replayed and verbatim comments (quotes) linked to the study's themes. The researcher was familiar with the industry and organisation's operation, as well as the social media aspects of WbF. Demographics of the interview participants are shown in Table 1.

Table 2 Interview Participants Demographics

Interviewee	Sex	Age Category	Management Level
1A	M	30-49	Middle Manager
2B	M	50-64	Middle Manager
3C	M	30-49	Employee
4D	F	18-29	Employee
5E	F	18-29	Employee
6F	F	30-49	Employee
7G	M	50-64	Employee
8H	M	50-64	Middle Manager
9I	F	30-49	Middle Manager
10J	F	50-64	Senior Manager

Source: Research Survey

3.3.2.5 Interview Respondents

The selection criteria for interview participants were: that they were currently employed by the organisation and had access to WbF; that they were over the age of 18; that they had completed the survey, and indicated they would partake further in the study. Participants were also required to read and sign the consent form before the interview could be conducted. Given that few participants were likely to be under 18 years of age and working within the organisation, this exclusion was deemed to have little impact on the study's findings.

All interviews were recorded on two devices, a mobile phone and a laptop both with recording software. All interview recordings were then stored in the Macquarie University's Information Technologies document cloud storage. In total, ten interviews were conducted in this survey. The interviews were conducted over a period from the 24th of July 2018 to the 4th of September 2018. The interview responses were then analyzed using the qualitative method of thematic analysis (Braun & Clarke, 2006) based on the themes of performance perception, effort perception, social influence and attitude as identified in the Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003).

3.4 Ethical Considerations

To ensure a high standard of ethical compliance, this study adheres to Macquarie University Ethics Committee's guidelines. The research was planned and conducted by the standards specified in the National Statement on Ethical Conduct in Human Research (2007). This research was submitted to the Macquarie University's Ethics Committee for approval and approval granted with the reference number: 5201800260.

3.5 Validity and Reliability of the Research

The validity of research is defined as measuring what is required to be measured (Field, 2013) and this survey's validity supported by the adaptation of an existing research instrument, the UTAUT (Dwivedi et al., 2017; Khechine et al., 2016; Venkatesh et al., 2003). The reliability of research is defined as being able to obtain the same result when the same test is completed

(Field, 2013). The survey used in this research has been used in Venkatesh et al.'s original research Venkatesh et al. (2003). The survey questions were pretested by both academic and industry representatives to ensure both validity and reliability. Objective data was used for the dependent variables of workplace use, 'Liking', 'Commenting' and 'Posting' obtained directly from WbF.

3.6 Conclusion

This chapter has outlined the methods used in the research on the use of the enterprise social media application, Workplace by Facebook, within an organisation. The sections in this chapter have identified the study's approach, strategy and research procedure. The quantitative methods of the survey and WbF usage data and the qualitative methods of semi-structured interviews have been defined. The rationale for selection of participants, the source of the data and the processes used for collection of the data were described. These methods have been employed to gain a balanced insight into the drivers and influences on WbF use in order to answer the research question and hypothesis formulated in this research.

Chapter 4 Data Analysis

This chapter presents analysis of the data to answer the study's research question, which is to investigate the drivers and influences of Workplace by Facebook (WbF) use by individuals as co-workers in an organisation. The data has been defined and collected as outlined in Chapter 3 and the data is analysed to answer the hypotheses defined in Chapter 2. This chapter has four sections. Section one presents the demographic data of study participants. Section two analyses the data pertaining to the hypothesis outlined in Chapter 2. Section three presents qualitative analysis of ten semi-structured interviews. Section four offers the conclusion to this data analysis.

4.1 Introduction

Data from three sources are analysed in this chapter. The primary source of data is the survey responses, which were matched with the organisation's data about the use of Workplace by Facebook (WbF). To complement the quantitative data, qualitative data from ten semi-structured interviews is also analysed. Together these three sets of data are used to answer the hypotheses presented in Chapter 2.

4.2 Demographic Information and Descriptive Statistics

This research took place in one organisation identified as one of the largest users of the enterprise social media software, WbF. The requirement for participation in the study was that participants be staff of the organisation and registered for use in WbF. All staff who completed the survey were active on WbF during the study period as they had to access the survey via WbF. The survey received 147 responses, and from these responses 129 were complete and used in this research. Respondents were from all departments, as shown in Table 3.

Table 3 Respondents by Department

Department	<i>N</i>	%
Corporate Affairs	5	3.4
Engineering	12	8.2
Finance	8	5.4
Human Resources	6	4.1
Information Technology	30	20.4
Legal	4	2.7
Operations	55	37.4
Strategy	9	6.1

Source: Survey

The demographics of the 129 respondents who provided usable data comprised 47.3% male, and 52.7% female as shown in Table 4. The highest percentage of respondents were in the 30 to 49-year-old age group, which comprised 64% of participants. Twenty-four percent were in the 50 to 64-year-old age group, 10% in the 18 to 29-year-old age group, and those over 65 years of age made up 1.6% of the participants. Respondents' management level varied, with 65.9 % from the employee or contractor level, 28.7 % middle manager, and 5.4% self-reported as senior or executive managers, as shown in Table 4.

Table 4 Demographic Data of Survey Respondents

Characteristic	Survey Responses	Valid%
<i>N</i>	147	100
Gender		
Male	61	47.3
Female	68	52.7
Missing	18	
Respondents	147	100
Age		
18 -29	13	10.1
30 -49	83	64.3
50-64	31	24
65+	2	1.6
Missing	18	
Respondents	147	100
Level of Management		
Employee/Contractor	85	65.9
Middle Manager	37	28.7
Senior Manager	7	5.4
Missing	18	
Respondents	147	100

Source: Survey

The survey was based on the Unified Theory of Acceptance and Use of Technology model (UTAUT), (Venkatesh et al., 2003) and asked about respondents' level of agreement with a range of factors which influence the use of WbF. Additional questions regarding the participants' actual use of WbF and Facebook use were also included. All survey questions used a 7-point Likert scale anchored by Strongly Disagree = 1, and Strongly Agree = 7 as discussed in Chapter 3. As shown in table 5, the highest mean score for UTAUT factors was for 'Effort Perception' with a mean of 5.52, followed by 'Attitude' with a mean of 5.25 and 'Social Influence' with a mean of 5.17. The standard deviation was least for 'Social Influence' and greatest for the use of Facebook in their personal life, as shown in Table 5.

Table 5 Means and Standard Deviations for UTAUT Variables

Variable	<i>M</i>	<i>SD</i>
Performance Perception (PP)	4.27	1.28
Attitude (AT)	5.25	1.53
Social Influence (SI)	5.17	1.06
Effort Perception (EP)	5.52	1.12
Use of Facebook	4.86	2.17

Source: Survey

The second source of data was obtained from WbF on the use of the major functions of ‘Liking’ ‘Commenting’ and ‘Posting’. This data, which was automatically tracked by WbF, and was obtained from the Organisation. The data covers a three-month period, from the 1st of June 2018 to the 31st of August 2018. The highest usage is the function of ‘Liking’, with an average of 125.31 ‘Likes’ given per participant. The least used function is ‘Posts’, with a mean of 23.64 issued per participant. This data is shown in Table 6.

Table 6 Means and Standard Deviations for Workplace Usage per Participant

Variable	<i>M</i>	<i>SD</i>
Number of 'Likes'	125.31	170.603
Number of 'Comments'	29.68	47.89
Number of 'Posts'	23.64	49.25

Source: Workplace Application Usage Data

4.3 Analysis of Research Hypothesis

This section presents analyses of the survey data which partially answer the study’s hypotheses. Statistical analysis was undertaken using Pearson’s correlations to propound the factors which were proposed as influential in the use of WbF and their relationship with actual usage. The statistical outcomes are displayed in Table 7.

