ANALYSING THE PREPAREDNESS OF OFFICE MANAGEMENT & TECHNOLOGY GRADUATES FOR MULTITASKING IN THE WORKPLACE

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DECLARATION

I, Phumelele Precious Kubheka wish to declare that this dissertation is my own work and all sources used in this study were acknowledged.

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Student's signature **Date**

ABSTRACT

A number of studies have been conducted in relation to the preparedness of students for the workplace and particularly the role of Work Integrated Learning (WIL) in this preparation. However, fewer have specifically investigated the Office Management and Technology (OMT) student's preparedness for multitasking in the workplace, and none have been found to investigate this within a South African University of Technology.

The literature indicates that there are major causes for the increased use of multitasking[1] in the business workplace: the nature of work, working environment and skills required from employees by organisations have now developed and expanded. The office administrator in today's electronic office has to cope with a wide variety of electronic devices which often need to be used simultaneously and their work covers many more skills than were required in the past. Students with Office Management and Technology qualifications are now employed as office administrators, senior secretaries, and even as assistant managers. They are expected to have the ability to execute all duties that are within their job description and sometimes beyond their job description, and to be able to handle them within a limited time. Administrators who have multitasking skills are therefore preferred by employers and the literature shows that the multitasking skill is regarded as one of the most sought-after skills in the workplace.

The purpose of this case study was therefore to investigate the preparedness of Office Management and Technology students for multitasking in the workplace. To achieve a complete analysis the study used a mixed methods approach involving three questionnaires with both closed and open-ended questions, administered to 3rd year students who have had WIL experience; B Tech students /recent employees to provide

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Multitasking has been defined as the ability to undertake competently more than one task at the same time and multitasking success as 'the ability to draw on a wide range of cognitive functions when acting to achieve multiple goals' (Peterson, 2014:22).

a different perspective of experience gained; as well as WIL Supervisors who have supervised OMT students while on WIL.

Analysis of data revealed that students require additional knowledge before they go on WIL training to prepare them for multitasking, with a better understanding of the office environment. The study concluded that a curriculum upgrade is required involving increased use of practicals at undergraduate level, and that the universities need to work more closely with companies to determine what skills they require from Office Management and Technology students when they reach employment. The study recommends that the identified gaps should be addressed in order to improve students' knowledge and to upgrade their skills in multitasking and in time management in order to improve their performance in the workplace.

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LIST OF ABBREVIATIONS

DUT	Durban University of Technology
WIL	Work Integrated Leaning
OMT	Office Management and Technology
OA	Office Administrator
ND	National Diploma
UoT's	Universities of Technology
ICT	Information Communication Technology
ADT	Attention Deficit Trait
GPA	Grade Point Average
TUT	Tshwane University of Technology
VUT	Vaal University of Technology
MUT	Mangosuthu University of Technology
CUT	Central University of Technology
CPUT	Cape Peninsula University of Technology
IREC	Institutional Research Ethics Committee
HOD	Head of Department
SPSS	Statistical Package for Social Sciences

CHAPTER 1

CONTEXT OF THE STUDY

1.1 INTRODUCTION

South African Institutions of higher learning have recognised the importance of creating an Office Management and Technology course to empower and educate students to become office administrators. According to Judd (2014) students are required to have a realistic understanding of the challenges they may encounter in practice, hence it is becoming essential for students to be able to effectively and efficiently attend to multiple tasks in the workplace as this is increasingly expected of office managers (Peterson, 2014).

Multitasking has become a world-wide way of doing work, allowing multiple tasks to be handled during a specified period of time in most organisations (Jeong and Hwang, 2016). According to Madaan (2014) office administrators must be equipped to perform all required duties, sometimes simultaneously.

Organisations recruit employees for the purpose of generating an income for the business and therefore students would benefit from acquiring practical skills prior to being employed as office administrators. However, the Office Management and Technology curriculum which is the focus of this study does not have multitasking as a practical component in the undergraduate programme.

According to Stuart and Vance (2013) students who are unprepared or underprepared for multitasking fall behind in the working environment, while other studies conducted in this area indicate that there are often inadequate opportunities for students to study multitasking in the workplace (Jackson, 2015). In addition, it has been found that students themselves are often unclear as to how adequately the academic syllabus prepares them for this increasingly important skill prior to going out on WIL (O'Briain, Bergin, Bourgoin, Mooney, Murray and Zhao, 2013).

The research will therefore seek to identify the factors that influence the development of multitasking skills of Office Management and Technology graduates for the workplace and also suggest and recommend what should be done to address the challenges identified as facing OMT graduates in this regard.

1.2 DEFINITIONS

1.2.1 Multitasking

The term 'multitasking' was first coined in the computer engineering industry. In that context it represents the ability of a microprocessor (the brain of a computer) to process certain operations simultaneously to increase operational speed (Åström and Wittenmark, 2013:11). Subsequently the term has been used to describe the activity of performing multiple tasks during a specified time period (Dzubak, 2008).

When referring to individuals, the term multitasking means to engage in several tasks (either simultaneously or sequentially) (Loukopoulos Dismukes and Barshi, 2009). Some individuals have greater multitasking ability than others and are better able to perform multiple functions leading to successfully achieving multiple goals (Logie, Law, Trawley and Nissan, 2010). On the other hand, Shao and Shao (2012) maintain that people may have this ability but that accuracy can be compromised in the process and that accuracy is in fact more important than speed. This suggests that, for instance, a person working on an important document while also answering calls, is less likely to achieve accuracy than if concentrating only on the report.

1.2.2 Office Administration

Office Management or Office Administration is generally described as organizing and administering the auxiliary, day-to-day tasks of the front office that are included in the responsibility of an office manager (Cooper, Saunders, Winston, Hirt, Creamer and Janosik, 2013).

1.2.3 Office Management and Technology

Office management and Technology is a course offered at the Durban University of Technology and at other universities of technology. The course is preparing office administrators/managers for every organisation. The course is offered from a National Diploma level up to a Masters level in the Institution.

1.2.4 Work Integrated Learning (WIL)

Work integrated learning (WIL) has been defined in various ways, such as experiential learning, in-service training, or cooperative education. Work integrated learning is viewed as a component of undergraduate curricula which includes a practicum placement (Barkhuizen and Schutte, 2014:22-23).

1.3 THE IMPORTANCE OF PREPARING STUDENTS FOR MULTITASKING DURING WORK INTEGRATED LEARNING

WIL is training which students undergo in order to assist in becoming effective employees. It is understood that prior training, such as WIL, will enable the student to cope better with a workplace schedule (Von Treuer, Sturre, Keele and McLeod**,** 2010). WIL is ideally designed to equip students to acquire planning skills as well as time management skills, enabling them to finish more functions within a stipulated time according to Billet and Choy (2011).

Brink, Mearns and Du Plessis (2014) argue that WIL programmes are important in enhancing the soft skills as well as the technical skills of graduates. Some of the most prominent graduate skills identified by these authors include, amongst others, interpersonal skills, motivation and communication skills, business skills, Work Integrated Learning etiquette, and team spirit and cohesiveness, as well as the value of showing an interest in tasks assigned. Moreover, research has shown WIL programmes to contribute to the employment and retention of graduates within organisations (Jackson, 2015).

WIL has developed into a feature of higher education worldwide (Jackson, 2015). The skills acquired after WIL completion are described as 'employability skills', deemed critical and considered integral to undergraduate education (Freudenberg, Brimble and Cameron 2011). Students' preparedness for excellent performance in the workplace impacts on the partnership between higher education and industry. This partnership is also essential for designing a curriculum which is responsive to the needs of both community and organisations (Smith, 2012). Increasingly this involves skills in multitasking.

1.4 CONTEXT

In organisations managers traditionally performed single tasks until finished and then moved on to the next task. Some tasks would be delegated to secretaries who would also perform each task until finished. Now administrators' work is changing due to both the rapid increase in technology (and the related skills needed) and to fewer secretaries or administrators being employed now that some of their former duties, especially involving typing, are done by managers themselves, Administrators are therefore required to do more challenging work, to have a wider range of skills and duties and often to undertake these concurrently (ASAP, 2014).

A study by Rosen, Carrier and Cheever (2013) found that office administrators are frequently required to multitask. However, they also found that in some organisations producing more products to make greater income for the company was seen as more important than checking the accuracy of production. Therefore multitasking has become the priority understood to bring more income to organisations but potentially negative aspects are also important to consider. One recent experiment appears to provide strong evidence that multitasking can be counterproductive, particularly when at least one of the tasks involves higher level conceptual learning skills (Jeong and Hwang, 2016). These authors suggest that graduates may therefore not be required to be dependent on multitasking only but also to be proactive in handling the duties assigned in the most productive way.

Similarly, a study by Peterson (2014) revealed that there is a lack of knowledge about the current situation in sectors of the South African business world concerning the problems associated with multitasking skills. Leach (2014) finds that most employees currently believe that multitasking is the key to effective completion of tasks, while time management and planning are less of a focus in work environments. However, Leach argues that, from his project manager's experience, acquired over 30 years, multitasking is seldom the key to greater productivity. He believes instead that employees need time management skills to compete tasks successfully. Peterson (2014:103) agrees that while employees should be made aware of the circumstances of multitasking, they should be aware of using planning as well as time management in the daily routine.

It is clear therefore that employees require prior training as to the most efficient ways to perform multiple work duties that they will encounter. Therefore, this study focuses on the preparedness of students for multitasking, particularly Office Management and Technology students and graduates at the Durban University of Technology.

1.5 RESEARCH PROBLEM

The daily routine of an office administrator in the past would have included reading mail (not on the computer but the actual in-basket on the desk for memos and new items that have arrived) as well as completing routine tasks that needed to be done in a more or less sequential fashion (Oswald, Hambrick, Jones and Ghumman, 2007:96). This has changed as the advent of modern technology in recent decades has increased not only the number of interruptions experienced (through multimedia devices) but also raised expectations for higher levels of productivity (Lucas Jr, 2016:18).

The exact duties currently undertaken by an office administrator or office manager vary depending on the employer and level of education of the employee. Most duties of an office manager are performed electronically; and would normally include ordering and purchase approval of office supplies and services; hiring and supervision of front office workers; handling customer services; managing accounting functions; and often financial planning, analysing sales, and billing and recordkeeping along with physical distribution and logistics (Hines and Mercury, 2013:109).

It has been observed that administrators continually switch between different collaborative contexts throughout their day. According to Bongers, van Hove, Stassen, Dankelman and Schreuder (2015) activities that are thematically connected are referred to as work ranges and a study done by these authors shows that when multitasking, and coping with the resulting undesirable workload, individuals constantly have to renew overviews of their working spheres. They then have to strategize how to manage change between contexts flexibly, while maintaining concentration among their different working scopes. This range of duties clearly requires very careful planning and training.

The literature indicates that Office Management graduates are often not ready for this multitasking situation when they enter employment. This can be partly attributed to not being familiar with the terminology and practices used in the different sectors of industry (Judd, 2014). However, there is also clearly a role to be played by the university in

preparing students more generally for the kinds of multitasking that they are going to have to undertake in nearly all workplace situations.

Undergraduates are required to have a realistic understanding of the challenges they will encounter in practice in the work situation. Some undergraduates do not anticipate the busyness of the workplace or the level of (or lack of) supervision offered, and new graduates often experience challenges in relation to role conflict and role clarity. Challenges also include ethical conflicts, as well as uncertainty regarding professional conceptions of their work. On the other hand, Heng (2014) indicates that some graduates feel that their self-perceptions of being a professional are challenged by the routine activities they are expected to perform in practice, while others reported frustrations at other professionals' misconceptions of the WIL student's work role. This research will investigate whether WIL students experience these routine activities and also the differences between these experiences and the new employees' experience.

Graduates are often challenged by organisations that place an emphasis on instrumental rather than process skills, and Anderson, Hardy and Lesson (2010) argue that they should be made aware of the transitions needed to work in industry. A mismatch between the values and practices of new graduates and other colleagues, and organizational culture, has also been found to be challenging for some. Another difficulty is that a busy workplace makes it more difficult for new graduates to find time to reflect on their practice, particularly when required to multitask in order to cope effectively. Information is lost during interruptions and, because multitasking creates a higher memory load, where decisions are made under time pressure with incomplete information, mistakes often occur (Heng, 2014). Cavalcante, Cardonha and Herrmann (2013) have also observed that when workers switch their activities frequently, they have difficulty when resuming tasks that are interrupted.

It is therefore still not clear if OMT graduates can multitask or how well they cope and how they can best be prepared for this situation particularly in a South African context. Growth and expansion of communication technology has created a multitasking

generation of students, who believe they are utilizing time more effectively by performing two or more tasks simultaneously (Ellis *et al*, 2010), while experts agree that multitasking in the workplace should be minimised in order to prevent mistakes and potential accidents, as well as undue mental strain (Otto, Wahl, Lefort and Frei, 2012).

Graduates have stated that they would prefer to have discipline-specific teaching for multitasking (both theoretical and practical) while at the University. Practicals would be done where students can use work equipment and be given tasks that will allow practice in multitasking. They believe that incorporating this into their curriculum will assist in obtaining experience and ultimately also employment. However not only is it important to identify "what to teach" but it is also necessary to know "how to teach it". Schools often examine test data to guide plans for what to teach (Blanc, 2017:135). However research is still not clear as to whether OMT graduates can multitask or how well they coped, and how they could best be prepared for this skill.

1.6 OFFICE MANAGEMENT AND TECHNOLOGY CURRICULUM

South African Institutions of higher learning have recognised the importance of creating an Office Management and Technology course to empower and educate students to become administrators. Office Management and Technology is a course that is offered in five of the six Universities of Technology in South Africa. The Office Management and Technology National Diploma, B Tech and M Tech are the courses offered to students at the Durban University of Technology. The National Diploma is a three-year course and students can then register for B Tech in the fourth year. Students are taught the following subjects in the National Diploma: Business Administration, Information Administration, Legal Practice, Personnel Management, Communication, Financial Accounting, Labour and immaterial law. At B Tech level where students are now graduates, they are taught Labour Law, Organisational Behaviour, Business Administration, Information Administration and Research Methodology. A theoretical section of multitasking is covered in the Organisational Behaviour subject at the B Tech level but it is not included in the undergraduate curriculum.

In the final year of study in the National Diploma at the Durban University of Technology (DUT) students have to undergo six weeks of WIL as a required component of the syllabus, in order to complete the National Diploma. Students perform office work and are given experience in order to acquire competencies. They are required to complete a log book of the hours worked, and the student's supervisor in the workplace has to sign this. In addition, a supervisor from DUT visits the student at the workplace to get feedback on their behaviour and experience. At the end of the WIL period students are required to give a presentation at DUT of their WIL experience. Some complete a Work Site Project while on WIL and present it when back on campus.

1.7 AIMS AND OBJECTIVES OF THE STUDY

The aim of this study is to understand in greater detail the nature of multitasking currently required of final year students and graduates in a range of workplace situations in Durban with a view to making recommendations as to what aspects are not presently covered or not sufficiently covered in their Durban University of Technology (DUT) curriculum, including the WIL component of the curriculum.