Table 7 Mean, Standard Deviation and Correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10
Performance Perception	4.28	1.28										
Attitude	5.25	1.54	.788**									
Social Influence	5.18	1.06	.543**	.542**								
Effort Expectancy	5.52	1.12	.625**	.694**	.520**							
Management Level	1.40	0.59	-0.09	-0.15	-0.06	-.209*						
Facebook Use	4.86	2.17	.269**	.355**	.196*	.365**	-0.03					
Age	2.17	0.61	-0.07	-.187*	0.07	-0.17	.18*	-.21*				
Sex	1.53	0.50	.178*	.330**	.211*	.345**	-0.10	.187*	-.19*			
Likes'	125.31	170.60	.453**	.447**	.228*	.437**	-0.12	.213*	-0.18	.236*		
Comments'	29.68	47.89	.361**	.274**	0.15	.308**	0.05	0.02	-0.03	0.04	.747**	
Posts'	23.64	49.25	.296**	.242*	0.12	.280**	-0.02	0.11	-0.06	0.14	.648**	.670**

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

* . Correlation is significant at the 0.05 level (2-tailed).

4.3.1 Hypothesis 1

Hypothesis 1 considers the relationship between an individual's perception that WbF will assist them in performing their job via their use of the application's functions.

H₁: 'Performance Perception' has a positive correlation with the WbF functions of 'Posting,' 'Commenting,' and 'Liking.'

4.3.1.1 Results

To confirm this hypothesis a Pearson correlation was used to assess the relationship between 'Performance Perception' and actual use of the WbF functions, 'Liking' 'Commenting' and 'Posting.' The result for the function of 'Liking' was positively significant with $r = .453$ and $p < .01$; 'Commenting' was positively significant with $r = .490$ and $p < .01$, and 'Posting' was positively significant with $r = .296$ and $p < .01$. This suggests that as 'Performance Perception' increased so did the functions of 'Liking' 'Commenting' and 'Posting.'

Thus hypothesis 1 is confirmed: the higher the individual's perception that Workplace assists in job performance for the individual, the more likely the individual was to use WbF's functions.

4.3.2 Hypothesis 2

Hypothesis 2 proposes that 'Attitude', the positive or negative emotion of the individual toward using WbF, will influence the individual's use of WbF and its functions.

H₂: 'Attitude' has a positive correlation with the Workplace functions of 'Posting,' 'Commenting,' and 'Liking.'

4.3.2.1 Results

To confirm this hypothesis a Pearson correlation was carried out to assess the relationship between 'Attitude' to using Workplace, and the actual use of Workplace functions, 'Liking' 'Commenting' and 'Posting'. The result of the correlation tests between 'Attitude' and Workplace 'Liking' was positively significant with $r = .447$ and $p < .01$; 'Commenting' was positively significant with $r = .274$ and $p < .05$. and 'Posting' was positively significant with $r = .242$ and $p < .05$. These results suggested that as a positive 'Attitude' increased so did the functions of 'Liking', 'Commenting' and 'Posting.' We can conclude that the 'Attitude' of the individual has indeed a positive relationship with the use of WbF.

4.3.3 Hypothesis 3

Hypothesis 3 predicts that 'Social Influence' from management and peers regarding WbF use within the organisation influences and increases the individual's use of WbF functions.

H₃: 'Social Influence' has a positive correlation with the WbF functions of 'Posting,' 'Commenting,' and 'Liking.'

4.3.3.1 Results

To answer this hypothesis a Pearson correlation assessed the relationship between 'Social Influence' on using Workplace, and the actual use of Workplace functions, 'Liking' 'Commenting'

and 'Posting'. The result of the correlation test of 'Social Influence' and 'Liking' was positively significant with $r = .228$ and $p < .05$; 'Commenting' was not positively significant with $r = .153$ and $p = .136$, and 'Posting' was not positively significant with $r = .117$ and $p = .254$. 'Social Influence' within the organisation therefore did not have a relationship with the use of 'Commenting' or 'Posting', hence H_3 can only be partially supported.

4.3.4 Hypothesis 4

Hypothesis 4 investigates the individual's perception of the effort involved in using WbF and the relationship of this perception with the individual's actual use of the WbF functions.

H4: Low 'Effort Perception' has a positive correlation with the use of the WbF functions of 'Liking', 'Commenting', and 'Posting'.

4.3.4.1 Results

To investigate this hypothesis a Pearson correlation assessed the relationship between low 'Effort Perception' of using WbF, and the actual use of the WbF functions of 'Liking', 'Commenting' and 'Posting'. The result of the correlation test between 'Effort Perception' and WbF 'Liking' was positively significant with $r = .437$ and $p < .01$; 'Commenting' was positively significant with $r = .308$ and $p < .01$, and 'Posting' was positively significant with $r = .280$ and $p < .01$. The results suggest that the less effort perceived to use WbF's functions, the greater the use of those functions. 'Effort Perception' has the strongest relationship with WbF of 'Liking', perhaps the function that requires the least effort. The hypothesis is therefore confirmed; a positive relationship exists between 'Effort Perception' and the use of WbF functions.

4.3.5 Hypothesis 5

Hypothesis 5 proposes that the 'Management Level' of the individual influences their use of WbF.

H5: 'Management Level' has an impact on the use of the WbF functions, of 'Liking', 'Commenting', and 'Posting'.

4.3.5.1 Results

To investigate whether the use of WbF functions is influenced by the individual's 'Management Level' an independent sample t-test was performed on the data. The results show that non-managers and managers do not differ statistically in their use of 'Liking': non-managers were $t(95) = .66, p = .509$, : non-managers were ($M = 134.16, SD = 183.567$) to managers ($M = 110.31, SD = 147.301$). The function of 'Commenting', $t(94) = -1.37, p = .176$ by non-managers ($M = 24.53, SD = 34.535$) is not statistically significant than managers ($M = 38.25, SD = 63.983$). The function of 'Posting', $t(94) = -.21, p = .831$ by non-managers ($M = 22.80, SD = 49.298$) is also not statistically significant compared to managers ($M = 25.03, SD = 49.835$), as shown in Table 8. Hypothesis 5 is therefore rejected because the results suggest that there is no difference between managers and non-managers use of WbF functions of 'Liking', 'Commenting' or 'Posting'.

Table 8 Descriptive statistics Associated with Workplace Use

	N	M	SD
Non Managers	61		
Likes		134.16	183.567
Comments		24.53	34.535
Posts		22.8	49.298
Managers	36		
Likes		110.31	147.301
Comments		38.25	34.535
Posts		25.03	49.835

Source: Survey and WbF Usage Data

4.3.6 Hypothesis 6

Hypothesis 6 investigates the relationship between the individual's use of personal social media, Facebook, compared to the use of WbF. As WbF has similar functions and concepts to Facebook, previous experience with Facebook could enhance the use of WbF.

H6: Experience of using Facebook in the individual's personal life has a positive correlation to their use of WbF's functions of 'Liking', 'Commenting' and 'Posting'.

4.3.6.1 Results

The results of the Pearson correlation test between Facebook use and the WbF function of 'Liking' ($r = .213$ and $p < .05$), 'Commenting' ($r = .017$ and $p = .868$), 'Posting' ($r = .0108$ and $p = .296$) was only positively significant for the function of 'Liking'. The functions of 'Commenting' and 'Posting' were not significant. Hypothesis 6 can only be partially confirmed, as only the WbF function of 'Liking' had a relationship with the use of Facebook. These results suggest that personal use of Facebook does not strongly relate to WbF use. However, a familiarity with Facebook may influence the use of WbF for the function of 'Liking', but not 'Commenting' or 'Posting'.

4.3.7 Hypothesis 7

Hypothesis 7 considers the usage levels of the WbF functions by users' age categories. The use of Facebook is influenced by age - younger people are higher users. However, the use of professional social media application LinkedIn is not used more by younger people, as discussed in Chapter 2.

H7: Age will have an inverse impact on the WbF functions, in that younger employees are more likely to use WbF.

4.3.7.1 Results

To investigate whether use of WbF functions are influenced by the individual's age, a one-way ANOVA was performed on the data. The results of the one-way ANOVA showed no significant statistical difference between age categories and the use of WbF function 'Liking' $F(3, 93) = 1.175$, $p = .324$, $\eta^2 p = .0365$; 'Commenting' $F(3, 92) = .733$, $p = .535$, $\eta^2 p = .5$, or

‘Posting’ $F(3, 92) = .365, p = .778, \eta^2 p = .5$, as shown in Table 9. Hypothesis H7 is rejected, as the data suggests no statistical difference in WbF use across age categories.

Table 9 ANOVA Summary Table for Age Categories

Function	Source	Sum of Squares	df	Mean Square	F	Sig.	$\eta^2 p$
Likes	Between Groups	101996.658	3	33998.886	1.175	0.324	0.0365
	Within Groups	2692114.063	93	28947.463			
Comments	Between Groups	5086.850	3	1695.617	0.733	0.535	0.5
	Within Groups	5086.850	92	2313.002			
Posts	Between Groups	2713.896	3	904.632	0.365	0.778	0.5
	Within Groups	2713.896	92	2475.112			

Source: Survey and WbF Usage Data

Table 10 Descriptive Statistics for Workplace Functions by Age Category

Function		N	Mean	Standard Deviation
Number of 'Likes'	18 to 29 years	10	153.70	172.907
	30 to 49 years	61	142.74	194.004
	50 to 64 years	25	76.44	82.860
	65 + years	1	0.00	
Number of 'Comments'	18 to 29 years	10	16.50	24.328
	30 to 49 years	60	34.90	54.701
	50 to 64 years	25	23.52	35.900
	65 + years	1	2.00	
Number of 'Posts'	18 to 29 years	10	19.40	30.942
	30 to 49 years	60	27.48	59.151
	50 to 64 years	25	17.04	22.972
	65 + years	1	0.00	

Source: Survey and WbF Usage Data

4.3.8 Hypothesis 8

Hypotheses 8 considers participants' sex, as earlier research has identified sex as a differentiator in technology-use (A. A. Smith, M, 2018; Venkatesh et al., 2012; Venkatesh et al., 2003). Research identifies that Facebook has a higher use amongst females than males (A. A. Smith, M, 2018). Alternate research on technology-use in organisations identifies males as greater users (Venkatesh et al., 2003).

H8: Sex is a factor in WbF use; Females are more likely to use WbF than males for the functions of 'Liking', 'Commenting' and 'Posting'.

4.3.8.1 Results

To test the hypothesis that sex is a factor in the use of WbF, an independent samples *t*-test was performed. The results show that males and females do differ statistically in the Workplace function of 'Liking', $t(95) = -2.36, p = .020$. The mean for females ($M = 163.27, SD = 187.51$) is significantly higher than the male respondents ($M = 83.22, SD = 139.93$). The mean for the WbF function of 'Commenting' for female respondents ($M = 31.67, SD = 40.59$), was numerically higher than males ($M = 27.43, SD = 55.41$), but these differences were not statistically significant

($t(94) = -.431, p = .667$. For 'Posting', $t(94) = -1.396, p = .166$ the mean for females ($M = 30.20, SD = 53.11$) was not statistically significantly different than males ($M = 16.20, SD = 43.88$) as shown in Table 11. Although not statistically significant, females have a higher mean use of all the functions compared to males. Females' average is almost double males' usage for the functions of 'Liking' and 'Posting'. Therefore, hypothesis H8 is only partially supported, in that females use the Workplace function of 'Liking' more than males, but there is no difference between males and females for the Workplace functions of 'Commenting' and Posting'.

Table 11 Descriptive statistics Associated with Workplace Use

	<i>N</i>	<i>M</i>	<i>SD</i>
Males	46		
Likes		83.22	139.932
Comments		27.42	55.410
Posts		16.20	43.876
Females	51		
Likes		163.27	53.111
Comments		31.67	187.508
Posts		30.2	40.586

Source: Survey and WbF Usage Data

4.4.1 Multiple Regression

A Multiple regression analysis was performed on the data to understand further the capacity of this study's independent variables to predict use of the WbF functions of 'Liking', 'Commenting' and 'Posting'.

4.4.1.1 Multiple Regression with the Dependant Variable of 'Liking'

Multiple Regression analysis tested whether the independent variables of 'Performance Perception', 'Attitude', 'Social Influence', 'Effort Perception', 'Management Level', 'Facebook Experience', 'Age' or 'Sex' significantly predicted the use of 'Liking'. The results of the regression indicate that these eight predictors explained 26% of the variance ($R^2 = .264, F(8,88) = 3.948, p < .001$). None of the independent variables individually significantly predicted the use of the WbF function 'Liking', as shown in Table 10, Model 1.

A further multiple regression analysis was performed removing the factors of 'Management Level', 'Facebook Experience', 'Age' and 'Sex'. Previous research indicates that these factors have a weaker relationship with technology use (Dwivedi et al., 2017; Khechine et al., 2016). The results of the regression indicate that four of the predictors, 'Performance Perception', 'Attitude', 'Social Influence', 'Effort Perception' explained 25% of the variance ($R^2 = .252$, $F(4,92) = 7.768$, $p < .001$). It was found that none of the independent variables individually significantly predicted the use of the WbF function of 'Liking', as shown in Table 12, Model 2.

An additional multiple regression analysis was performed removing the factor of 'Attitude'. The remaining factors of 'Performance Perception', 'Effort Perception', and 'Social Influence' are the highest correlating factors of the UTAUT Model (Khechine et al., 2016). The results of the regression indicate that the model explained 24.5 % of the variance ($R^2 = .245$, $F(3,96) = 10.08$, $p < .001$). 'Performance Perception', 'Effort Perception', individually significantly predicted the use of the WbF function of 'Liking', as shown in Table 12, Model 3.

Table 12 Summary of Multiple Regression Analysis for 'Liking'

	<i>B</i>	<i>SE B</i>	β	<i>p</i>
Model 1				
Constant	-209.86	124.92		<i>p</i> = .097
Performance Perception	34.01	21.00	.25	<i>p</i> = .109
Attitude	12.11	20.64	.10	<i>p</i> = .559
Social Influence	-7.118	17.87	-.045	<i>p</i> = .691
Effort Perception	28.92	19.98	.20	<i>p</i> = .151
Management Level	3.10	27.13	.01	<i>p</i> = .909
Facebook Experience	.110	7.96	.00	<i>p</i> = .989
Age	-23.193	27.43	-.08	<i>p</i> = .400
Sex	24.80	34.17	.07	<i>p</i> = .470
Model 2				
Constant	-245.40	20.31		<i>p</i> = .007
Performance Perception	30.58	20.30	.23	<i>p</i> = .136
Attitude	18.02	19.26	.15	<i>p</i> = .352
Social Influence	17.10	17.10	-.06	<i>p</i> = .585
Effort Perception	18.83	18.83	.23	<i>p</i> = .083
Model 3				
Constant	-243.36	89.40		<i>p</i> = .008
Performance Perception	41.92	16.28	.31	<i>p</i> = .012
Social Influence	-7.38	16.96	-.05	<i>p</i> = .665
Effort Perception	39.26	17.59	.27	<i>p</i> = .028

Source: Survey and WbF usage data.

Note.

Model 1, $R^2 = .26$, $F = 3.995$, $p < .001$

Model 2, $R^2 = .25$, $F = 7.768$, $p < .001$

Model 3, $R^2 = .245$, $F = 10.079$, $p < .001$

4.4.1.2 Multiple Regression with the Dependant Variable of 'Commenting'

Multiple regression analysis was used to test whether 'Performance Perception', 'Attitude', 'Social Influence', 'Effort Perception', 'Management Level', 'Facebook Experience', 'Age', and 'Sex' significantly predicted the use of the WbF function of 'Commenting'. The results of the regression indicate that eight predictors explained 18% of the variance ($R^2 = .18$, $F(8,87) = 2.393$, $p = .022$), but none of the independent variables individually significantly predicted the use of the WbF function of 'Commenting', as shown in Table 11, Model 1.

A further multiple regression analysis was performed removing the factors of 'Management Level', 'Facebook Experience', 'Age' and 'Sex'. Previous research indicates that these factors have a weaker relationship with technology use (Dwivedi et al., 2017; Khechine et

al., 2016). The results of the regression indicate that four of the predictors, 'Performance Perception', 'Attitude', 'Social Influence', 'Effort Perception' explained 15% of the variance ($R^2 = .147$, $F(4,91) = 3.94$, $p = .005$). It was found that 'Performance Perception' was the only independent variable that individually significantly predicted the use of the WbF function of 'Commenting', as shown in Table 13, Model 2.