1.7.1. Research Objectives

- To identify the variety and nature of the work-related tasks that Office and Management and Technology graduates are required to undertake in the workplace.
- To establish the degree of preparedness for multitasking of OMT third-year students while on WIL training and of recent graduates studying for B Tech who have previously completed WIL, and of whom half are already employed.
- To identify the factors that influence the development of multitasking skills of OMT graduates for the workplace;
- To recommend improvements/ developments within the OMT curriculum wherever necessary.

1.8 RESEARCH METHODS

The research was a case study conducted using mixed methods, that is, both qualitative and quantitative methods were employed. Purposive sampling was used to gather data to meet the objectives of the study. The measuring instrument of the study involved three sets of questionnaires: one for OMT students, one for B Tech graduate students and recent employees, and one for workplace/ industry supervisors. Each questionnaire consisted of closed–ended questions, with space provided for open-ended responses. The questionnaires employed statements to which respondents were asked to respond on a Likert scale from 'strongly agree' to 'strongly disagree'. Qualitative data was obtained from the open-ended questions in the questionnaires and the 'additional comments' sections provided at the end of each questionnaire.

1.9 SIGNIFICANCE OF THE STUDY

This study aimed to contribute to the improvement of the OMT curriculum in respect to the inclusion of elements of multi-tasking skills development. The researcher hopes that this research will encourage the OMT department to be aware of the need for the curriculum to empower students and give them a full range of currently required skills to use in the workplace, and particularly skills related to multitasking. The outcomes consist of the following: suggestions concerning the improvement of the curriculum, the enhancement of students' abilities to perform well in the workplace, the encouragement of a positive attitude on the part of both academics and students towards the WIL experience and the development of students' willingness to express themselves and to reflect on their abilities in a professional manner. The outcomes should also help towards the increase in students' practical skills and competencies to meet current workplace demands and to enhancing students' independence.

1.10 SCOPE OF THE STUDY

This study was conducted at the Durban University of Technology, Ritson Campus, and only focused on the OMT Department's 3rd and B Tech students. The case study also involved DUT workplace supervisors who were targeted to get their responses at to the students' performance while on WIL. This study could have relevance to similar institutions elsewhere, particularly other Universities of Technology in South Africa that offer Office Management and Technology.

1.11 THEORETICAL FRAMEWORK

A theoretical framework is a vital characteristic of the process of any research study. It can be made explicit or it may remain implicit. According to Saunders, Lewis and Thornhill (2009) research philosophy can be positivist or phenomenological or a grouping of both with each involving strong points and weaknesses. This case study combines quantitative and qualitative elements in the research design. Consequently, it is a combination of a positivist theoretical standpoint, which seeks to find the facts through verifiable measurable data, with a phenomenological or interpretivist framework which understands that human knowledge is socially built. The positivist paradigm informs the statistical analysis obtained from the questionnaires, and the interpretivist paradigm informs the analysis of data gathered from the opinions expressed within the open-ended questions within the questionnaires.

1.12 CHAPTER CONTENT

Chapter 1: Introduction

This chapter provides an introduction to the problem faced by OMT graduates relating to multitasking in the workplace. The reader is informed of the aims, objectives, and the limitations of the study. The reason for the need for this study is explained, the theoretical framework given and the chapter contents outlined.

Chapter 2: Literature Review

The literature review provides an overview of previous research on graduates' preparedness for multitasking in the workplace. The literature also covers evidence of the experience students receive in the workplace and how workplace managers feel about students' performance and their ability to adapt to this change. The chapter also explores documentary evidence of multitasking interventions in the curriculum at DUT.

Chapter 3: Research Methodology

The research methods and tools used in this study are described and justified. How the data was collected, where and from whom, and how the validity of the data was assured are explained.

Chapter 4: Analysis of Results

The purpose of this chapter is to present the findings from the surveys. The chapter describes how the data was processed. It is then analysed and interpreted.

Chapter 5: Conclusions and Recommendations

This final chapter of the dissertation contains the conclusions that were drawn from the findings in chapter four. It also includes the recommendations and provides suggestions for further research.

1.13 CONCLUSION

This chapter outlined the importance of the study and the various reasons as to the need for research to be conducted on this topic. It also covers an overview of the research methods employed, a description of the theoretical framework, and an outline of chapter content. The next chapter is a literature review which presents and discusses both primary and secondary literature sources related to this study.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Chapter one provided an introduction to this study. The research problem was identified and the aim of the study was presented together with the objectives of the study. This chapter will review the literature which supports the study. A literature review can be defined as the selection of available documents (both published and unpublished) on the topic, which contain information, ideas, data and evidence written from a particular standpoint to fulfil certain aims or express certain views on the nature of the topic and how it is to be investigated with an effective evaluation of these documents in relation to the research (Ridley, 2012). Blaxter, (2010) also explains that a literature review should demonstrate a fully professional grasp of the background theory of the subject.

This chapter will cover definitions of multitasking; the causes of the current increase in multitasking; the reviewed articles on the perceived benefits and the problems associated with multitasking and issues of good time management as a possible way forward. Other secondary sources, including curriculum documents produced by the Universities of Technology (UoTs) in South Africa and the specific current syllabus at Durban University of Technology (DUT) are also discussed.

A literature search has shown that while numerous previous studies have been carried out on the subject of multitasking, there is no study investigating how a UoT in South Africa currently prepares students for multitasking in the workplace.

2.2 DEFINITION OF MULTITASKING

According to Peterson (2014: 22) Multitasking can be defined as the ability to process multiple tasks or functions simultaneously – a situation with the potential to cause an interruption of work as a worker moves from one task to another. Multitasking has become prevalent for job design and is accepted behaviour in current workplace systems throughout the global marketplace. It takes place at home, at work and at school (Robbins, Judge, Millet and Boyle, 2013: 18). Au and Keir, writing in 2007, noted that multitasking had in fact become a central aspect of today's work-place indicating that this has been an important issue over the past decade. Multitasking ability is also differentiated from multitasking preference as follows: 'multitasking ability is a cognitive variable more likely to be related to working memory and information processing whereas multitasking preference is a non-cognitive variable which collates with personality (Sanderson, Bruk-Lee, Viswesvaran, Gutierrez and Kantrowitz, 2013: 30).

2.3 THE CAUSES OF THE CURRENT INCREASE IN MULTITASKING

A review of the literature has identified major causes for the increased usage of multitasking in the business workplace: the nature of work nowadays has changed in many ways – including the speed, technology, working environment and the skills required from employees. Many organisations are now formalising workplace programs that combine non-traditional work practices, settings and locations as technology has become essential to their operations. Unlike in previous eras, when organisations generally required a specific set of work tasks from each employee, one that could not be changed easily, employees currently change from performing one task requiring relevant skills, to performing other often requiring different skills.

The office administrator in today's electronic office has to cope with the combination of a wide variety of software programs including Internet and e-mail in order to produce high quality, professional documents. For instance, he/she may be required to integrate graphics and spreadsheets into an annual report and produce a finished product similar to that published by professional printers. Technology has also made business life

faster by nearly eliminating the waiting time to receive information. Smart phones, video conferencing and other technological devices create real time communication within seconds regardless of geography (Stewart, 2013). Furthermore, technology encourages a more collaborative environment by linking organizations' employees and consumers in real time (Kamal and Silva, 2013: 61).

Office administrators ideally should have creativity and the ability to fully apply all the advanced functions of computer software programs with related administrative duties. Zhang and Zhang (2012: 93) mention that multitasking is a common component of many job descriptions, is critical to current job demands and is also identified as a key competency in job analyses. Companies therefore usually employ candidates who have multitasking skills.

The working environment also has an impact on resources. Information Communication Technologies (ICT) may lead to an increase in production depending on the kind of information received, while some may decrease productivity if, for instance, employees engage in unproductive tasks not related to their job descriptions. Depending on the level of Information Technology knowledge of the employees, ICT may also have a major impact in increasing the level of performance in the organisation, or it can also have a very negative impact if their skills are not sufficiently advanced (Crews and Russ, 2012).

Wang, Irwin, Cooper and Srivastava (2015: 32) found that multitasking for most Americans has become a way of life and Americans have generally embraced multitasking as the key to success. Students are immersed in technology and, for example, it has been estimated that the average American between the ages of 8 and 18 spends more than 7.5 hours per day using a phone, computer, television or other electronic device (Willingham, 2010: 73). Other countries are not likely to be far behind. It has therefore become increasingly important to consider multitasking preferences in personnel selection.

Sanbonmatsu, Strayer, Medeiros-Ward and Watson (2013: 40) mention that although multitasking has become universal, the issue of its effectiveness for work, learning and play remains unclear. Buser and Peter (2012) argue that a job that does not need full attention can be done simultaneously with another one, like, answering telephone while photocopying. Some information may increase the level of performance in employees because ICT can provide employees with, for example, real time streaming, and the opportunity to perform more than one online duty at a time, and very much faster than before the technological age. At a more everyday level multitasking often allows us to perform tasks efficiently and effectively especially office workers and doctors who would be hard pressed to do their work if they were forcibly made to focus on a single task for an extended time. For example, Salvucci and Taatgen (2010) found that office workers would often have to answer incoming calls while sending an email; and a doctor may be discussing symptoms with a patient while writing a script and checking a patient's details on a computer.

2.4 GENDER AND AGE DIFFERENTIALS IN MULTITASKING

The Office Management and Technology course at the Durban University of technology is offered to both men and women although the great majority of the students who study it are female. It is generally understood that multitasking is more often undertaken by women than men in the workplace regardless of age (Sullivan and Gershuny, 2013). It has also been found that women do more multitasking at home than men, and that the gender gap in the household's labor is largest for the most intense type of multitasking (Ruiz, 2013). Despite this, a study by Mäntylä (2013) showed that males outperformed females in an experiment that monitored accuracy in multitasking. Females were fast but certain errors occurred, whereas males were a little slower but more accurate. A study by Buser and Peter (2012) also shows that it is not always correct that women multitask better than men, women also suffer from the pressure that men experience in multitasking. In Kenya women's employment levels are higher than men's, the perception being very prevalent, according to Oduol[1] and Mithöfer (2014), that women multitask better than men, while employers sometimes think more of productivity and less of accuracy. Other research however, for example Sanbonmatsu et al. (2013),

found no gender differences in the real world where multitasking was concerned. They found that it all depended on the individual's ability and individual performance skills in multitasking.

Similarly, it has been found that being young does not mean that you will necessarily be good at multitasking. Böckerman, Bryson and IImakunnas (2012: 7) state that it is within the individual's capacity although younger people's better memory can give them a greater ability to multitask. Another research provides evidence of a possible generational component in multitasking effectiveness, with a negative correlation between age and length of time to refocus on a task after interruption. However, the results were not conclusive in either case (Thornton, Faires, Robbins and Rollins, 2014).

2.5 CHALLENGES OF MULTITASKING

Despite the fact that each person has a range of resilience or the ability to meet and learn from, and not be crushed by, the challenges and stresses of life (implying that multitasking, being increasingly important, should be manageable) existing research reveals that multitasking is more likely to impact negatively on productivity, frequency of error, critical thinking skills, and the ability to concentrate (Wicks and Maynard 2014). Offer (2011) in fact concludes that the literature suggests that overall there may be more negatives than positives associated with multitasking.

Böckerman et al. (2012) found that multitasking in the work environment leads to a decline in productivity, and that it can be a formula for poor work, mismanaged time, rote solutions, stress and forgetfulness. This would seem to be explained by the recent findings of Alkubaisi (2015) that there are stubborn human mental limitations in the ability to simultaneously perform multiple tasks even in special population groups. Presently, graduates find the extra effort involved in multitasking inhibits their performance and may not be within their capabilities to perform successfully. The more worrying aspect perhaps is that nowadays students have adapted to the technologies in

ways that appear to have altered their brains so that they find it difficult to focus on one thing for a long period of time and multitasking engages them because it allows them to do several things at once (Laurillard, 2013). This may not however lead to successful learning. Students who focus on more than one subject at a time will not obtain the best marks as it is not an easy thing to switch from one task to another (Schultz-Jones, 2013). Khalid, Chin and Nuhfer-Halten (2012) found that a subset of students believed that multitasking during lectures does not interfere with academic performance. However, Yulianto, Heriyanni, Dewi and Adinugroho (2015) introduced a handheld computer for use in lectures, and a qualitative analysis of interviews with both students and lecturers showed that both parties did not recommend the use of these devices while listening to a lecture.

In a study by Russ and Crew (2014) multitasking behaviours were investigated on the grounds that multitasking has an impact on every organization. These behaviours were measured using, among other aspects: how long the respondent typically spent on work tasks uninterrupted, how long it took the respondents to refocus once interrupted, how frequent were responses to email, perceptions of how the workload was managed, what types of technologies were regularly used at work and had operating at one time, perceptions of the benefits of multitasking behaviours, ability to be productive and efficient while multitasking, perceived organizational support and expectations regarding multitasking and the extent to which work was brought home and personal issues taken to work. The results on a 5-point scale of agreement showed that participants were clearly able to concentrate better when working on one task at a time.

Again the effects of multitasking in the classroom were investigated in students in an upper level communications course. Two groups of students heard the same lecture and were tested immediately following the lecture. One group of students was allowed to use their laptops to engage in browsing and social computing behaviour during the lecture. Students in the second group were required to keep their laptops closed for the duration of the lecture. Students with the open laptops did less well on traditional

measures of memory for lecture content. A second experiment replicated this result (Wood, Zivcakova, Gentile, Archer, De Pasquale and Nosko 2012).

Many multitaskers are highly confident that frequent switching among tasks and media types improves rather than diminishes their performance. This is seen to be likely particularly among young children and teens who have grown up with technology and whose neural plasticity is relatively high (Courage, 2015). On the negative side however, according to Courage (2015: 65), multitasking is likely to be problematic for children whose executive functioning and attention control are immature. Multitasking has also been found to impact on productivity by consistently increasing the time required to complete a task when performing two or more tasks concurrently as opposed to staying with one task until completion (Adler and Benbunan-Fich, 2012b).

Therefore, while multitasking contributes to the illusion of productivity it often causes performance degradation (Adler and Benbunan-Fich, 2012b). Multitasking may even contribute to Attention Deficit Trait (ADT) which is characterized by distracted and rushed behaviour due to frequent task switching and resulting in sub-par performance and loss of concentration (Crews and Russ 2012: 69). Furthermore, multitasking and continuous partial attention can increase the frequency of error, increase stress levels and decrease the ability to concentrate and to make good decisions (Crews and Russ 2012:69).

People who multitask proved to be more inefficient than people who focus on one task at a time because our brains are incapable of performing two conceptual tasks literally simultaneously, the process of multitasking entails alternating rapidly among various projects (Schindler, 2015). When there is inconsistency between multitasking role requirements and multitasking preference; work anxiety, stress and discontentment arise. Such feelings increase employees' tendency toward work withdrawal and contribute to high employee turnover (Mesmer-Magnus, Viswesvaran, Bruk-Lee, Sanderson and Sinha, 2014).