An additional multiple regression analysis was performed removing the factor of 'Attitude'. The remaining factors of 'Performance Perception', 'Effort Perception', and 'Social Influence' are the highest correlating factors of the UTAUT Model (Khechine et al., 2016). The results of the regression indicate that the model explained 14.5 % of the variance ($R^2 = .145$, $F(3,92) = 5.19$, $p = .002$). 'Performance Perception' was the only independent variable that individually significantly predicted the use of the WbF function 'Commenting', as shown in Table 13, Model 3.

Table 13 Summary of Multiple Regression Analysis for 'Commenting'

	<i>B</i>	<i>SE B</i>	β	<i>p</i>
<i>Model 1</i>				
Constant	-55.67	37.03		$p = .136$
Performance Perception	11.74	6.23	.31	$p = .063$
Attitude	-.102	6.12	-.003	$p = .987$
Social Influence	-2.45	5.30	-.06	$p = .645$
Effort Perception	10.43	5.93	.25	$p = .082$
Management Level	9.61	8.05	.123	$p = .236$
Facebook Experience	-3.02	2.36	-.137	$p = .204$
Age	-.527	8.13	-.007	$p = .948$
Sex	-6.29	10.26	-.07	$p = .541$
<i>Model 2</i>				
Constant	-41.34	26.86		$p = .127$
Performance Perception	13.26	6.10	.34	$p = .032$
Attitude	-3.13	5.78	-.09	$p = .589$
Social Influence	-2.46	5.14	-.06	$p = .633$
Effort Perception	7.49	5.65	.18	$p = .188$
<i>Model 3</i>				
Constant	-41.70	26.75		$p = .122$
Performance Perception	11.29	4.89	.30	$p = .023$
Social Influence	-2.81	5.09	-.063	$p = .581$
Effort Perception	6.41	5.26	.154	$p = .226$

Source: Survey and WbF usage data.

Note.

Model 1, $R^2 = .18$, $F = 2.39$, $p = .022$

Model 2, $R^2 = .147$, $F = 3.94$, $p = .005$

Model 3, $R^2 = .145$, $F = 5.19$, $p = .002$

4.4.1.3 Multiple Regression with the Dependant Variable of 'Posting'

Multiple regression analysis was used to test if 'Performance Perception', 'Attitude', 'Social Influence', 'Effort Perception', 'Management Level', 'Facebook Experience', 'Age' or 'Sex' significantly predicted the use of the WbF function of 'Posting'. The results of the regression indicate that eight predictors explained 11% of the variance ($R^2 = .112$, $F(8,87) = 1.37$, $p = .222$). None of the independent variables individually significantly predicted the use of the WbF function 'Posting', as shown in Table 12, Model 1.

A further multiple regression analysis was performed removing the factors of 'Management Level', 'Facebook Experience', 'Age' and 'Sex'. Previous research indicates that

these factors have a weaker relationship with technology use (Dwivedi et al., 2017; Khechine et al., 2016). The results of the regression indicate that four of the predictors, 'Performance Perception', 'Attitude', 'Social Influence', 'Effort Perception' explained 11% of the variance ($R^2 = .107$, $F(4,91) = 2.734$, $p = .034$). It was found that none of the independent variables individually significantly predicted the use of the WbF function of 'Posting', as shown in Table 14, Model 2.

An additional multiple regression analysis was performed removing the factor of 'Attitude'. The remaining factors of 'Performance Perception', 'Effort Perception', and 'Social Influence' are the highest correlating factors of the UTAUT Model (Khechine et al., 2016). The results of the regression indicate that the model explained 11% of the variance ($R^2 = .107$, $F(3,92) = 3.66$, $p = .015$). It was found that none of the independent variables individually significantly predicted the use of the WbF function of 'Posting', as shown in Table 14, Model 3.

Table 14 Summary of Multiple Regression Analysis for 'Posting'

	<i>B</i>	<i>SE B</i>	β	<i>p</i>
<i>Model 1</i>				
Constant	-47.94	39.64		<i>p</i> = .230
Performance Perception	9.78	6.67	.25	<i>p</i> = .146
Attitude	-1.83	5.68	-.05	<i>p</i> = .781
Social Influence	-3.40	5.68	-.07	<i>p</i> = .551
Effort Perception	8.12	6.34	.19	<i>p</i> = .204
Management Level	3.21	8.62	.04	<i>p</i> = .710
Facebook Experience	-.36	2.53	-.02	<i>p</i> = .886
Age	-.53	8.70	-.01	<i>p</i> = .951
Sex	5.76	10.98	.06	<i>p</i> = .601
<i>Model 2</i>				
Constant	-39.42	28.27		<i>p</i> = .167
Performance Perception	9.68	6.42	.25	<i>p</i> = .135
Attitude	-1.50	6.08	-.04	<i>p</i> = .806
Social Influence	-3.21	5.41	-.07	<i>p</i> = .554
Effort Perception	8.05	5.94	.19	<i>p</i> = .179
<i>Model 3</i>				
Constant	-39.59	28.12		<i>p</i> = .163
Performance Perception	8.742	5.13	.22	<i>p</i> = .092
Social Influence	-3.38	5.34	-.07	<i>p</i> = .529
Effort Perception	7.53	5.53	.176	<i>p</i> = .177

Source: Survey and WbF Usage Data.

Note.

Model 1, $R^2 = .112$, $F = 1.37$, $p = .222$

Model 2, $R^2 = .107$, $F = 2.734$, $p = .034$

Model 3, $R^2 = .107$, $F = 3.663$, $p = .015$

4.5 Semi-structured Interview Analysis

This section presents the research findings from the interviews conducted, which enquired about the reasons for using Workplace by Facebook. The objective of this section is to summarise the interviews' findings, providing additional insight into the quantitative analysis in the preceding section. The findings of this qualitative research are presented in line with the study's research hypotheses.

The demographics of the ten interviewed respondents comprised five males and five females. In the 18 to 29-year-old age group, there were two interviewees; in the 30 to 49-year-old age group, there were three interviewees; in the 50 to 64-year-old age group there were four interviewees, and no interviewees in the 65 years and over age group. The management level of

the respondents varied; five were of the employee or contractor level, there were four middle managers, and one senior manager as shown in Table 15.

Table 15 Demographic Data of Interview Participants

Characteristic	Participants	%
<i>N</i>	10	100%
Gender		
Male	5	50%
Female	5	50%
Age		
18 -29	2	20%
30 -49	3	30%
50-64	4	40%
65+	0	0%
Level of Management		
Employee/Contractor	5	50%
Middle Manager	4	40%
Senior Manager	1	10%

Source: Survey and Semi-structured Interviews

4.5.1 Performance Perception

Performance perception is defined as the belief held by the individual that using WbF will assist them in carrying out their job. All interviewees had used WbF. The response to the questions regarding WbF's assistance in carrying out their job was mixed; some interviewees provided examples of how it had helped to gain information and directly or indirectly to assist them in their job functions. Alternatively, others saw using the system as time-wasting and detracting from completing their work functions.

"I had a problem with my email when it was upgraded after-hours, I reported it on Workplace at night and got it fixed."; *"My team has used it to raise the profile of the team, by posting our achievements."* Respondent A, Male, 30-49, Middle Manager

"I use Workplace to get to a lot of people in an easy way, to get a mass message out quickly." Respondent J, Female, 50-64, Senior Manager

Opposite comments included: *“You don’t need to have workplace going off in the background, you lose track of what you are doing.”*; *“It’s not an effective tool because there are no rules.”* Respondent H, Male, 50-64, Middle Manager

One interviewee advised that there was a group which didn’t use Workplace: *“They dislike using it”*; *“I feel like they think it is not professional to be using it.”* Respondent E, Female, 18-29, Employee.

Most of the interviews used WbF in performing their work. Those who liked and used WbF either via the app on their phones or their desktop or laptop computers were from all age groups, management level, and sex. Users used it to obtain or provide information and were, overall, successful in gaining information from it. Those who disliked WbF - three males in the 30-64 year-old-age group - still had used it to gain information, or share information and were successful. However, they had a sense that it was ‘time wasting’ and using Workplace was not an appropriate task to be performing when they were at work. In relation to Hypothesis H1, the quantitative finding was supported, in that interviewee indicated that Workplace did assist individuals, directly or indirectly, in performing their work functions, even for three of the respondents who had a very negative attitude toward WbF.