Crews and Russ (2012: 69) mention that loss of productivity is due to interruptions and the concomitant time required to regain focus. It was calculated that interruptions take up more than two hours of the working day amounting to a cost of $588 billion a year to the U.S. economy. Judd (2013) found that multitasking caused an increased risk of content errors in emailing, involving errors such as misunderstanding a message, misstating one's own message or sending a message to the wrong recipient. In addition to these productivity and efficiency losses, there also were apparent effects on individual stress levels and work life balance as well as potential social repercussions (Junco and Cotten, 2012: 74). Administrators have to be cautious all the time when performing office duties. Workers who multitask experience voluntary and involuntary discontinuities in the execution of their tasks. Voluntary interruptions arise from self-imposed breaks in the flow of work to attend to other tasks, while involuntary ones originate from getting side tracked due to notifications from electronic devices and communication systems (Rogers, 2014: 77). Workers are often required to perform multiple tasks simultaneously which may reduce performance often contributing to elevated muscle activity to those performing multiple physical tasks with various levels of cognitive load (DiDomenico and Nussbaum, 2011). A critical factor here would be whether or not an employee can effectively juggle tasks without experiencing a significant decrease in performance and if there is a decrease, what factors cause it. Nowadays an office manager has a heavy workload to be completed, and while the office administrator may also be available to assist, administrators are not there all the time.

Russ and Crew (2014) found that managers carry out many tasks each day and that half the activities lasted less than nine minutes. Multitasking consistently indicated a significant increase in the time required to complete a task – when performing two or more tasks concurrently versus staying with one task until completion, the latter was done more efficiently and more quickly. A small, practical case study by Paridon and Kaufmann (2010) tested two situations which further illustrate this finding. In the first situation, the participants were asked to complete a driving simulation while simultaneously using a cell phone, a tissue, pulling change from a purse and reading

directions. In the second test the participants were asked to complete an office task. They had to spell check words displayed on a screen, while listening to a text message that they were to be quizzed on once they finished the simulation. The results for both situations (as expected) demonstrated poor coordination and indicated that these two situations both needed full attention from the individual.

The study by Russ and Crew (2014) found that there is a relationship between multitasking, individual differences and organizational outcomes. It was found that while multitasking behavior is occurring widely in the workplace, employees' perceptions about multitasking which are generally very positive, often conflict with their reported behavior which is less effective. The results indicate that the productivity losses from multitasking and interruptions are extensive.

A decade ago a study by Healy (2004) mentions that some overworked Americans had begun to suspect that multi-tasking, which they may have embraced as the key to success, is instead a formula for shoddy work and mismanaged time. Lee (2012) also advises that students should be encouraged to avoid doing an important task while doing other tasks because engaging in any mentally challenging task should be done on its own. The idea is that a person should preferably perform tasks individually or with a method other than multitasking, and that this is more efficient than multitasking itself (Spink, 2008: 28).

2.6 UNETHICAL MULTITASKING

Administrators have also to be aware of unethical behaviour towards colleagues or guests in the office when absorbed by personal emailing or social media. Benbunan-Fich (2012) explains that unethical multitasking usually occurs when technology devices are used at work. A distinction must be drawn between tasks that are directly performed as individual duties and the collective endeavours in which the individual participates. The image of people hiding behind their laptops working on other things during a meeting is also commonplace. This is the unacceptable side of multitasking. This is

unethical as it reduces the quality of work and the time actually spent on work-related tasks.

Poposki and Oswald (2010) mention that early research did not distinguish between multitasking ability (where employees are able to multitask) and multitasking preference (where employees sometimes chose to multitask to earn more wages) which may lead to unethical behavior. They found that some employees are unable to multitask but are forced to because companies are looking for higher productivity, although this may clearly be counter-productive. Also employees who prefer to multitask can mislead the company by performing unethical multitasking, apparently to increase production but not being, in fact, concerned about the quality of work performed.

Unethical behaviour can be encouraged when employees are under pressure to meet deadlines or to contact specified numbers of client meetings per day leading to cheating and misreporting. Unethical multitasking can therefore be caused by tangible or intangible barriers that have a significant impact in organisational performance (Prentice, 2015).

A study by Junco and Cotten (2012: 86) with Information and Communication Technology (ICT) students examined how multitasking impacted on their college grade point average (GPA).The results found that students are spending a large amount of time using ICTs on a daily basis and that they frequently switch for content not related their courses. This research shows that the type and purpose of ICT use matters in terms of the educational impact in multitasking. However, these researchers also found that emailing, searching and phone calls had no effect on GPA.

2.7 TIME MANAGEMENT AS POSSIBLE WAY FORWARD

Time management and multitasking work hand in hand. Time management is the act or process of planning and exercising conscious control over the amount of time spent on specific activities specially to increase productivity effectively (Chinchanachokchai, Duff

and Sar 2015: 189). A study done by Agypt and Rubin (2012) shows that organizations that allow employees to choose between multitasking and time management had a marked effect on job satisfaction. Employees who were not allowed to choose had lower job satisfaction levels than employees who could choose. Many researchers have noted that time management seems to be more effective than multitasking. An employee performing tasks individually, or with a method other than multitasking, has been found to be more efficient than the person using multitasking itself (Otto et al., 2012). Farooq and Abbasi (2015) find that recent work by sociologists have shown that the way workers view time is connected to social issues such as the institution of family and gender roles. According to Lusardi and Mitchell's (2013) study of time management, individuals need to first determine their needs and wants in terms of importance in order to prioritise tasks effectively. Time management and multitasking can play equally important roles in an administrator's work schedule.

Shao and Shao (2012) claim that each individual has a different capacity as regards to the amount of time that they can focus their attention effectively on a single task. Multitasking might only be an effective time-management strategy for people with a large memory capacity. (Ahmad, Yusuf, Shobri and Wahab, 2012) in discussing event management, mentions that time management is the essence of success for any event. The capability of an event organizer to schedule and follow the schedule of an event contributes to the good reputation of his/her organisation. However, Mitchell and Samms (2010) point out that the job performance of the event crew management depends on the ability of the team to achieve the required demands – that is beyond the expertise of the manager alone. The team has to be well-trained for specific individual tasks to be performed in order for them to be done successfully and accurately.

Time demands have a bigger role to play in each organization than ever before, and every employer and employee must have time management skills (Russ and Crews, 2014: 36). Whether these are seen as requiring multitasking, or the ability to move between tasks within a well-managed time management schedule, may not be easy to determine.

2.8 INDUSTRY TRAINING IN MULTITASKING

Buss, Wifall, Huzeltine and Spencer (2014) claim that behavioural studies now suggest that multitasking training improves the performance of each task, thereby reducing the interference that tasks create for each other. However, it has also been argued that training could lead to the recruitment of more employees to coordinate efficient multitasking! (Neely and Neyberg, 2014)

Cameron (2012) notes that within the hotel (hospitality) industry relationships with guests are progressively being assisted by technology. However, this requires a very wide range of skills from new staff, including the capability to interact at the same time with the guest and the computer. Students were measured as to how well they were prepared by hospitality training providers in New Zealand but the results showed that not all training providers were able to provide access to relevant software, and those that could were more likely to focus on how to use the individual functions of the software, rather than on simulating a realistic front desk environment experience.

Wasson (2004) states that multitasking can be effective once guidelines have been set up to be followed and that multitasking relies on a person's ability to focus and pay attention to the task at hand before moving to the next task. Morse (2014) states that multitasking ability may play an important role in performance at work for individuals with multiple thinking, and also multitasking preference, skills which enable students to work cooperatively in a variety of formats. It also needs an experienced teacher to generate a wide range of materials and activities efficiently. Mesmer-Magnus et al., (2014) found that multitasking preference predicted employee satisfaction and involvement in jobs that require multitasking, while Peterson (2014) found that multitasking can be utilized successfully to increase productivity metrics. However, there is an increased risk of communication and leadership obstacles and very few organizations offer training on how to multitask effectively.

2.9 ACADEMIC TRAINING IN MULTITASKING

Internationally, curriculum in universities is increasingly concerned with ensuring that graduates develop attributes which will better equip them for the world of work, and as members of society (Jones and Killick, 2013). It is interesting to note that Helyer and Lee (2014) mention multitasking specifically as a skill that ought to be included as one of the graduate attributes to be attained by an individual through tertiary education in administration courses. However, it has also been pointed out that multitasking is experienced better in practice then theory (Murdoch-Eaton and Whittle, 2012). Therefore, other researchers suggest that Universities should have a practical period where students will perform the kinds of office duties they will encounter before being placed in organisations (Vilapakkam Nagarajan and Edwards 2014). According to Blickley, Deiner, Garbach, Lacher, Meek, Porensky, Wilkerson, Winford and Schwartz (2013) graduates may be able to obtain appropriate training for non-academic tasks and also students must be well aware of what is required by the employer from them. Overall it is clear that nearly all responsible office administration posts require this skill at present, but that the UoTs in South Africa do not emphasise it in their syllabi (see below).

The study done by Walker, Yong, Pang, Fullarton, Costa and Dunning (2013) shows that students who are unprepared for multitasking fall behind in the working environment. Graduates are required to have a realistic understanding of the challenges they will encounter in practice, and therefore they should be prepared to attend to multiple work tasks with confidence. Industries have complained that learners/graduates are not prepared for the workplace (HESA, 2009). The findings indicate that employers expect higher levels of competence than those which graduates can deliver. However there is a lack of specific knowledge about the current situation in sectors of the South African business world concerning the problems associated with multitasking skills. Reviews of the current programmes need to be done (Zwane, Du Plessis and Slabbert 2014).

2.9.1 THE OFFICE MANAGEMENT AND TECHNOLOGY (OMT) SYLLABUS OFFERED IN UOT's

There are six University of Technology (UoT's) in South Africa, these are: Cape Peninsula University of Technology (CPUT), Tshwane University of Technology (TUT), Vaal University of Technology (VUT), Central University of Technology (CUT), Durban University of Technology (DUT) and Mangosuthu University of Technology (MUT). According to UOT's websites, only five offer OMT Diploma courses. CUT does not offer an OMT course and the MUT National Diploma syllabus is different from the other four UOTs, and it does not offer fourth year (B Tech in OMT). The five who do offer OMT all provide WIL training in their third year as a component which students have to pass in order for them to graduate.

According to the OMT syllabus, a student is prepared with supervisory skills to work independently and still be an important member of the executive team. The highly technical computer, personnel, financial, legal and communication skills covered are designed to empower the students and also to provide the flexibility needed to be engaged in a wide variety of business organizations. Sapp and Zhang (2009) advise that Universities should increase attention in performance categories including initiative, writing skills, multitasking and oral communication skills when preparing students for internships and post-graduate employment. The five UoT's that offer a common syllabus claim that the course provides the business world with multi-skilled knowledge workers who manage information efficiently, are equipped with a comprehensive range of skills including managerial, technological (substantial computer applications) and communication skills. Multitasking as an independent skill is not, however, mentioned amongst the skills listed that OMT students should acquire.

2.9.2 THE OMT SYLLABUS AT DUT

Durban University of Technology offers a National Diploma up to Master's Degree in Office Management and Technology at the Ritson Campus in Durban. The following subjects are offered in the National Diploma: Information Administration, Business Administration, Personnel Management, Legal Practice, Financial Accounting and Mercantile Law. It is compulsory for OMT third level students at DUT to undertake Work Integrated Learning (WIL) or in-service training with local companies. According to the DUT syllabus document, the curriculum is aimed at developing appropriate office management skills and WIL is designed to ensure graduates can function as an active member of an office team as well as providing them with hands-on experience of the office environment by reinforcing the theoretical concepts encountered in the academic environment. WIL promotes knowledge application, skills development and the formulation of a professional attitude towards work and the work environment. Students are supervised by a member of staff employed in those particular companies while on WIL. Anecdotal evidence suggests, however, that this experience occasionally fails to develop their multitasking skills satisfactorily. In addition, students are unclear as to how adequately the academic syllabus prepares them for this increasingly important skill prior to going out on WIL. Therefore Smith (2001:23) claims that 'there should be intervention strategies designed to enhance the level of students' preparedness for multitasking.' This indicates that the need for these skills has been recognised for a long time.

In the Office Management and Technology Department at DUT multitasking is taught in theory only at B Tech level which is a fourth-year, postgraduate, course. These graduates have already been out on WIL and also are commonly employees in organizations that require multitasking to be performed. On the other hand, subjects that are lectured in a National Diploma do not emphasize multitasking but the work supervisors students encounter while on WIL still expect them to know how to multitask.

2.10 CONCLUSION

This chapter presented definitions of multitasking, and reviewed articles on the benefits and drawbacks of multitasking and its current prevalence in the workplace. Interchangeably with time management, it was explained as one of the most important elements currently operating in administration in the workplace. The chapter also discusses the considerable problems and drawbacks which researchers from various fields have noted concerning the human endeavor of multitasking. A brief overview of industry and academic training programmes was given, and the curriculum offered to OMT students by South Africa's Universities of Technology, and by Durban University of Technology in particular, were discussed. It was noted that while the need for multitasking was implied and expected from students who go on Work Integrated Learning in their third year, the undergraduate syllabus does not specifically include multitasking. The literature also indicated a gap in that no research has been found which has been conducted concerning the inclusion of multitasking within the undergraduate curriculum and its potential effects upon the quality of Work Integrated Learning and subsequent employability of OMT graduates.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The preceding chapter presented a review of the relevant literature underpinning this study. This chapter will focus on the methodology used, and the following aspects will be explored: research design; target population; data collection instruments; data analysis; ethical considerations; and the reliability and validity of the study.

3.2 RESEARCH DESIGN

According to Leedy and Ormrod (2014: 96 - 97), data contain fragments of truth which are in an unrefined state, and research methodology is the method that researchers use to extract meaning from the data, in order to solve the research problem. They also explain that different research problems result in different research designs. Similarly, Sekaran and Bougie (2013: 53-54) state that a research study must be designed in such a way as to ensure that the required data can be collected and analyzed, in order to solve the research problem. Research design is the logic that links the data to be collected (and the conclusions to be drawn) to the initial questions of the study (Yin, 2013:130). Every empirical study has an implicit, if not explicit, research design. Creswell (2009:3) also mentions that research designs are plans and procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis to obtain answers to research questions.

The aim of the design of this study was to select the best methods in order to find answers to the research questions about multitasking skills. The involvement of different groups of students, and of supervisors, made an in-depth study in which different perceptions and similar experiences were explored from different players. Both qualitative and quantitative methods were used to explore their feelings and expectations, and to identify both similarities and differences.

A case study is an in-depth, multifaceted investigation using qualitative research methods of a single social phenomenon (Cohen, Manion and Morrison, 2013:131), and most case studies have made use of both quantitative and qualitative methods. A case study is also referred to as a limited system whose factors are set and studied with reference to the specific context in which it is situated (Biesta, 2012:132). The involvement of supervisors, 3rd year students, and B Tech graduates and recent employees, in this research made it a case study consisting of participants with different experiences of the same situation. WIL supervisors could respond regarding the performance of the students but from a different perspective on a similar educational experience.

3.2.1 Mixed Methods

Deciding on which type of research to follow depends on the purpose of the study and the type and availability of the information which is required (Naoum, 2007:36). There are two types of research approaches, namely, qualitative and quantitative research. This study employed mixed methods, this being the use of two or more corresponding methods of data collection that separately collect qualitative and quantitative data concurrently (Andrew and Halcomb, 2009: 68).

Mixed methods research results in research which provides broader perspectives than those offered by single method designs (Cohen at al, 2013:153). Creswell (2013:11) concludes that its central premise is that the used of both approaches in combination provides a better understanding of research problems than either approach alone.