4.5.1 Attitude

‘Attitude’ is defined as the positive or negative emotion towards the technology. ‘Attitude’ was discussed with the interviewees to determine whether they had a positive or negative feeling about using WbF. Most responses were positive, with some interviewees identifying positive feelings of enjoyment using WbF.

A positive emotion was conveyed by statements such as: *“I am surprised as to what a convert I am to Workplace.”*; *“I love the group, ‘Ask anything’.”* Respondent F, Female, 30-49, Employee

“I really like (the CEO’s) posts; they are really informative.” Respondent J, Female, 50-64-year-old, Senior Manager

Alternatively to the positive feelings of some of the interviewees others were unemotional and matter-of-fact such as: “*I just wait for the email notifications to come through, and then check it.*”; “*I am not sure if I have it (Workplace) on my phone.*” Respondent I, Female, 30-49, Middle Manager

In contrast, there were very strong negative responses to the technology, such as: “*People are just Liking shit! And posting crap, it turns into look at me!*”; “*People should just pick up the phone and ring me*”; “*I prefer to have the email, as evidence of the conversation.*” Respondent H, Male, 50-64, Middle Manager

The attitude of the respondents was therefore diverse; some were passionate about using it while others were ambivalent, and this was independent of sex, age or management level. However, three males - one in the 30-49-year-old age category and two in the 50- 64-year-old age category - conveyed very negative emotions toward WbF. The majority of interviewees had a positive emotion towards WbF, corroborating the H2 quantitative finding.

4.5.2 Social Influence

There was a variety of responses regarding ‘Social Influence’ and the degree to which interviewees perceived that it was important if others or colleagues in the organisation encouraged them to use WbF. Interviewees were asked whether they felt pressure from important others, such as their boss or work colleagues, to use WbF.

“*Pressure to (perform) ‘Liking’ it is one of my manager's metrics*”. Respondent H, Male, 50-64, Middle Manager

“*My boss and bosses, boss monitor it, so I do too*” Respondent B, Male, 50-64, Middle Manager

“*I encourage management to use it with a bit of competition between them.*” Respondent F, Female, 30-49, Employee

It was evident from the interviews that influencing by both peers and management occurred within the organisation which encouraged people to use WbF. The effect of the influencing was

mixed. Some interviewees admitted that influencing from others was why they used WbF. Yet others had definitely decided that they would not overly use WbF, despite identifying a tenor of social influence to use the system. The quantitative analysis indicates that there is a positive relationship between the use of WbF and ‘Social Influence’, and the interview responses support this finding.

4.5.3 Effort Perception

‘Effort Perception’ is the effort that the individual perceives is required to use the technology. The response from eight of the ten interviewees was that WbF was not difficult to use as they all had used Facebook.

“We knew how to use it in the beginning, but not what to use it for. Do I post about my dog on the weekend?” Respondent A, Male, 30-49, Middle Manager

“It’s an easy mechanism.” Respondent J, Female, 50-64, Senior Manager

All interviewees implied that WbF required little effort to use - the ease of use was a constant message from those who had both positive and negative emotions towards WbF. ‘Effort Perception’ amongst interviewees did not show much variation, in participant responses, which confirmed the quantitative finding.

4.5.4 Management level

Interview participants were asked if they believed that managers used WbF differently. The responses from the participants were mixed.

“No, I don’t think managers post differently”; “It’s an equaliser”; “Yes I encourage my staff indirectly (to use Workplace), by posting” Respondent J, Female, 50-64, Senior manager

“I think senior managers don’t do the ‘Liking’ it’s the team assistant, doing it on their behalf” Respondent G, Male, 50-64, Employee

“There was a general manager that would ‘Like’ everything, he was getting his stats up, by going in and ‘Liking’ everything.” Respondent G, Male, 50-64, Employee

From the interview responses, there is no clear indication whether managers use WbF differently from non-management staff within the organisation. Some respondents advised that their manager did use WbF differently; others believed they did not. The quantitative analysis shows no difference in the use of WbF between managers and non-managers.

4.5.5 Facebook use

Facebook use was discussed with interviewees to investigate further the relationship between Facebook and WbF. The respondents were asked: ‘Do you use Facebook in your personal life?’ Although at first some did not admit to using Facebook or social media in their personal lives, later in the interview they advised that they did use.

“I am not a Facebook user in my personal life” but later in the interview advised *“I use Facebook a little more now, we share photos (with overseas family)”*. Respondent J, Female, 50-64, Senior manager

“I’m not on Facebook, or social media” was later qualified by *“I used my wife’s Instagram to see what our son’s up to.”* Respondent B, Male, 50-64, Middle Manager

“When you’re at work right, you’re not going to go on your Facebook page your personal page, so I scratch the itch with Workplace.” Respondent E, Female, 18-29, Employee

Regarding the use of personal social media, eight of the ten interview respondents in the over 30 years of age category responded negatively to Facebook or personal social media use in their personal lives, even if they admitted they did use it. It appeared as if there was a stigma with which they did not wish to be tarred, attached to Facebook or social media use. The quantitative analysis only identified a relationship between the WbF function of ‘Liking’ and the Facebook function of ‘Liking.’

4.5.6 Age and sex

There were no interview questions about perceptions about use according to age or sex, of those who used WbF. Equal numbers of males and females were interviewed, with three of the

four age levels represented and all management levels represented. There was no discernible theme to use determined by age or sex, although one of the respondents advised it was more for young people. Two respondents, in the female 18–29 year-old age group had completely opposing views on WbF. Three males in the 30-64 year-old age group had strong negative emotions towards using WbF; no females identified any negative emotion towards using WbF.

“We don’t use it that often”; “Just use it for social things.” Respondent E, Female, 18-29, Employee

“Workplace is part of my role, I use it a lot to share information and create the newsletter from the posts.” Respondent D, Female, 18-29, employee

Two alternate respondents, male in the 50–64-year-old age group also had opposing views.

“I’m a heavy user [of WbF].” Respondent B, Male, 50-64, Middle Manager

“I only read it on the bus [to and from work].” Respondent G Male, 50-64, Employee

There was a perception voiced by one interviewee that WbF and social media were used more by young people.

“I find that the older people at work don’t use it, it’s more of the younger Gen-Y.”
Respondent E, Female, 18-29, employee

The interview analysis provided assorted data on the use of WbF by age or sex. It did not identify whether either sex or any age category were greater or fewer users than others. The quantitative data only indicated a difference in females, performing the function of ‘Liking’ in WbF; all other functions showed no difference in use across age or sex.

4.6 Conclusion

This chapter has analyzed the data related to the research questions and hypotheses detailed in Chapter 3, and it has answered the hypotheses detailed in Chapter 2. It has detailed the data collected via quantitative methods of the survey and WbF system usage data and the qualitative data collected via the semi-structured interviews. The conclusions, discussion, and limitations identified by this chapter’s data analysis will be discussed in Chapter 5.

Chapter 5 Discussion, Conclusion, and Implications

In this chapter, the findings of the research are presented and discussed. This chapter has six sections. Section one summarizes the earlier components of this thesis, including the research problem, issues and propositions. Section two provides insights into the research questions. Section three outlines the findings regarding the research problem. Section four discusses the implications of the research to theory and practice. Section five discusses the conclusions to the broad findings in this research. Section six offers the limitations to this research and further research areas in this field.

5.1 Introduction

The literature identifies enterprise social media as a growing organisational phenomenon that has productivity benefits to the organisation as well as implications for the work of employees. Research has identified that enterprise social media assists with effective and efficient collaboration, communication, and knowledge sharing (Leonardi & Meyer, 2015; Leonardi & Neeley, 2017; Robertson & Kee, 2017). To gain the benefits of enterprise social media, employees within the organisation need to adopt and use the software. Understanding what influences individuals to use the software can assist in increasing the usage and in turn gain the benefits that it affords.

5.1.1 Research Problem

The focus of this research was to explore the nature of individuals' influences and drivers in using the enterprise social media application, Workplace by Facebook (WbF), in a large Australian organisation. To investigate and understand the reason for their use of WbF the factors of the Unified Theory of Acceptance and Use of Technology (UTAUT) model (Venkatesh et al., 2003) have been used. The research explored whether the drivers and influences of technology associated with traditional enterprise systems were also applicable to WbF.

5.2 Findings on the Hypotheses

This section considers the literature discussed in Chapter 2, and the data analysis performed in Chapter 4 and derives insights to the hypotheses in this study. This research addresses the hypotheses based on the factors of ‘performance perception’, ‘attitude’, ‘social influence’, ‘effort perception’, ‘management level’, ‘Facebook experience’, ‘age’, and ‘sex’ and their relationship to use of WbF. The research finds that the factors of ‘performance perception’, ‘effort perception’, ‘social influence’, and ‘attitude’ have an impact on WbF use. However, the factors of ‘age’, ‘sex’, ‘management level’, and ‘Facebook experience’ have far less impact.

5.2.1 Performance Perception

This study inquires into the relationship of ‘performance perception’ and the use of WbF by the individual in the organisation. ‘performance perception’ is the belief that using WbF will help them to perform their job (Venkatesh et al., 2003). The results of the data analysis indicate that there is a relationship between the individual's use of WbF and this belief. The greater the belief held by the individual that the WbF will assist them to perform their job, the greater their use of WbF.

The positive relationship between ‘performance perception’ was evident across all the WbF Functions of ‘Liking’, ‘Commenting’ and ‘Posting’. However it is strongest for the WbF function of ‘Liking’ and least for the function of ‘Posting’. The multiple regressions analysis identified that ‘performance perception’ was the greatest predictor of WbF use, out of all the factors in the study and was strongest for the WbF function of ‘Liking’ and least for the function of ‘Posting’.

This finding was reflected in both the quantitative and qualitative analysis of the individual's ‘performance perception’. All interview participants were able to name a work function which had been facilitated by their use of WbF and examples included: obtaining information about the organisation in the media; acknowledging staff for good work, and having technology issues resolved. This finding supports the UTAUT model, that the factor of

‘performance perception’ has a relationship between the individual’s use of technology in organizations and assisting them in performing their work.

5.2.2 Attitude

Existing research identifies that ‘attitude’ towards technology was correlated with its usage (Davis, Bagozzi, & Warshaw, 1989; Dwivedi et al., 2017; Venkatesh et al., 2003). The more positive the individual’s attitude towards using the technology, the higher its actual usage. The workplace functions of ‘Liking’ ‘Commenting’ and ‘Posting’ all had a positive relationship with ‘attitude’, with ‘Liking’ being the highest positive relationship in the quantitative analysis. Performing the function of ‘Liking’ requires the least effort. The multiple regression analysis identified that ‘attitude’ had no statistically significant relationship with any of the WbF functions.

The qualitative analysis confirmed there were strong opinions, both positive and negative, held about individuals’ attitude to using WbF. The five females interviewed identified positive or neutral emotions toward the use of WbF. Two of the five males interviewed held slightly positive emotions towards using WbF; three of the males interviewed held very strong negative emotions toward using WbF. A further independent samples t-test was performed between ‘attitude’ and ‘sex’. The results show that males and females do differ statistically in ‘attitude’, $t(127) = -3.94, p < .001$, the mean ‘attitude’ for females was ($M = 5.74, SD = 1.30$), compared to males ($M = 4.72, SD = 1.62$). These results suggest that sex and age do influence individuals’ attitude towards using WbF, but not the actual use. The relationship between ‘sex’ and ‘attitude’ is significant ($r = .330, p < .05$) and the relationship between ‘age’ and ‘attitude’ is significant ($r = -.187, p < .05$). That is, individuals are still using WbF to some degree, even if they have a neutral or negative attitude toward WbF.

This finding on ‘attitude’ is consistent with current research’s mixed findings on the use of traditional enterprise systems and technologies. It has previously been shown that individuals who have a positive attitude towards the technology have increased usage, but that attitude is not a strong predictor of use (Dwivedi et al., 2017; Venkatesh et al., 2003). Venkatesh et al. (2003) did

not include it in the original UTAUT model but it has been included in later research (Dwivedi et al., 2017).

5.2.3 Social Influence

The factor of ‘social influence’ measures the effect of others in the organisation on individuals using the technology (Venkatesh et al., 2003). The survey average for ‘social influence’ was 5.18, suggesting that there is a relatively high level of influence from within the organisation to increase use of WbF. However, correlations between ‘social influence’ and WbF functions showed only a modest influence on ‘Liking’ (.23) and no significant correlation for ‘Commenting’ or ‘Posting’.

The qualitative analyses identified evidence of attempts by others to increase individuals’ use of WbF. The qualitative research identified that perceived influences included the belief that their manager had measures, targets and KPI’s (Key Performance Indicators) on the number of ‘likes’ the staff and manager performed.

5.2.4 Effort Perception

‘Effort perception’ is defined as the amount of effort that the individual perceives must be expended to use the technology (Venkatesh et al., 2003). The UTAUT model predicts that individuals who perceive that less effort is required to use the technology are indeed more likely to use it. Data analysis confirmed this. This finding was most evident with the function of ‘Liking’, which requires least effort to perform. In contrast the lowest correlation was with ‘Posting’, which requires the most effort. The results of the multiple regression analysis did not indicate that ‘effort perception’ was a predictor of use of ‘liking’, ‘Commenting’ and ‘Posting’.² The qualitative analysis identified that WbF and its functions were easy to use, and that individuals knew how to

² Only Model 3, with two factors predicted ‘Liking’ as statistically significant.

use it when it was implemented for use in the organisation. Overall, participants in this research found WbF required little effort to use.

5.2.5 Management Level

Industry analysis suggests that the management level of individuals is a factor in the use of enterprise social media (LockLee, 2018). No evidence from the quantitative (correlations and multiple regression) or qualitative analysis in this research indicates that managers' use of WbF functions is different to non-managers'. While managers have different functions to perform from non-managers, there is no indication that they are use WbF to carry out these different functions.

5.2.6 Facebook Use

Facebook, the provider of WbF, states that one of the benefits of WbF is that it has the same functionality and layout as Facebook, the widely used personal social media software (Facebook, 2016). Facebook use, and the WbF function of 'Liking' do have a positive relationship ($r = .21$). This may be influenced by the ease with which the function of 'Liking' can be undertaken, and the similarity between Facebook and WbF. The individual's habit may also be an influence in the relationship between performing the 'Liking' function in WbF and Facebook.

In the interviews, participants who had high use of WbF did not report a high use of Facebook. In other words, high-use WbF individuals did not associate the two applications as being similar. However, those who did not use WbF believed that WbF and Facebook were similar and that WbF did not have a strong organisational purpose. These results indicate that WbF's similarity to Facebook may have assisted with individuals in knowing how to use WbF and its functions, but it did not drive the use of WbF in the organisation.

Both quantitative and qualitative research have identified a negative sentiment toward Facebook. Participants were hesitant to identify as a Facebook user in the semi-structured interviews. This negative sentiment towards Facebook is also seen in the survey responses in two questions about self-rated of personal social media in comparison to their use of Facebook. 21 respondents advised they 'Strongly Disagreed' that they used Facebook often, compared with nine

respondents who ‘Strongly Disagreed’ that they used personal social media often. These results suggest a strong negative sentiment held in general by participants towards Facebook.

5.2.7 Age

Personal social media usage is different across age groups, with younger people more likely to use personal social media (A. A. Smith, M, 2018). The UTAUT model indicates that age is a moderator and influences use, but this research does not support that finding. There is no statistically significant finding that age is a factor in the use of WbF functions. The age categories in this research did not indicate younger people are more likely to use WbF. The research, both qualitative and quantitative, suggests that individuals of any age will use WbF when they perceive it will assist them in performing their job functions.

5.2.8 Sex

Industry research identifies that sex is a factor in the use of Facebook with females more likely to use it. However, in the use of LinkedIn, a work-related social media, this is not the case (A. A. Smith, M, 2018) as both males and females use it equally. The UTAUT model (Venkatesh et al., 2003) identifies sex as a moderator in the use of enterprise technologies. The statistical analysis in this research does not identify a difference in use between males and females for any of the WbF functions of ‘Liking’, ‘Commenting’ or ‘Posting’. However, while not statistically significant, the WbF function of ‘Liking’, was used on average, approximately 100% more by females ($M = 163$) than males ($M = 83$).