3.2.2 Quantitative and Qualitative Design aspects

A quantitative research method is a structured and predetermined set of procedures to explore aims and to measure the extent of variation in a phenomenon. It emphasises the measurement of variables and the objectivity of the process. Given (2008:2) explains that quantitative data is any data that is in a numerical form, such as statistics and percentages. Quantitative data in this study allowed the researcher to involve a good number of students which would allow for useful numerical comparisons to indicate the percentage of students (and of supervisors) that agreed or disagreed with a particular statement. Quantitative data provides very useful information when drawing conclusions. The quantitative method was chosen because its data analysis is less time consuming and allows the researcher to reach a large proportion of the population and it also provides a precise and numerical data that can be easily interpreted.

On the other hand, Creswell (2013:4) describes qualitative research as an enquiry approach useful for exploring and understanding a central phenomenon. It is embedded in the philosophy of observation following an open, flexible and unstructured approach to enquiry which aims to explore diversity rather than to quantify things. It involves the narration of feelings, perceptions and experiences rather than measurements. In this study the use of open ended questions for each of the three categories of respondent gave the respondents an opportunity to provide additional information that could have been left out of the Likert scale questions. It allowed respondents to provide any additional information that could contribute in the study, providing a better understanding of the research problems. Thus suggestions, knowledge and feelings were obtained which could not be obtained from the quantitative data alone.

3.3 TARGET POPULATION

The target population is the complete group of objects or elements relevant to the research project. They are relevant because they possess the information the research project is designed to collect (Hair Jr, Wolfinbarger, Money, Samouel and Page,

2011:165). They are the group of people to whom the results of the research will apply. It is therefore very important to define clearly the target population (Whitley, 2013:137).

The target population for this study comprised all OMT students and graduates who currently undergo WIL training and their supervisors. Suitable respondents were selected from the population. 178 OMT students (98 3rd year students who have WIL experience and 80 B Tech students who are graduates, including recent employees) with 25 WIL Supervisors in the workplace. Permission to gather the information from the selected groups was requested from the WIL co-ordinator in the OMT Department with permission from the OMT HOD.

3.4 SAMPLING

According to Gomez and Jones (2010:80-81) a sample is a mechanism by which units of a study are selected from the sampling frame of the population. Sampling is a means of selecting a manageable proportion from amongst a large population. This must be determined before data is collected. A purposively selected sample is described as a selection of sampling units within the segment of the population with the most information on the characteristic of interest (Sekaran and Bougie: 2013:265). Davis and Pecar (2013:192) further describe purposive sampling as a sampling method in which elements are chosen based on the purpose of the study. Saunders et al. (2009) explain the purpose of sampling as to enable researchers to estimate some unknown characteristics of the population. The sampling goal is to obtain an unbiased and representative sample of the target population (Davis and Pecar, 2013: 239). The researcher purposively selected not only students who had recently been on WIL training but also recent graduates whose greater experience of work from the point of view of being an employee, would provide an additional viewpoint. The researcher was able to contact those who happened to be available as their contact details were known and who were therefore convenient for the researcher to contact.

3.4.1 Sample Design

A census survey measures or collects information about every person of the population and a sample survey involves data collection from a smaller number of individuals who fit a particular category of people. A census is a 100 per cent of the targeted group as compared to a smaller percentage which forms a sample (Sekaran and Bougie: 2016)

Kumar (2011:201) states that it is not possible to identify an ideal sample design as good or bad; the researcher must rather consider the purpose and goals of the study. As the purpose of this study was to examine multitasking skills these respondents who have experienced, or may have experienced, these work demands are the most appropriate and the number of respondents represented a large enough proportion to represent the problems of the study.

Convenience sampling involves the selection of the most accessible subjects. It is the least costly to the researcher. Self-administered surveys by definition involve convenience sampling (Sekaran and Bougie, 2013:268). In this study only those B Tech students who were contactable by the researcher responded to the questionnaires as some of them were at work and not always available.

The lists of 3rd year students were obtained from the Information Technology Support Services (ITSS) at DUT in November 2015. They indicated that 3rd year OMT registered students totalled 109, B Tech full-time registered students totalled 40 and part-time registered B Tech students totalled 20. There were 25 WIL supervisors who had supervised these and other recent DUT students and whose contact details were available. The list of WIL supervisors was obtained from the OMT department at DUT.

3.4.2 Inclusions

All OMT 3rd year students who had been out on WIL were targeted, registered B Tech students and recent employees and WIL Supervisors in the workplace who have supervised OMT students formed the third group in the study.

3.4.3 Exclusions

OMT first and second year students at DUT did not form part of the study and also 3rd year students who do not have WIL experience did not take part in the study.

3.5 DATA COLLECTION

According to Yin *et al* (2013) data may be placed into two major groups: primary and secondary. Secondary data is obtained from some media like external or internal reports, newspapers, handbooks, websites or scholarly journal articles and books. Primary data are collected by the investigator directly from study participants by in-person or telephone interviews or questionnaires to address a specific question as well as through observation and/or also focus group interviews (Velentgas, Dreyer, Nourjah, Smith and Torchia 2013).

In this study, the researcher used a combination of both primary and secondary data, first conducting secondary research to understand the theory and framework of this study where articles were used. This was then followed by primary data where the researcher used appropriate data collection instruments where questionnaires were distributed to the targeted groups.

In 2015, between February and June, 109 questionnaires were forwarded to 3rd year OMT registered students who had WIL experience, only 25 students responded to the questionnaires. It was agreed that the response rate was lower than required for valid conclusions to be drawn, and the researcher therefore agreed to collect more data from the 2016 cohort of OMT students. The researcher and supervisor agreed that new data collected from 3rd year students will be analysed. Collection of these took place from August until September of 2016 as students were returning from WIL. 98 3rd year students were targeted of whom 83 responded giving a good response rate of 85%.

In 2015, 20 questionnaires were sent to WIL supervisors in the workplace and only 5 responses were received which was lower than required. In 2016 the researcher

forwarded 22 questionnaires to the supervisors employed for this cohort (excluding those who had responded in 2015) and 15 responses were received. This was an acceptable response rate.

80 B Tech students, of whom 42 responded, were carried over from 2015 to 2016 as B Tech is part-time it is taken over 2 years and most students were therefore from the same cohort. No additional questionnaires were sent to this group.

3.6 THE QUESTIONNAIRES

A questionnaire is a printed list of questions that respondents are asked to answer (Dillman, Smyth and Christian, 2014). The questionnaires in this study were designed and distributed to obtain primary data from each of the target groups. All questionnaires included both open-ended and closed questions. Open ended questions were included to allow the participant to record personal ideas in their own words. Closed questions required the respondent to select an answer from among a list provided by the researcher.

The literature, along with the researcher's personal knowledge of the context, was used as the source of information to formulate the questionnaires for the study. The questionnaire was available in English only as all participants were proficient in English.

3.6.1 Administration of the instrument

Self-administered questionnaires, consisting of questions that measure different aspects of multitasking in the workplace, were used.

3.6.2 Questionnaire Design

Questionnaires have to be very carefully designed. According to Dillman et al. (2014: 32) the “goal of writing a survey question for self - administration is to develop a query that every potential respondent will interpret in the same way, be able to respond accurately, and be willing to answer”. A good survey instrument includes questions that meet the research objectives, testing them to ensure that they can be first asked by the researcher and then answered by the respondent (Sekaran and Bougie 2016:138). The questions were piloted first.

According to Hall (2008:80) a pilot study is a smaller scale version of the main study and designed to check that the design is doing the job it is designed to do. Yin *et al* (2013:13) add that the aim of the pilot study is to try out the research approach to identify potential problems that might affect the quality and validity of the results. 10% of questionnaires were distributed to each of the targeted sets so that the necessary revisions could be made before the final survey was produced. A pilot study is considered essential and can greatly improve the proposed study design and methodology (Hall, 2008:81).

To avoid errors the questionnaire aimed to be brief and to the point and the questions was easy to understand. The researcher wanted to find out, for instance when, in the opinion of the students and graduates, multitasking should be taught, when they should have practical experience in multitasking, and whether the Institution is providing enough training and resources for students to practice multitasking. The Supervisors’ opinions on the same issues were also probed.

The Likert scale entails using a series of typically five statements that convey various levels of agreement with an item stem (Litwin, 1995: 49). The approach used to elicit a response was a 5-point Likert scale choice of responses (strongly Agree, agree, neutral, disagree and strongly disagree). This ensured that questions would be easy to code and analyse. It also saved time and created an atmosphere where the respondents

would be happy to complete the questionnaire. Simple, clear words were used to structure the questions to make them easy to interpret [2]and answer and the 'additional comments' space was provided to allow respondents to add any information that could have been left out from the Likert scale questions.

All three sets of questionnaires had a Letter of Information and Consent Form (see Appendix D). This letter contained the title of the research study, the researcher's details, the supervisor's details, purpose of the study, the procedure involved in completing of the questionnaire, and any risks or benefits involved for the participants. The participants were assured that they could withdraw from the study at any time and were also guaranteed of anonymity. The researcher was available to explain questions if needed.

3.6.2.1 B Tech, recent employees' questionnaire

With the third-year questionnaire, the first three questions were biographical questions, followed by closed and open-ended questions (from 1.4 to 1.10). The questionnaire had 6 pages including the letter of information and letter of consent (see Appendix E). Open ended questions for these students were different from the third-year questions as these students have more experience, some being already employed and all were studying towards their B Tech qualification. As they are more mature and experienced it was felt that their responses would draw on wider knowledge of real-life multitasking demands. For example, B Tech students were asked if, from their experience, and from what they understood, most companies currently require all office management personnel to be competent at multitasking (see Appendix E).

3.6.2.2 3rd year student's questionnaire

The questionnaire had six pages including the letter of information and consent form (see Appendix F). The first three questions were biographical (1.1 to 1.3) covering age, gender and race (voluntary) for statistical purpose. 1.4 to 1.11 consisted of closed and

open-ended questions as discussed above with spaces provided for additional comments (See Appendix F).

3.6.2.3 WIL supervisors in the workplace questionnaire

This questionnaire had five pages including a letter of information and the consent letter (Appendix G). Again the first two questions were biographical. 1.3 to 1.9 were closed questions asking, for instance, whether the supervisors had supervised an OMT student before, and whether they feel that the university makes it clear exactly what skills students should acquire during WIL. They were also asked to rate the level of competence they found in the students they supervised. The rest of the questions were open ended and also asked for additional comments (see Appendix G).

3.7 Results of the Pilot Test

There were no significant issues raised as a result of the pilot test, as the questionnaires were understood by the selected respondents within each group. No alterations had to be made.

3.8 RESEARCH ETHICS

Miller, Birch and Mauthner (2012:14) define ethics as moral deliberation, choice and accountability on the part of researchers throughout the research process. Ethics in research consists of moral rules and professional codes of conduct in the collection, analysis, reporting and publication of information about research topics. The individual's right to privacy, confidentiality and informed consent are essential elements of ethics (Graziano and Raulin 2013: 92).

According to Leedy and Ormrod (2014: 102), when the researcher undertakes a research study that involves human beings, it is imperative that they explore the ethical issues surrounding their study. Furthermore, these authors explain that ethical issues fall into three categories, i.e., protecting research participants from harm; voluntary and

informed participation; and honesty with professionalism. The respondents were clearly informed of the envisaged outcomes of the study before signing the consent form.

In this study the researcher considered ethical issues starting from applying for permission to conduct research at the selected university through the University's Research Postgraduate Support Office. After obtaining permission, the research proposal, which was approved by the Faculty Research Committee, was submitted together with each of the data collection instruments, consent forms, letters of permission and covering letters to the Institutional Research Ethics Committee (IREC) for ethical clearance. This study did not target any ethnic or community group and met with all the university's ethics policies and guidelines

3.8.1 Protection from harm

In the current study, participants were not exposed to any psychological or other harm. In terms of the letter of information provided, the research participants were required to write their names and sign, however confidentiality was maintained as participants' names were not linked to the findings. There was no risk involved.

3.8.2 Voluntary and informed consent

The letter of informed consent accompanied the letter of information. All the research participants, including those involved in the pilot study, were requested to sign the letter of informed consent. Here the research participants were provided with a choice to participate in the research study and were given the opportunity to withdraw from the research at any point in time. The researcher did not pressurize the participants in any way; their participation in the research study was voluntary.

3.8.3 Honesty with professionalism

No deception of any kind was used in the current study and the researcher reported on the findings of the research in a truthful way, without misinterpretation or fabrication of information (Leedy and Ormrod 2014: 110). These research findings will be discussed in Chapter 4 and recommendations will be given in Chapter 5. The researcher complied

with all the requirements laid down by the Institutional Research Ethics Committee (IREC) at the DUT.

3.9 RELIABILITY AND VALIDITY

3.9.1 Reliability

Reliability testing is an important test of sound measurement; the instrument is reliable if it provides consistent results (Kothari, 2006: 74). The SPSS statistical package was used to ensure reliability. The questionnaires were standardised and the questions were consistent and in chronological order for each respondent to ensure overall consistency.

The length of the questionnaires was also considered; a long questionnaire could result in people being reluctant to take part in the study. The Likert scale was utilised to increase the respondent's ability to complete the questionnaire in its totality and the researcher's contact details were given on the pre-notification letter to be easily accessible. However, no problem arose which required respondents to access the researcher or the supervisor.

3.9.2 Validity

Validity is the most critical criterion and indicates the degree to which an instrument measures what is supposed to be measured. It is also the extent to which differences found with a measuring instrument reflect true differences among those being tested (Kothari, 2006: 73). Similarly, Sekaran and Bougie (2013: 400) and Leedy and Ormrod (2014: 91), explain validity as the degree to which the data collection instrument measures what it is intended to measure.

3.10 DATA PREPARATION

Data preparation is an important component of research and includes identifying the method of coding the data collected by the researcher. The questions and responses

were coded and captured using the SPSS version 23.0 (2015) and 24.0 (2016) by a qualified statistician and all questionnaires were numbered.

3.11 DATA ANALYSIS

The statistical techniques employed in analyzing the data are dependent upon the type of measurement scales used in the data collection instrument (Graziano and Raulin 2013: 78; Leedy and Ormrod 2014: 86). The collected data was documented on an excel spreadsheet according to the codes and analysed, as indicated, using SPSS. The first type of analysis was looking at frequencies, e.g., the number of times a certain response was made. Variables were then screened, identifying the variables that were highly influential on the dependent variables of the study.

3.11.1 Descriptive statistics

Gupta and Gupta (2011: 32) explain that descriptive statistics provide an elementary and concise analysis of the data. They define the set of data, using statistics such as frequencies and standard deviation (Sekaran and Bougie 2013: 393). Descriptive statistics used for the current study included frequency distributions and various types of graphs. The frequency distributions as well as the graphs are known as univariate analysis, since they involve the analysis of one variable at a time (Bryman and Bell 2011: 342). Frequency distributions indicate the number of times or frequency with which each score value occurs (Gupta and Gupta 2011: 34). Percentages and cumulative percentages can be calculated from any of the occurrences (Sekaran and Bougie 2013: 283). The current study used frequencies, with percentages and cumulative percentages, to analyze the biographical details of all three groups. Frequencies can either be represented graphically or in tabular format (Gupta and Gupta, 2011: 34). The graphical format in the form of bar and pie graphs were considered appropriate (Gupta and Gupta 2011: 34).

3.11.2 Inferential statistics

Inferential statistics involve a process allowing for forecasting or approximating, based on the sample data of a population. It is a method that allows the inference of statistical data from the sample to the entire population (Keller, 2009: 109). For this study inferential techniques incorporated the use of relationships and chi square test values which were inferred using p-values

3.12 CONCLUSION

This chapter outlined the methodology used in conducting the study. A mixed methods approach was applied. Questionnaires were used to collect data. These included both open-ended and closed questions, ensuring that both qualitative and quantitative data could be used to address the research objectives. 3rd year students; B Tech students (including recent employees); and supervisors' questionnaires were personally completed by the participants. A pilot study was carried out for each set of questionnaires to ensure reliability and validity. Privacy and confidentiality were maintained during the administration of the questionnaires. Ethical clearance was sought and granted by the Institutional Research Ethics Committee to ensure that the research was conducted in a proper and ethical manner.

The next chapter presents the analysis of the data and discussion of the results.

CHAPTER FOUR

STATEMENT OF FINDINGS, INTERPRETATION AND DISCUSSION OF THE PRIMARY DATA

4.1 INTRODUCTION

This chapter presents the results and discusses the findings obtained from the questionnaires, which were the primary tool that was used to collect data. Separate questionnaires were distributed to B. Tech. students, 3rd year students, and supervisors. Data gathered from the questionnaires was grouped differently in each case. The data collected from the responses was analysed with SPSS version 23.0 (graduates) and version 24.0 (students and supervisors) by a qualified statistician. The results will present descriptive statistics in the form of graphs, cross tabulations and other figures from the quantitative data that was collected. Inferential techniques include the use of correlations and chi square test values, which are interpreted using the *p*-values.

4.2. RECENT EMPLOYEES' AND BTECH STUDENTS' QUESTIONNAIRE

4.2.1 The Sample

In total, 80 questionnaires were dispatched and 42 were returned which gave a 51% response rate. Gathering this data was challenging as many of these students are working and no longer in touch directly with DUT, and attendance at lectures is low. However, the researcher requested permission from the HOD and met with approximately half of the students in the B Tech class, and respondents answered the questions in the presence of the researcher and the HOD. Some of the students were registered as part-time and were not attending this class. To involve these, questionnaires were also distributed via email to addresses obtained from the students' class lists. A quarter of these students responded – making the response rate of 51% in total for this group. This data was collected in 2015.

4.2.2 The Research Instrument

The research instrument consisted of 10 items, with a level of measurement at a nominal or an ordinal level.

4.2.3 Reliability Statistics

The two most important aspects of precision are **reliability** and **validity**. Reliability is computed by taking several measurements on the same subjects. A reliability coefficient of 0.70 or higher is considered as “acceptable”.

The table below reflects the Cronbach’s alpha score for all the items that constituted the questionnaire.

Table 4.1 Case Processing Summary

		N	%
Cases	Valid	2	4.8
	Excluded[a]	40	95.2
	Total	42	100.0

a. List wise deletion based on all variables in the procedure.

Table 4.2 Reliability Statistics

Cronbach's Alpha	N of Items
.933	7

The reliability scores for all sections exceed the recommended Cronbach’s alpha value of 0.700. This indicates a degree of acceptable, consistent scoring for these sections of the research.

4.2.4 Biographical Information

This section presents descriptive statistics of the biographical information obtained from respondents. According to Peck, Oslen and Devore (2011: 8) descriptive statistics are methods employed in summarizing the obtained data into frequency distribution and percentage distribution. It develops and utilises techniques for the careful collection and effective presentation of data to highlight patterns otherwise buried in unorganised data (Burns, 2008:6).

4.2.5 Results

This section provides the results of the data collection on biographical data, employment status, the curriculum and multitasking, and perceptions of competency in multitasking of the graduates and recent employees who are the respondents.

4.2.5.1 Biographical Data

Table 4.3 Biographical data

Age of respondents	**Number (n= 42)**	**Percentage (%)**
18 -25	29	69.0
26 – 30	8	19.0
31 – 35	5	11.9
Total	42	100.0
Gender of respondents	**Number (n=42)**	**Percentage (%)**
Male	15	35.7
Female	27	64.3
Total	42	100.0
Ethnic group	**Number (n=42)**	**Percentage (%)**
African	36	85.7
Coloured	3	7.1
Indians	3	7.1
Total	42	100.0

Table 4.3 shows that a large number of respondents (69.0%) were between the ages of 18 to 25 years. About 64.3% were females compared to 35.7% of males. In terms of gender, there is a growing number of males on the course. The ratio of males to

females is therefore approximately 1:2 (35.7%: 64.3% respectively). The majority of the respondents were African (85.7%).

4.2.5.2 Employment Status and multitasking competency

Are you currently employed?

Table 4.4 Employment status

Are you employed?	Number (n=42)	Percentage (%)
Yes	20	47.6
No	22	52.4
Total	42	100.0

Slightly more than half of the respondents (52.4%), as shown in table 4.4, indicated that they were unemployed.

If you answered ‘no’ to Question 1.4 please answer this question.

While on Work Integrated Learning (WIL), I found that I had to teach myself multitasking

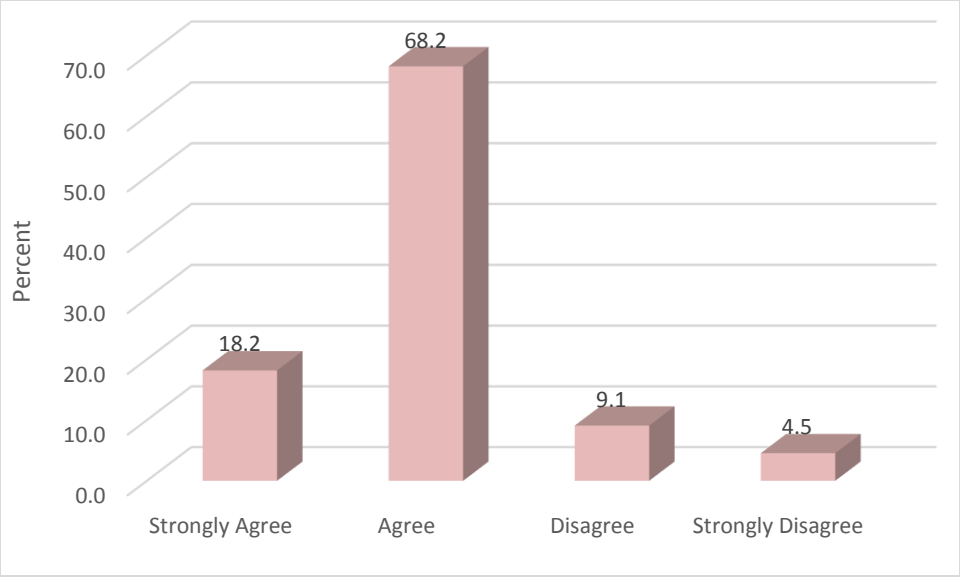

Figure 4.1 Self-taught multi-tasking among the unemployed respondents (n =22)

Of the unemployed nearly 87% of the respondents agreed that they had to teach themselves multi-tasking when they were on WIL as illustrated in Figure 4.1.

If you answered ‘yes’ to Question 1.4 please answer this question.

I feel that I had to teach myself multitasking while first in employment.

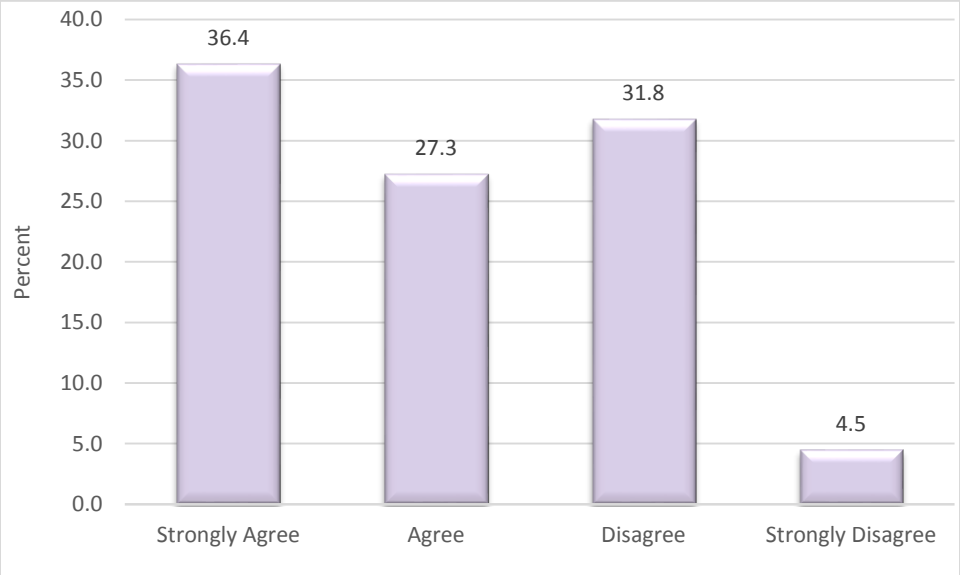

Figure 4.2 Self-taught multi-tasking among the employed respondents (n=22).

As indicated in figure 4.2 of the 47.6% that were employed, 63.7% of the respondents agreed that they taught themselves multitasking when they were first employed.

4.2.5.3 Multi-tasking and the curriculum

Statistics obtained from the following statements are shown in the table which follows:

- I believe that a student needs to be taught how to multitask within the academic curriculum
- The Office Management and Technology academic curriculum prepared me adequately for multitasking
- I believe that multitasking should be taught in modules that have practicals
- I believe that most companies currently require all office management personnel to be competent at multitasking

Table 4.5 Multi-tasking in the curriculum

Multi-tasking within the curriculum	**Number (n=42)**	**Percentage (%)**
Strongly agree	21	50
Agree	18	42.9
Disagree	3	7.1
Total	42	100
Curriculum preparedness for multi-tasking	**Number (n=42)**	**Percentage (%)**
Strongly agree	2	4.8
Agree	27	64.3
Disagree	10	23.8
Strongly disagree	3	7.1
Total	42	100
Level of study multitasking should be taught at University	**Number (=42)**	**Percentage (%)**
1st year	34	81.0
2nd year	3	7.1
3rd year	3	7.1
B Tech	1	2.4
I do not believe that multitasking	1	2.4

can/should be taught at university		
Multi-tasking should be taught in practical modules	**Number (n=42)**	**Percentage (%)**
Strongly agree	18	42.9
Agree	17	40.5
Disagree	1	2.4
Strongly disagree	6	14.3
Total	42	100
Perception of requirement of competency in multi-tasking by companies	**Number (n=42)**	**Percentage (%)**
Strongly agree	24	57.1
Agree	18	42.9
Total	42	100

Table 4.5 illustrates that 92.9 % percent of the respondents agree that students need to be taught how to multitask within the academic curriculum. Although 69.1% of the respondents agreed that the curriculum prepared them adequately for multitasking in the workplace, it is currently formally taught in only in one subject at B Tech level. These students have therefore already been out on WIL without specific multitasking knowledge. 81% believed that multitasking should be taught from level 1 at the university with 7.1% indicated 2nd year and 3rd year level. 83, 4% of the respondents agreed that multitasking should be taught in practical modules, e.g. Information Administration where students are taught practically. A smaller percentage of respondents felt that this is not necessary, reflecting some of the open-ended responses which suggested that students must simply apply time management. All of the respondents (100%) agreed that companies currently require office management personnel to be competent at multitasking. Office managers are frequently required to perform multiple tasks concurrently.

4.2.5.4 Qualitative responses

This section summarises responses concerning whether postgraduate students felt that the University OMT Programme prepares students well for multitasking. Students indicated that only in B Tech were they lectured about multitasking in the subject 'Organizational Behavior'. The results presented in table 4.6 also detail responses

regarding additional aspects that they consider may improve students' performance of multitasking. (Note that these have been grouped by the researcher within specific categories of response).

Table 4.6

WELL PREPARED	NOT WELL PREPARED
• done duties that makes me feel I am able to multitask • student can deal with most office work simultaneously very successfully • studying prepared me very well for multitasking • department prepared students for multitasking at work • lecturers prepared me well for multitasking • subjects taught to work as a team and have time management • lectures are doing a great job in preparing students for multitasking in the workplace • course taught me multitasking • as women we must be able to multitask naturally • department taught me well how to multitask from 1st year to B Tech level • the department gave us assignments to submit in one week, so we were multitasking	• students are not well prepared for multitasking • curriculum need to be upgraded • Department did not prepare us for multitasking, I was confused when I was given lots of work. • Could not perform well at work, I was the only black person, sometimes did not understand instructions in English • multitasking has to be a skill that employers are looking for in an employee • were taught multitasking in theory no practicals took place • supervisor was assisting me at work • did not perform well as I was unable to use machines I have never seen before • was expected to do more work at once, the department need to upgrade teaching • I was able to do one task while on WIL and my supervisor was very harsh • sometimes I had to teach myself

- more tasks were given at once and I was able to perform
- modules taught me how to multitask
- was taught multitasking at 1st year level
- did my job very well
- In Business Administration we were taught how to multitask
- organisational behaviour educated us how to multitask
- I am able to multitask in my current job and while on WIL
- it was very hectic at first but my supervisor always helped me, I can multitask
- multitasking
- the department must prepare students for multitasking in the workplace
- while working multitasking is very hard because you have to balance everything
- the course only teaches us about the basics
- I cannot even multitask at home; I believe that I have to do one thing at a time.
- department must make new curriculum
- I had to teach myself how to multitask
- students must teach themselves multitasking because they know their schedule

Table 4.7

Additional comments

- planning help to multitask successfully
- there should be a subject that teaches multitasking in a practical form
- students must be able to use office machines
- Training in multitasking is very important, even in the workplace, student must practice
- given more work so multitasking practice can take place
- challenging task to be given so there can be improvement
- multitasking must be taught in lower levels of study before reaching employment
- more tasks to be given to require students to perform office duties
- multitasking is very important it improves the production of the company

- multitasking is the key in improving company's production effectively
- multitasking must be practised in class
- syllabus must be upgraded
- students to pay more attention in class
- people should be able to multitask as some of the things are not taught in class
- students must start at level 1 as it is hard at B Tech level and at work
- multitasking is very important, it ensures work is done on time
- multitasking also depends on one's personality
- multitasking cannot be taught as one need to know their schedule
- students must pay attention in all modules and also practice even not at work
- students must all practice before going out on WIL
- The department must show student the machines used at work, it's so frustrating seeing the machine for the 1st time.

These responses indicate that about half of the students felt that the University prepared them well for multitasking, while others indicated that they had not even seen office machines before going on WIL. Students also feel that multitasking could create errors, and some students stated that multitasking depends on one's personality and the ability to focus. First time employment is frightening for some students and particularly those who are second language speakers of English. These students prefer to perform one task at a time and to make sure that they follow instructions carefully. In addition, students are taught mostly theory in the lecture theatres with no fax or other machine in front of them, while the workplace requires students to perform work duties, not to teach them.

4.2.5.5 Chi Square Test

To determine whether the scoring patterns per statement were significantly different per option, a chi square test was done. The null hypothesis claims that similar numbers of respondents scored across each option for each statement (one statement at a time). The alternate states that there is a significant difference between the levels of agreement and disagreement.

The results are shown below.