5.3 Conclusions to the Research Problem

In this investigation of the influences and drivers of individuals in the organisation using the enterprise social media software, Workplace by Facebook (WbF), two notable findings were identified. One finding is that the major factors of the UTAUT which apply to traditional enterprise systems also apply to WbF, with the major drivers for use being that: WbF assists the individual to perform their job (‘performance perception’); individuals like using the technology (attitude),

and that individuals using the technology perceive that it requires little effort to use (effort perception).

The second notable finding was the strong negative association of Facebook. Stigmata of time wasting, frivolousness, and bad behaviour were identified in qualitative research associated with Facebook use. This research finds that an individual can extend this perception of Facebook to WbF and that it may, in turn, inhibit their use of WbF. The negative perception of Facebook is likely to be a unique problem for WbF as the technology was adapted from people's personal lives and transferred to organisations. This is unlike traditional enterprise software which has been developed specifically for use in organisations.

The qualitative research identified that individuals within the organisation who see WbF as differing from Facebook are more likely to use it. The analysis in this research indicates that individuals in the organisation have different drivers for their use of WbF to the drivers of use for Facebook. This finding makes a unique contribution to the body of knowledge in the field of enterprise social media use and Workplace by Facebook use.

5.4 Implications

This study advances the understanding of individuals' use of WbF in the organisation both theoretically and practically and extends the Unified Theory of Acceptance and Use of Technology, (UTAUT) (Venkatesh et al., 2003) by applying the theory to the enterprise social media application, WbF. While the model was adapted for this research, the UTAUT factors of 'performance expectation', 'social influence', and 'effort expectancy', did correlate to the use of the WbF. Individuals in the organisation used WbF to gain the same benefits as from other technologies in the organisation and the use of WbF could be predicted by the UTAUT.

5.4.1 Implications for Policy and Practice

This research identifies that individuals use WbF as a tool to assist them in performing their job functions. Consequently, conveying the benefits to individuals that using WbF can improve their performance at work may assist in encouraging its use. Communication initiatives could be

undertaken by the organisation to encourage staff to use WbF as a valid work tool and that time using the application is productive and not time wasting or bad behaviour by the organisation's management.

5.4.2 Private Sector Organisations and Management

There is the potential to increase the use of WbF and further gain the benefits of its use if the negative perceptions of the users are addressed. If the organisations and their management can change the individual's perception that WbF differs from Facebook and is appropriate to use in the organisation, WbF usage could be increased.

Developers of enterprise social media applications generally could also use the knowledge obtained from this research to adjust their marketing and promotion of the software. The promotion of enterprise social media should include its benefits in performing job-related tasks. The difference between personal social media and enterprise social media should also be highlighted. Ensuring that the enterprise social media software is perceived to assist the individual in performing their job functions and requires little effort to use will assist in its adoption and use.

5.5 Limitations of the Research

The study uses both qualitative and quantitative methodologies to investigate the research question, drawing on the benefits of both. The organisation in the study was one of the largest users of WbF in the world, offering a rich source of data. However, the study was confined to one organisation, in one geographic location. Research across a variety of industries could add further insights into WbF use.

The Survey was distributed via WbF, so many of the respondents to the survey had to be browsing the 'newsfeed', in WbF to view and access it. Requiring the respondents to be using the application could influence the representation of respondents to include a greater percentage of regular users of WbF.

Technology affords the ease of presenting a professional survey via online survey applications and presents it to many recipients with little effort. However, the recipients are still required to complete the survey. The organisation in this study was very generous with their time and support for this research to be undertaken. However, several challenges external to the research were experienced. The survey was delayed as the organisation had their annual 'Employee Response Survey' and their 'IT Feedback' survey issued in the same timeframe. Due to the number of surveys, the organisation had concerns about 'survey fatigue' among staff and requested that the survey be delayed some months.

This research survey was issued at a time when the organisation was undergoing a major organisational restructure. As a result, many employees were focused on their positions in the organisations, the new departments they were to be working in, and their new management. Coupled with the restructuring, a new Chief Executive Officer was announced and instated. These significant events in potential respondents' lives are likely to have had an impact on the number of participants responding to the survey. Extending the survey to a greater number of participants and more interviews would help to increase the power and validity of the findings. While the limitations of this research are identified and acknowledged, the findings of this research are still valid and relevant and contribute to knowledge on the use of WbF.

5.6 Areas for Future Research

Enterprise social media is still a new phenomenon in research and industry and offers many opportunities for further research, development, and innovation. Research theories used to study personal social media could also be extended to enterprise social media and WbF. Some popular research areas in personal social media are personality types (Burke & Kraut, 2016; Ross et al., 2009) and tests are often carried out on personal social media users to understand their use and relationship to personality types. Thus, possible future research could focus on WbF use and personality types. For example, extroverts may be more likely to 'Comment' and 'Post' than introverts.

Employee performance and job satisfaction and the relationship with WbF use may provide additional insights into the nature of WbF use, as has been indicated by previous research (Alimam et al., 2015; Charoensukmongkol, 2014; Hanna et al., 2017). For example, enterprise social media use is correlated with higher employee performance. Future research could examine whether WbF drives performance or whether, conversely, higher performers are more likely to use WbF. Similarly the correlation between job satisfaction and enterprise social media use could be further explored, focusing on WbF.

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Appendix A

Survey

Welcome to the Workplace study!

We are interested in understanding your use of Workplace by Facebook at NBN, and your participation would be very much appreciated. You will be presented with a number of statements relevant to Workplace and you will be asked to record your response. Please be assured that your responses will be kept completely confidential.

This survey should take you less than 5 minutes to complete. With your consent, the responses you provide in this survey will be matched with your Workplace usage data from WbF. If you would like to contact the Principal Investigator in the study to discuss this research, please e-mail jacqueline.dinklo@hdr.mq.edu.au. This research is being conducted to meet the requirements of a Master of Research Degree, and potential progression towards a Ph.D. at Macquarie University. By clicking the button below, you acknowledge that your participation in the study is voluntary, you are 18 years of age or over, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason. The completion of this survey denotes your consent. Please note that this survey can be completed on a laptop, desktop or mobile phone.

- ☐ I consent, begin the study
- ☐ I do not consent; I do not wish to participate

Q1 We would like to better understand your personal view of Workplace by Facebook, please select the response that best reflects your view

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
I find Workplace useful in my job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using Workplace enables me to accomplish tasks more quickly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using Workplace increases my productivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using Workplace will increase my chances of getting a pay increase or promotion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My interaction and use of Workplace is clear and understandable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is easy for me to become skillful at using Workplace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find Workplace easy to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning to operate Workplace is easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using Workplace is a good idea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workplace makes work more interesting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Working with Workplace is fun	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like working with Workplace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who influence my behaviour think that I should use Workplace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who are important to me think that I should use Workplace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The senior management of NBN Co has been helpful in the use of Workplace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In general, the organisation has supported the use of Workplace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2 We would also like to understand your personal experience with Workplace by Facebook, please select the response that best reflects your experience.

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
I have the resources necessary to use Workplace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have the knowledge to use Workplace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workplace is compatible with other systems I use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A specific person (or group) is available for assistance with Workplace difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel apprehensive about using Workplace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It scares me to think that I could share information that could be misinterpreted using Workplace by hitting the wrong key	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I hesitate to use Workplace for fear of making mistakes I cannot correct	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workplace is somewhat intimidating to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I browse Workplace often	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I 'Like' Posts and Comments in Workplace often	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I 'Comment' on Posts and Responses in Workplace often	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I 'Post' on Workplace often	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use Workplace often	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use Social Media in my personal life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use Facebook in my personal life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3.1 Please select the option that best describes your department

- ☐ Corporate Affairs
- ☐ Engineering
- ☐ Finance
- ☐ Human Resources
- ☐ Information Technology
- ☐ Legal
- ☐ Operations
- ☐ Strategy

Q3.2 Please select the option that best describes your role at NBN

- ☐ Employee or Contractor
- ☐ Middle Manager
- ☐ Executive Manager

Q3.3 Sex

- ☐ Male
- ☐ Female

Q3.4 Please select your age category

- ☐ 18 to 29 years
- ☐ 30 to 49 years
- ☐ 50 to 64 years
- ☐ 65 + years

Q3.5 To match your survey answers to your Workplace usage can you please provide your email address.