Table 4.8 Chi square test

	Chi-Square	df	Asymp. Sig.
To which age group you belong to?	24.429	2	.000
Please indicate your gender	3.429	1	.064
To which of the following racial or ethnic groups you belong?	51.857	2	.000
Are you currently employed?	0.095	1	.758
While on Work Integrated Learning (WIL), I found that I had to teach myself multitasking	22.727	3	.000
I feel that I had to teach myself multitasking while first in employment	5.273	3	.153
I believe that a student needs to be taught how to multi-task within the academic curriculum	13.286	2	.001
The Office Management and Technology academic curriculum prepared me adequately for multitasking	38.19	3	.000
From which level of study, if any, do you think students should be taught how to multi-task?	98.000[e]	4	.000
I believe that multitasking should be taught in modules that have practicals	19.905	3	.000
I believe that most companies currently require all office management personnel to be competent at multitasking	0.857	1	.355

The highlighted sig. values (p-values) are less than 0.05 (the level of significance), it implies that the distributions were not similar. That is, the differences between the way respondents scored (agree, uncertain, disagree) were significant.

4.2.5.6 Hypothesis Testing

The traditional approach to reporting a result requires a statement of statistical significance. A **p-value** is generated from a **test statistic.** A second Chi square test was performed to determine whether there was a statistically significant relationship between the variables (rows vs columns). The null hypothesis states that there is no association between the two. The alternate hypothesis indicates that there is an association in this case.

4.2.5.7 Summary

Recent employees and B Tech students' feelings indicated overall that a multitasking gap still exists in the curriculum. Since these students have obtained work experience, either as new employees or as WIL students they are in a position to indicate that there is a need for curriculum renewal. Many felt that more practicals would assist in preparing students for multitasking skills. There was strong agreement that multitasking is one of the skills required by employers in the current, very competitive, business environment.

4.3 THIRD YEAR QUESTIONNAIRE

4.3.1 Introduction

Statistics for both the 3rd year students' and the supervisors' questionnaires which follow were compiled in two batches – the first in 2015. However, the response rate for each group in 2015 was considered too low to ensure the validity and reliability of the data and further data were therefore collected in 2016. The discussion that follows draws on 2016 data only.

4.3.2 The Sample

There were 109 registered students in total in 2016, 98 questionnaires were dispatched and 83 were returned which gave a response rate of 85%.

4.3.3 Research Instrument

The research instrument was a questionnaire consisting of 10 items, with a level of measurement at a nominal or an ordinal level.

4.3.4 Reliability Statistics

The table below reflects the Cronbach's alpha score for all the items that constituted the questionnaire.

Table 4.9

Case Processing Summary

		N	%
Cases	Valid	83	100.0
	Excluded[a]	0	.0
	Total	83	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.724	5

The reliability scores for all sections exceed the recommended Cronbach's alpha value of 0.700. This indicates a degree of acceptable, consistent scoring for these sections of the research.

4.3.5 Factor Analysis

Factor analysis is a statistical technique whose main goal is data reduction. A typical use of factor analysis is in survey research, where a researcher wishes to represent a number of questions with a small number of hypothetical factors. The matrix tables are preceded by a summarised table that reflects the results of KMO and Bartlett's Test. The requirement is that Kaiser-Meyer-Olkin Measure of Sampling Adequacy should be greater than 0.50 and Bartlett's Test of Sphericity less than 0.05. In all instances, the conditions are satisfied which allows for the factor analysis procedure.

Factor analysis is done only for the Likert scale items. Certain components divided into finer components.

4.3.6 KMO and Bartlett's Test

Table 4.10

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.641
Bartlett's Test of Sphericity	Approx. Chi-Square	140.609
	Df	10
	Sig.	.000

All of the conditions are satisfied for factor analysis.

4. 3.7 Biographical Data

4.3.7.1. Overall gender distribution by age.

Table 4.11

			Please state your gender		Total
			Female	Male	
To which age group (in years) do you belong?	18 - 20	Count	14	4	18
		% within To which age group (in years) do you belong?	77.8%	22.2%	100.0%
		% within Please state your gender	21.2%	23.5%	21.7%
		% of Total	16.9%	4.8%	21.7%
	21 - 25	Count	47	12	59
		% within To which age group (in years) do you belong?	79.7%	20.3%	100.0%
		% within Please state your gender	71.2%	70.6%	71.1%
		% of Total	56.6%	14.5%	71.1%
	26 - 30	Count	2	1	3
		% within To which age group (in years) do you belong?	66.7%	33.3%	100.0%

		% within Please state your gender	3.0%	5.9%	3.6%
		% of Total	2.4%	1.2%	3.6%
	31 - 35	Count	3	0	3
		% within To which age group (in years) do you belong?	100.0%	0.0%	100.0%
		% within Please state your gender	4.5%	0.0%	3.6%
		% of Total	3.6%	0.0%	3.6%
Total		Count	66	17	83
		% within To which age group (in years) do you belong?	79.5%	20.5%	100.0%
		% within Please state your gender	100.0%	100.0%	100.0%
		% of Total	79.5%	20.5%	100.0%

Overall, the ratio of males to females is approximately 1:4 (20.5%: 79.5%). The table above therefore illustrates that the course is still dominated by women although there are now also a significant number of males. There are also a significant number of respondents from ages 31-35 which may be explained by experienced employees[3] enrolling in order to upgrade their skills.

4.3.7.2. To which of the following racial or ethnic group do you belong?

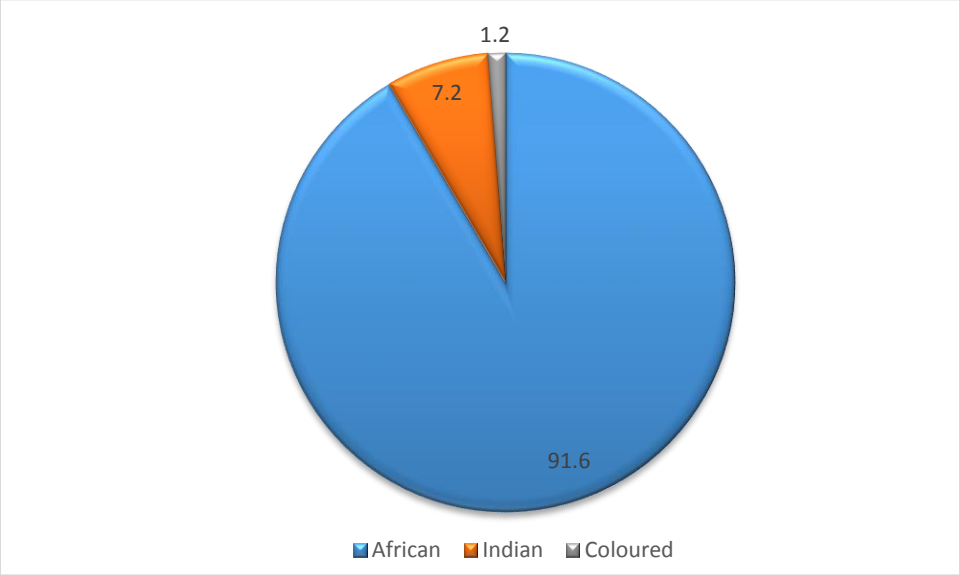

Figure 4.3 racial group (n=83)

.

The great majority of the respondents were African (91.6%) with 7.2% Indians and 1.2% Coloured.

The section below reflects and analyses third-year students' experience of multitasking as a component of the university curriculum, and as a component of WIL.

4.3.7.3. At which level of study do you think students should be taught how to multitask?

Level of study

Table 4.12

	Frequency	Percent
1st year	45	54.2
2nd year	15	18.1
3rd year	23	27.7
Total	83	100.0

The majority of respondents (54.2%) believed that it should be taught from the first year. However, a significant proportion (45.8%) considered it should be taught either in second or third year. As mentioned above multitasking is currently only included as a subject at a B Tech level, although students are required to perform multitasking duties when on WIL during third year. It is also important to note that some students do not continue with their studies to the B Tech level so that these students are left out of any training in multitasking while at University. All respondents saw a need to include it in the university curriculum from National Diploma level.

4.3.7.4. I was given the opportunity to develop good skills of multitasking while on work-integrated learning (WIL)

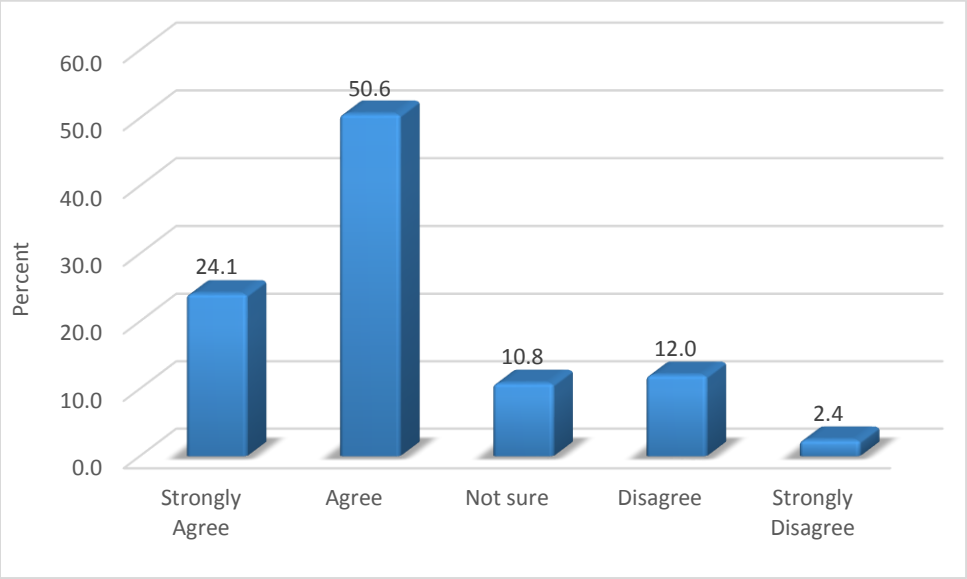

Figure 4.4 Developing good skills while on WIL (n=83)

Nearly three-quarters of the respondents (74.7%) agreed that this opportunity was afforded them. However only a quarter strongly agreed, while 14, 4% disagreed. As students have indicated in the open-ended questions, the experiences they acquire in different companies varies considerably. Almost 11% were not given an opportunity to multitask during WIL. It is also important to note that a large majority (86.4%) of the B Tech students who are current employees felt that they had to teach themselves multitasking while on WIL. Furthermore 100% of supervisors indicated that students are required to multitask in the workplace which may indicate that their expectation is that students are well prepared for multitasking and they see no need to teach them.

4.3.7.5. I feel that the academic curriculum at university has prepared me well for multitasking

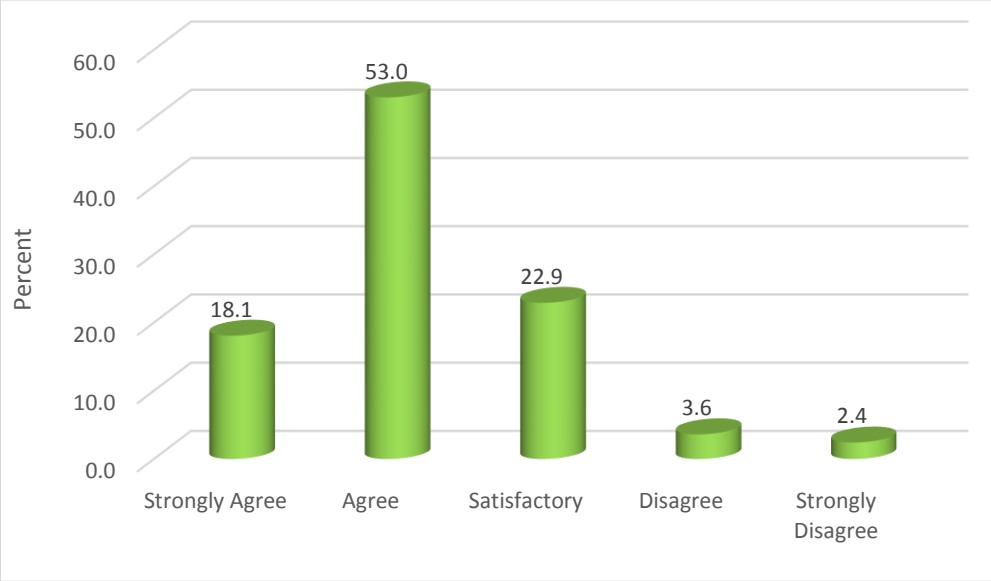

Figure 4.5 academic curriculum prepared me well for multitasking (n=83)

Only a quarter (18.1%) strongly agreed that the curriculum prepared them well, with 53.0% agreeing, while 6% disagreed and 22.9% felt that the preparedness was satisfactory. This would seem overall to indicate the need for further improvement in the curriculum in this regard. This reflects the opinion of the B Tech students, where only a small percentage (4.85%) strongly agreed that the curriculum prepared them well, while a significant number (64.3%) agreed and 30% disagreed[4].

4.3.7.6. I believe that the University should teach multitasking to students before they go out to WIL

Table 4.13 Teaching multitasking at the University level

	Frequency	Percent
Strongly Agree	49	59.0
Agree	33	39.8
Strongly Disagree	1	1.2
Total	83	100.0

59% of the respondents strongly agree with 39.8% agreed (making almost 100% altogether) that the University should teach multitasking to students before going out on WIL.

4.3.7.7. I believe that students should have practical training/ role play in multitasking while at the University

Table 4.14 Practical training in lectures

	Frequency	Percent
Strongly Agree	34	41.0
Agree	46	55.4
Disagree	2	2.4
Strongly Disagree	1	1.2
Total	83	100.0

The findings in table 4.15 indicate that almost 97% agreed and only 3.2% felt that it is not necessary to have role play or other forms of practical training at the University level. These findings indicate that the great majority of students felt that role play would be helpful. Students therefore believe that practice in practically performing multitasking office work set by lecturers while in the University would be helpful. Within research done in Australia Chris Pilgrim (2012) found that ICT graduates and ICT employers identified common deficiencies in the workplace readiness of new graduates particularly regarding development of essential generic skills. New graduates and employers believed that these insufficiencies could be addressed by large appropriate workplace experiences. While the academics believed in the value of role play and of including industry guest speakers in the curriculum, industry players were more skeptical of the value of these interventions.

4.3.7.8. While on WIL, when I was given multitasking to perform, I coped well

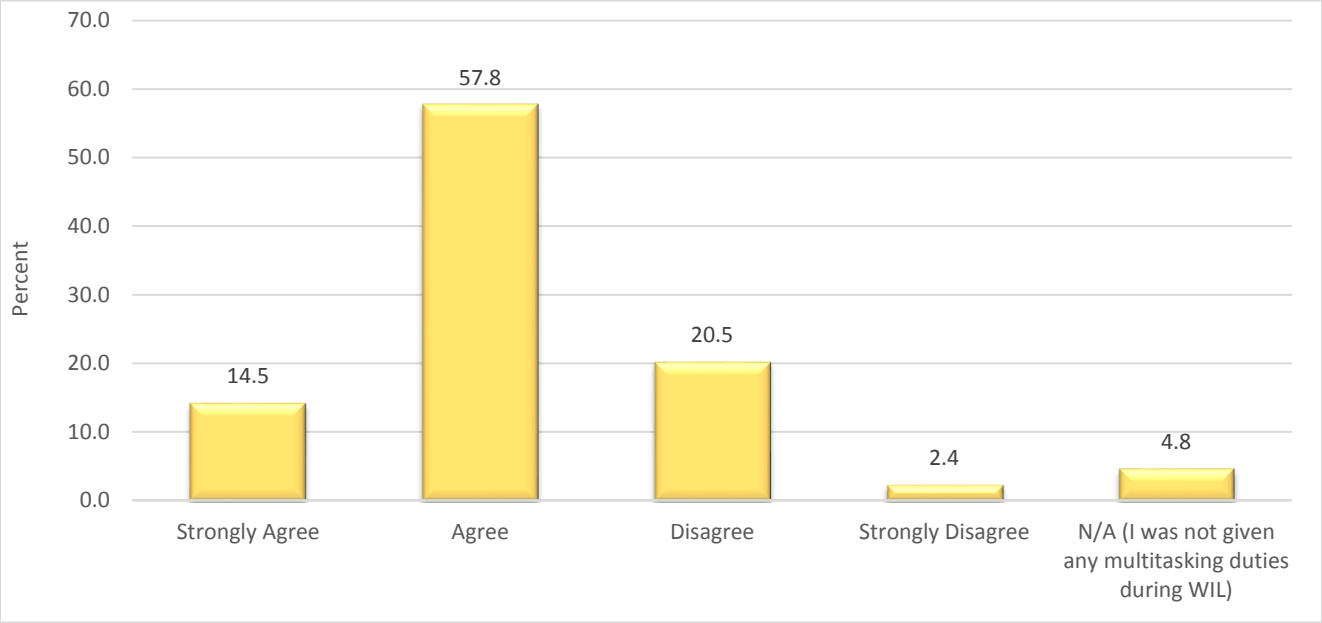

Figure 4.6 tasks given while on WIL and coped well (n=83)

This figure shows a large number of respondents (72.3%) agreed which may be an indication that most people would not want to admit to not coping, since this response is at variance with the great majority who felt that prior practical training in preparation for WIL would be beneficial. It is interesting to note that only 14,5% strongly agreed. 22.5% disagreed while 4.8% were not given any opportunity to perform multitasking.

4.3.7.9. Were there any challenges you came across while on WIL regarding multitasking?

Table 4.15 Multitasking challenges on WIL

	Frequency	Percent
Yes	33	39.8
No	42	50.6
N/A (I was not given any multitasking duties during WIL)	8	9.6
Total	83	100.0

Almost 40% did encounter challenges while 50.6% did not. 8% were not given multitasking duties to perform which implies that these students did not gain any experience in this regard while on WIL[5].

4.3.8 Chi Square Test

To determine whether the scoring patterns per statement were significantly different per option, a chi square test was done. The null hypothesis claims that similar numbers of respondents scored across each option for each statement (one statement at a time). The alternate states that there is a significant difference between the levels of agreement and disagreement.

The results are shown below.

Table 4.16

	Chi-Square	df	Asymp. Sig.
To which age group (in years) do you belong?	101.241	3	0.000
Please state your gender	28.928	1	0.000
To which of the following racial or ethnic group you belong?	127.108	2	0.000
At which level of study do you think students should be taught how to multitask?	17.446	2	0.000
I was given the opportunity to develop good skills of multitasking while on work integrated learning (WIL)	58.506	4	0.000
I feel that the academic curriculum at university has prepared me well for multitasking	69.711	4	0.000
I believe that the University should teach multitasking to students before they go out to WIL	43.181	2	0.000
I believe that students should have practical training/ role play in multitasking while at the University	74.928	3	0.000
While on WIL, when I was given multitasking to perform, I coped well	83.084	4	0.000
Were there any challenges you came across while on WIL regarding multitasking?	22.434	2	0.000

Where the highlighted sig. values (p-values) are less than 0.05 (the level of significance), it implies that the distributions were not similar. That is, the differences on how respondents scored were significant.

4.3.9 Qualitative response

Those respondents who indicated that they did experience challenges of multitasking while on WIL identified the challenges below: (Note that these have been grouped by the researcher within specific categories of response).

Table 4.17

I was not prepared for multitasking	Inadequate support from WIL Supervisor	Mistakes I made myself
• did not do what we studied for • first day had to do reception duties which I knew nothing about • answering telephone and attending to queries	• unsure of the roles to perform • give work without explanations • too many tasks given at once with tight deadlines • Too much filing done	• had a bad experience • forgetting tasks given • errors when multitasking • could not finish work on time

SUGGESTIONS FROM STUDENTS TO IMPROVE OFFICE MANAGEMENT SKILLS IN RELATION TO EFFECTIVE MULTITASKING SKILLS.

Table 4.18

MULTITASKING PRACTICAL IN THE UNIVERSITY	STUDENTS RESPONSIBILITIES	STUDENTS ADDITIONAL COMMENTS
• Department to have practicals lecture for answering of telephone, faxing and scanning.	• Students must be proactive and have time management	• Students to be given a stipend will increase work conditions
• Department must make sure students can multitask before going on WIL • Students to be physically shown the office machines	• Students to be taught more about multitasking as it used in the corporate world.	• Gender might also cause work delays as there is a perception regarding man that usually takes longer whilst women can do many things one time
• Students to be trained in practical before going out on WIL	• Students to use time effectively so multitasking can be better	• Environment students grew under may have positive or negative contribution
• Department to do practicals on how to print, fax and emailing • Lecturers to give students different work to do in one period to test if they can multitask	• People who can multitask are naturally organized people, responsible and have set goals for themselves.	• DUT must be supportive to students as they come from different background
• The department need	• Students to adapt into a	

to help students and students need to be willing to learn more about multitasking	change of workload as it can create tension when one needs to multitask
• More practicals at the University than theory • Lecturers should offer students more time to learn to multitask	• Students not given work to perform demotivates them. Students to be treated like normal employees[6]

4.3.10 Summary

In indicating their feelings regarding the curriculum and workplace experiences while on WIL, a number therefore made it clear that multitasking skills must be taught in the University to prepare students for the workplace. Although some students felt that it is their duty to plan their own work, most also felt that they should be prepared during lectures and that they should become familiar with office machines that are used in the workplace. Recent employees and students' feelings about multitasking skills are comparable. Both groups agree that it should be taught prior to work experience. Students also emphasized that the Department should inform the workplace more fully of what students are required to learn.

4.4 WIL SUPERVISORS' QUESTIONNAIRE

4.4.1 Introduction

The data collected from these responses was also analysed with SPSS version 24.0.

4.4.2 The Sample

In total, 22 questionnaires were dispatched in 2016 and 15 were returned which gave a 68% response rate[7]. Supervisor's details were obtained from the WIL coordinator in the OMT department, which had 22 supervisors' details. The researcher emailed to all 22 supervisors and 15 responded. Three others apologized that volume of work prevented them from answering the questionnaire.

4.4.3 The Research Instrument

The research instrument consisted of eight items, with a level of measurement at a nominal or an ordinal level.

4.4.4 Biographical Data

This section summarises the biographical characteristics of the respondents.

4.4.4.1. The table below describes the gender distribution by race.

Table 4.19

			Gender		Total
			Female	Male	
Race	African	Count	1	3	4
		% within Race	25.0%	75.0%	100.0%
		% within Gender	9.1%	75.0%	26.7%
		% of Total	6.7%	20.0%	26.7%
	White	Count	4	0	4
		% within Race	100.0%	0.0%	100.0%
		% within Gender	36.4%	0.0%	26.7%
		% of Total	26.7%	0.0%	26.7%
	Indian	Count	5	1	6

[7] It is accepted that 68% is not a large response rate and that 70% would have been preferable. The researcher is aware of this.

		% within Race	83.3%	16.7%	100.0%
		% within Gender	45.5%	25.0%	40.0%
		% of Total	33.3%	6.7%	40.0%
	Coloured	Count	1	0	1
		% within Race	100.0%	0.0%	100.0%
		% within Gender	9.1%	0.0%	6.7%
		% of Total	6.7%	0.0%	6.7%
Total		Count	11	4	15
		% within Race	73.3%	26.7%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	73.3%	26.7%	100.0%

Overall, the ratio of males to females is approximately 1:3 (26.7%: 73.3%).
Within the race category of Africans, 25.0% were female. Within the category of females (only), 9.1% were African. This category of African females formed 6.7% of the total sample.

4.4.4.2 The gender composition is reflected in the figure below.

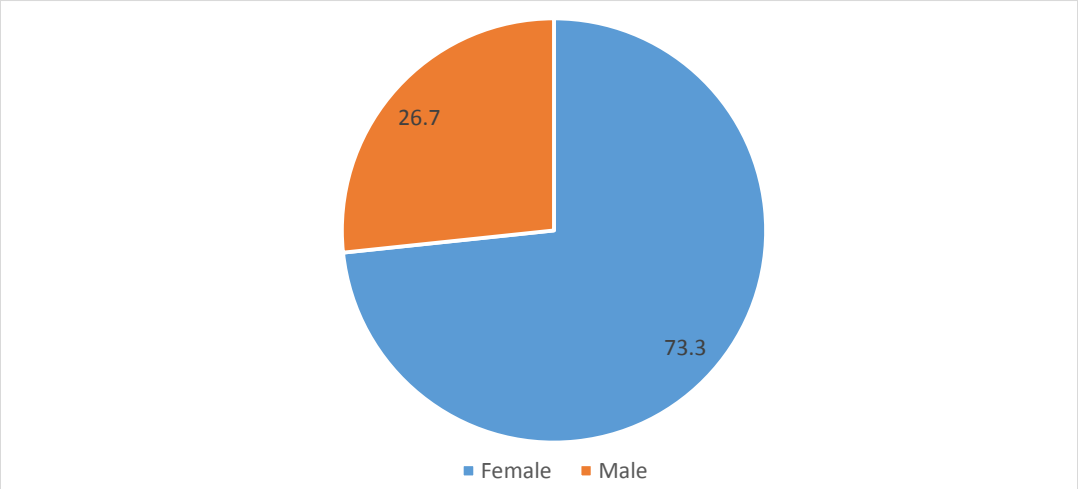

Figure 4.7 Gender (n=15)

The results indicate a large difference in gender. This could be because the course is female dominated and female students are seen by employers to be best monitored by

female employees. Some may find it easier to communicate with another woman, especially when they first enter employment.

4.4.4.3 The racial composition is shown below.

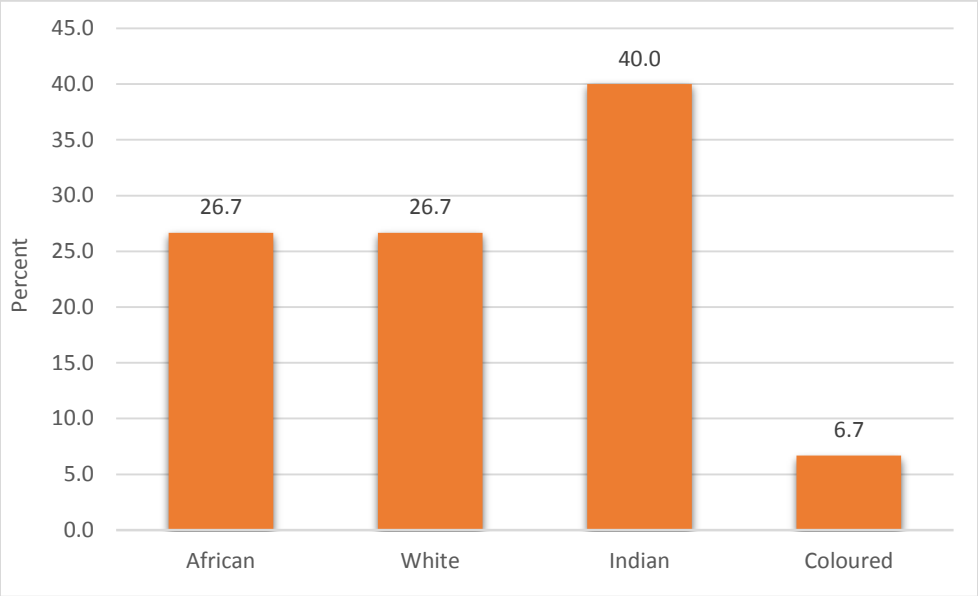

Figure 4.8 Racial (n=15)

Figure 4.8 indicates that the largest group of supervisors (40.0%) were Indians. White and African supervisors were both at 26.7%. Only one supervisor (6.7%) was Coloured.

4.4.4.4 When asked of experience in supervising Office Management and Technology students, table 4.22 shows that almost three-quarters (73.3%) of the respondents indicated that they had previously supervised students. Only 26.7% were supervising WIL students for the first time.

Table 4.20

	Frequency	Percent
Yes	11	73.3
No	4	26.7
Total	15	100.0

4.4.4.5 Figure 4.9 illustrates categories of the student supervisors were currently supervising or have supervised before:

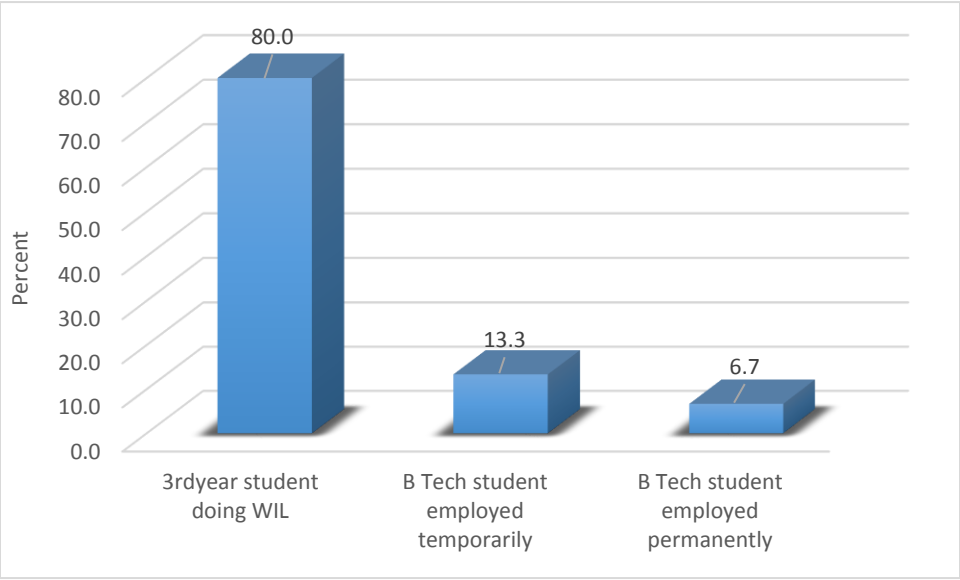

Figure 4.9 Level of study of supervised students (n=83)

The results show eighty percent of the students supervised were 3rd year WIL students, Of the B Tech students 13.3% being B Tech students, which are temporary employed, and 6.7% B Tech students that are permanently employed.

4.4.4.6 Do you feel that the university makes it clear exactly what skills students should acquire during WIL?

Table 4.21

	Frequency	Percent
Strongly Agree	3	20.0
Agree	5	33.3
Satisfactory	2	13.3
Disagree	4	26.7
Strongly Disagree	1	6.7
Total	15	100.0

Half of the respondents (53.3%) agreed with the statement or found the communication with the university satisfactory in this regard. However approximately a third (33.4%) of the respondents disagreed, indicating that some students will not be sufficiently aware of what they are required to learn, and also that the programme does not specifically indicate to the companies what kind of skills are to be acquired by students.