Q3.6 I would be happy to be contacted to take further part in this study

- ☐ Yes
- ☐ No

Appendix B

Workplace Application Usage Data

Data given for a set, 3-month period - June, July, August 2018

Number of 'Likes' given by each participant.

Number of 'Comments' given by each participant.

Number of 'Posts' created by each participant.

Interview Guide

Step 1: Explain the research background information

Step 2: Explain and request consent with signature

Step 3: Record interview, ask interview Questions.

Semi Structured Interview Questions

1. What was your reaction when the Organisation asked you to use Facebook Workplace?
2. Has your opinion on Facebook workplace changed since you first started using it?
Why?
3. Do you find Workplace by Facebook useful? Why?
4. How would you describe the training / communication on using Workplace? Were there any policies / guidelines on what to post? When / how to use it?
5. What do you mainly use it for?
6. Has it helped you do your job? Solve problems, find people / information?
7. Would you like to see more, or less posts?
8. Do the posts reflect the culture of the organisation as you see it? How? In what way?
9. Are you a big user of Facebook outside of work?
10. Is there anything else you would like it used for?
11. What's the best post you have seen?
12. What posts do you not like?
13. Is there a better way of seeing Workplace information?

Appendix D

Items used in estimating the UTAUT Factors

UTAUT Factors	Survey Items
Performance Expectancy/Perception	1. I find Workplace useful in my job. 2. Using Workplace enables me to accomplish tasks more quickly 3. Using Workplace increases my productivity 4. Using Workplace, will increase my chances of getting a pay increase or promotion
Effort Expectancy/Perception	5. My Interaction with the Workplace is clear and understandable 6. It is easy for me to become skilful at using Workplace 7. I find Workplace easy to use 8. Learning to operate Workplace is easy.
Attitude toward using technology	9. Using Workplace is a good idea 10. Workplace makes work more interesting 11. Working with Workplace is fun. 12. I like working with Workplace
Social Influence	13. People who influence my behaviour think that I should use Workplace 14. People who are important to me think that I should use Workplace 15. The senior management of NBN Co has been helpful in the use of Workplace 16. In general, the Organisation has supported the use of Workplace

Appendix E

Pearson's Correlations

		Performance Perception	Attitude	Social Influence	Effort Perception	Management Level	Facebook Experience	Age	Sex	Liking	Commenting	Posting
Performance Perception	Pearson Correlation	1	.788**	.543**	.625**	-0.092	.269**	-0.069	.178*	.453**	.361**	.296**
	Sig. (2-tailed)		0.000	0.000	0.000	0.300	0.002	0.438	0.044	0.000	0.000	0.003
	N	133	133	133	133	129	133	129	129	97	96	96
Attitude	Pearson Correlation	.788**	1	.542**	.694**	-0.148	.355**	-.187*	.330**	.447**	.274**	.242*
	Sig. (2-tailed)	0.000		0.000	0.000	0.094	0.000	0.034	0.000	0.000	0.007	0.017
	N	133	133	133	133	129	133	129	129	97	96	96
Social Influence	Pearson Correlation	.543**	.542**	1	.520**	-0.060	.196*	0.074	.211*	.228*	0.153	0.117
	Sig. (2-tailed)	0.000	0.000		0.000	0.497	0.024	0.406	0.016	0.025	0.136	0.254
	N	133	133	133	133	129	133	129	129	97	96	96
Effort Perception	Pearson Correlation	.625**	.694**	.520**	1	-.209*	.365**	-0.169	.345**	.437**	.308**	.280**
	Sig. (2-tailed)	0.000	0.000	0.000		0.017	0.000	0.055	0.000	0.000	0.002	0.006
	N	133	133	133	133	129	133	129	129	97	96	96
Management Level	Pearson Correlation	-0.092	-0.148	-0.060	-.209*	1	-0.035	.179*	-0.102	-0.115	0.051	-0.024
	Sig. (2-tailed)	0.300	0.094	0.497	0.017		0.696	0.043	0.249	0.261	0.623	0.814
	N	129	129	129	129	129	129	129	129	97	96	96
Facebook Experience	Pearson Correlation	.269**	.355**	.196*	.365**	-0.035	1	-.208*	.187*	.213*	0.017	0.108
	Sig. (2-tailed)	0.002	0.000	0.024	0.000	0.696		0.018	0.034	0.037	0.868	0.296
	N	133	133	133	133	129	133	129	129	97	96	96
Age	Pearson Correlation	-0.069	-.187*	0.074	-0.169	.179*	-.208*	1	-.193*	-0.175	-0.028	-0.059
	Sig. (2-tailed)	0.438	0.034	0.406	0.055	0.043	0.018		0.029	0.086	0.789	0.568
	N	129	129	129	129	129	129	129	129	97	96	96
Sex	Pearson Correlation	.178*	.330**	.211*	.345**	-0.102	.187*	-.193*	1	.236*	0.044	0.143
	Sig. (2-tailed)	0.044	0.000	0.016	0.000	0.249	0.034	0.029		0.020	0.667	0.166
	N	129	129	129	129	129	129	129	129	97	96	96
Liking	Pearson Correlation	.453**	.447**	.228*	.437**	-0.115	.213*	-0.175	.236*	1	.747**	.648**
	Sig. (2-tailed)	0.000	0.000	0.025	0.000	0.261	0.037	0.086	0.020		0.000	0.000
	N	97	97	97	97	97	97	97	97	97	96	96
Commenting	Pearson Correlation	.361**	.274**	0.153	.308**	0.051	0.017	-0.028	0.044	.747**	1	.670**
	Sig. (2-tailed)	0.000	0.007	0.136	0.002	0.623	0.868	0.789	0.667	0.000		0.000
	N	96	96	96	96	96	96	96	96	96	96	96
Posting	Pearson Correlation	.296**	.242*	0.117	.280**	-0.024	0.108	-0.059	0.143	.648**	.670**	1
	Sig. (2-tailed)	0.003	0.017	0.254	0.006	0.814	0.296	0.568	0.166	0.000	0.000	
	N	96	96	96	96	96	96	96	96	96	96	96

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

* . Correlation is significant at the 0.05 level (2-tailed).

11/05/2018

Dear Dr Nesbit,

Reference No: 5201830423415 (Research Master Reference No.: 5201800260)

Project ID: 3042

Title: Management Technology: Use and Acceptance of the social Media platform, Workplace by Facebook within a large organisation.

Thank you for submitting the above application for ethical review. The Business and Economics Subcommittee have considered your application.

I am pleased to advise that ethical approval has been granted for this project to be conducted by Dr Paul Nesbit.

This research meets the requirements set out in the National Statement on Ethical Conduct in Human Research 2007 (Updated July 2018).

Standard Conditions of Approval:

1. Continuing compliance with the requirements of the National Statement, available from the following website:
<https://www.nhmrc.gov.au/files/nhmrc/file/publications/national-statement-2018.pdf>.
2. This approval is valid for five (5) years, subject to the submission of annual reports. Please submit your reports on the anniversary of the approval for this protocol. You will be sent an automatic reminder email one week from the due date to remind you of your reporting responsibilities.
3. All adverse events, including unforeseen events, which might affect the continued ethical acceptability of the project, must be reported to the subcommittee within 72 hours.
4. All proposed changes to the project and associated documents must be submitted to the subcommittee for review and approval before implementation. Changes can be made via the [Human Research Ethics Management System](#).

The HREC Terms of Reference and Standard Operating Procedures are available from the Research Services website:

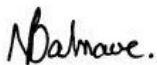
<https://www.mq.edu.au/research/ethics-integrity-and-policies/ethics/human-ethics>

It is the responsibility of the Chief Investigator to retain a copy of all documentation related to this project and to forward a copy of this approval letter to all personnel listed on the project.

Should you have any queries regarding your project, please contact the [Faculty Ethics Officer](#).

The Business and Economics Subcommittee wishes you every success in your research.

Yours sincerely,



Dr Nikola Balnave

Chair, Business and Economics Subcommittee

The Faculty Ethics Subcommittees at Macquarie University operate in accordance with the National Statement on Ethical Conduct in Human Research (2007), [Section 5.2.22].