4.4.4.7 Regarding the supervisors' competence rating of the students.

Figure 4.9 indicates moderate to weak responses amongst the supervisors regarding the student's level of competency in the workplace. 26.7% indicated that the level of competency was good or very good which indicates that the supervisors were not generally very impressed by the competence level of their students.

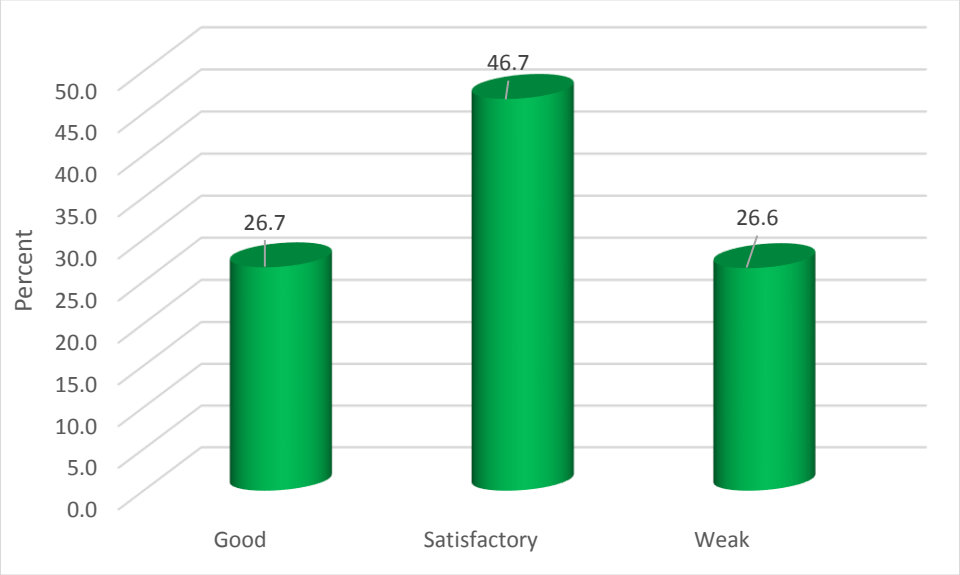

Figure 4.10 Students competency in the workplace (n=15)

4.4.4.8 Are your students required to multitask while doing WIL?

All of the respondents as seen on table 4.23 indicated that the students were required to multitask during WIL, which supports the responses of a high number of students who indicated that they were given opportunities to multitask and that they coped well[8].

Table 22

	Frequency	Percent
Yes	15	100.0

On the other hand, as mentioned above, some students indicated that they were not given any multitasking. Over 90% of students felt that there should be role play/practical classes in multitasking at university, while recent employees felt that they had to teach themselves multitasking when they first entered employment (employers possibly expecting them to have been taught it previously, or not feeling that it was their role to teach).

4.4.4.9 Respondents were then asked: If you answered 'yes' to Question 1.7 please briefly explain, giving examples of multitasking competencies which you see as important and able to be taught during WIL.

Table 4.23 Multitasking competencies

	Frequency
students must be able to multi-task	8
employers retain employees who can multi-task	7
Total	15

These response might be interpreted as indicating that Supervisors themselves are not sure of what multitasking skills students have to learn or what multitasking knowledge students must have obtained from the Institution, as they only indicate the importance of multitasking skills and avoided answering the details of the question.

4.4.4.10 If you answered 'yes' to Question 1.7, when do you think students should be prepared for multitasking?

Table 4.24 Multitasking preparedness

	Frequency	Percent
While studying on campus	6	40.0
While studying on campus + During WIL	9	60.0
Total	15	100.0

40% of the Supervisors indicated that students must be prepared for multitasking while at the University, while 60% of supervisors felt that students must be taught multitasking while on Campus and also on WIL.

4.4.5 Chi Square Test

To determine whether the scoring patterns per statement were significantly different per option, a chi square test was done. The null hypothesis claims that similar numbers of respondents scored across each option for each statement (one statement at a time). The alternate states that there is a significant difference between the levels of agreement and disagreement.

The results are shown below.

This means that gender played a significant role in terms of what respondents thought about the skills that the university believes a student should acquire during WIL. (The scoring patterns are observed in the table before.)

Table 4.25

	Chi-Square	df	Asymp. Sig.
Gender	3.267	1	0.071
Race	3.4	3	0.334

Have you previously been a supervisor of Office Management and Technology students?	3.267	1	0.071
Which of the following categories does the student you are currently supervising/ have supervised before belong to?	14.8	2	0.001
Do you feel that the university makes it clear exactly what skills students should acquire during WIL?	3.333	4	0.504
Please rate the general level of competence of the students you have sup- ervised/ are supervising	7.333	4	0.119
If you answered 'yes' to Question 1.7 please briefly explain	0.2	1	0.655
If you answered 'yes' to Question 1.7, when do you think students should be prepared for multitasking?	0.6	1	0.439
Please give any additional ideas which you consider important for developing student skills in the workplace	18.692	3	0.000

The p-values (Asymp. Sig.) are less than 0.05. This implies that the scoring patterns observed were significantly different for each option per statement.

4.4.6 QUALITATIVE RESPONSES

Respondents were then asked: Please give any additional ideas, which you consider important for developing student skills in the workplace.

- graduates must have diverse skills
- graduates must be able to handle different tasks concurrently while dealing with daily operations
- workplace needs to be aware of what the student wants to achieve.
- students must be willing to learn all there is in the workplace
- Students must be committed to workplace even when there is no remuneration.
- students must have listening skills in order to perform duties

The researcher felt that these responses, which also did not give very detailed replies

to this question, might show that respondents had not got strong opinions themselves on this. Some mentioned listening skills which is one of the most important ways of ensuring students carry out tasks, including multitasking, up to a required standard. They also indicated that graduates must have diverse skills but did not elaborate. Diversity of skills may be useful for multitasking.

4.4.7 Summary

Supervisors were therefore not highly impressed with the skills' levels of their WIL students. They agreed that students must be taught multitasking while at university. They also believe that students must be willing to perform duties even though they do not directly fit into their schedules in order to gain diverse experiences. Supervisors' statements therefore agree with those of WIL students and B Tech and recent employees. Supervisors also note that there is a great deal of work in an office and that students are there to assist, but feel that some of them have little idea of how to perform in an office and that many are ignorant of the office equipment and how to use it.

4.8 CONCLUSION

The purpose of this chapter was to provide a full presentation, analysis and interpretation of the data that was gathered from each targeted group: recent employees and B tech students, 3rd year students, and from WIL Supervisors. As explained above, currently, although WIL experience is required to complete a qualification, multitasking is not taught at undergraduate level and at Honour's level it is not taught practically. The results reveal that students feel the need for multitasking to be included in greater detail in the Office Management and Technology curriculum, that office machines and their use be introduced in lectures and role play be introduced where possible. Although recent employees have adapted to the work experience they also indicated this need. There were, however, also students who felt that the curriculum did prepare them well. WIL Supervisors indicated that students must be willing to perform work duties even although there is no stipend offered, and that students should demonstrate their interest in this field of work in order to perform well. All groups agreed that multitasking skills are very important and that they should be part of the undergraduate curriculum.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

Chapter Four presented the findings from the data and gave a detailed analysis. This chapter will summarize the findings, discuss the achievement of the research objectives and make recommendations. The limitations of the study are also discussed and potential future directions for research are suggested.

5.2 ACCOMPLISHMENT OF THE OBJECTIVES OF THE STUDY

This section will present conclusions that have been reached as regards the objectives of the study and will make specific recommendations in regard to each of these.

5.2.1 To identify the variety and nature of the work-related tasks experienced by students during WIL.

The OMT National Diploma curriculum states that students that have completed the course should be able to perform the following duties in the workplace: typing, scanning, photocopying, emailing, answering the telephone and general office duties. Although some of these duties may be required to be performed concurrently, the curriculum does not state this, nor does it make specific provision for multitasking skills to be taught. The findings show that students may be required to perform any of these office duties when on WIL, and will often be required to perform several of them together. For instance they can be required to master the following kinds of situation: depending on the environment they work in, administrators may be expected to: open the door for people to come in while having a conversation on the telephone or with a person present in the office. In the University environment students may come to the departmental administrator's office to see lecturers or to request help from the

administrator, more than one being allowed to come at one time. The administrator is then required to attend to each of their queries while at the same time a lecturer or the HoD may request something to be done urgently, and the phone may ring involving the need for other tasks to be put on hold, returned to and prioritized, once the call is finished[9].

It is therefore recommended that prior training occur. Students should be provided with as much prior information, and given as much experience, as possible. The responses received indicated that at present students on WIL are often given tasks to perform without instructions. They are simply expected to know how to do them. Students also confirmed that they are frequently expected to perform a variety of office duties at one time, and that they find this difficult especially those who have never been in an office and are still trying to familiarize themselves with the environment. They are nonetheless expected to use office machines which they have not used or seen before. Lecturers may have a perception that students will easily adapt to the new workplace situation, while students may think that they will cope, having perhaps seen office life dramatized on television, but the findings of the study show that they find that it is something different when they are actually in the office performing multiple duties, with deadlines for completion for their supervisors or managers. The need for further preparation both prior to WIL and in the workplace is therefore strongly indicated.

All of the respondents indicated that they believed multitasking skills should be taught at University in practical modules prior to coming on WIL. It is therefore recommended that both undergraduate and postgraduate students do practicals while in the learning environment allowing them to practice their office management skills before beginning work. In addition, Hasan, Wong, Ahmed and Chong, (2013) suggest that students should visit companies one day or more during the three months in their 3rd year before commencing WIL. This will give them an idea of what an office environment is like, allowing them to see people working, and to observe office machinery being employed. This could provide motivation for students as future employees as well as building

confidence and should be considered by curriculum planners in conjunction with industry players.

5.2.2 To establish the degree of preparedness for multitasking of OMT third-year students.

While a substantial proportion of undergraduate students (72%) indicated that they believed they had coped well when they were given multitasking tasks to perform, and 64.3% agreed that the curriculum had prepared them for multitasking, only 18.1% strongly agreed that the curriculum prepared them well and another 40% indicated that there were challenges encountered when they were required to multitask. 31% of students did not agree that they were well prepared by the curriculum and several students indicated that they were required to use office machines they had not seen before. Others indicated in open ended questions that they were confused when they were given more than one work task to perform during WIL. Responses from B Tech students indicated that 87% of the students that were unemployed felt that they had to teach themselves multitasking when they were on WIL with 63.7% of the employed indicating that they taught themselves multitasking when they were first employed. These rather mixed findings would seem to indicate that, while students may be reluctant to suggest that they do not cope well when encountering a new situation such as multitasking, they also realise that their preparation was not fully adequate. There is clearly a gap to be filled in the curriculum. Students also identified that although multitasking is included in some depth in the B Tech subject Organsational Behavior, that subject is done at 4th- year level when they have already been on WIL.

Although an overwhelming proportion of students agreed that multitasking should be taught within the curriculum, there were differences of opinion as to when it should be introduced. 54.2% of 3rd year students indicated that multitasking should be taught from first year with 45.8% believing that it could be introduced in second or third year. Although it may be feasible for students to start multitasking at first year level it may also be stressful or difficult as these students are coping with new ways of teaching and

learning and it is therefore recommended that to introduce multitasking at second or third year level would be preferable as by then students would have become familiar with these skills. It could be particularly useful at third year level before going out on WIL when they could practice all that has been taught from first year and put it into practice while preparing for the workplace.

It is advisable therefore overall that the OMT syllabus includes more pratical multitasking as well as more information about multitasking which could include advising students to attend any additional learning opportunities available to them such as workshops and workplace visits related to their work. If given some experience of multitasking while still at University, students' practical knowledge will improve which in turn will reduce the challenges faced on WIL.

5.2.3 Determine the students' and recent employees' perceptions regarding the learning of multitasking at the University and in the workplace

Students generally expected that they would attend training in the workplace before starting to take on their duties, but this often did not materialize and they were generally expected to know how to do the work from the start. In open ended questions students indicated that this additional training would have equipped them to perform their duties better. Therefore, although it is advisable that students be taught multitasking at University, it will also assist the company if they are willing to prepare the students for the tasks required in that particular workplace. It is recommended therefore that supervisors in the workplace should provide some training for WIL trainees which will also assist them in learning more about the culture of the workplace ensuring that they be trained towards reaching the goals of the company. This will allow the work to run smoothly and allow the students to perform their tasks in the way that the company requires.

While this specific training may cost the company a little in time and resources the company will also gain from students working more productively for them. Again some companies may consider arrangements where students who have done WIL in their

organization can subsequently be employed for two years, with an agreement that they cannot leave the company before finishing those two years, thus providing employment for the student and trained employees for the company.

There were also students who were not given any multitasking work to perform, and some students were only asked to do filing or to sort out files in the store rooms. These were therefore not given a chance to sit at a desk and to work on a computer; to answer the phone and transfer calls, etc., involving the various duties that would be performed by an administrator or office manager employed by the company. It was therefore very hard for them to give much input into the questionnaires concerning multitasking, as they were not given multiple tasks to perform. They were unable to judge if they were meeting workplace standards in this regard.

In open-ended questions students indicated that supervisors are usually very busy with their normal work and therefore have limited time to mentor or to evaluate their students' progress. It is advisable therefore, that employers ensure that mentors/ supervisors have sufficient time to give attention to their students. Supervisors should also give students a range of work to perform, including practice in having to achieve multiple tasks within a limited time span, so adding value to any company that might employ them, which may in practice be their own company. The list of skills to be learned which the University provides to the company should also include multitasking. Students currently come back to the University to present what they have learnt during their WIL experience and multitasking would then be included in these presentations.

5.2.4 Determine WIL supervisors' expectations regarding multitasking performance from their WIL students and recent employees

When WIL supervisors were asked if students are required to multitask while on WIL, all of the respondents agreed that students are required to multitask. However, when they were asked to indicate examples of the multitasking competencies they see as important, the responses were not clear and did not provide really helpful information regarding what multitasking skills are needed, suggesting that supervisors themselves are not entirely aware of what is required.

Some supervisors made the point that the level of skills that students bring to WIL differs considerably depending upon the students' backgrounds. Some students have never seen a computer, an office telephone, fax machines, scanners, or other office equipment before coming to University. This will have a negative impact on their workplace performance if they are expected to use the equipment without further training. It is therefore suggested both that the University ensure that all students are better prepared for the workplace in this regard allowing all of them to fit into the workplace more easily, and that supervisors should recognize that some specific training will be required to familiarize students with equipment and to understand office etiquette.

When they were asked to give any additional ideas which they consider important for developing student skills in the workplace, one supervisor indicated that he/she "had noticed a coherent cognitive inability in understanding the basic theoretical studies of the programme" which could mean that students are unable to express or implement what they have been taught at university when they enter employment. Supervisors also indicated that "university is an independent time of study" and that "the onus is always on the student and how much they can do with their time" – perhaps indicating that they feel that students had not put sufficient personal effort into their studies before coming on WIL.

Considering specific skills, supervisors indicated that students often lack telephone skills. It is therefore recommended that while at University students have practical

sessions involving this skill. Lecturers could use role play with a student acting the manager/ employer while other students take on the office administrator role. This role play could be designed to upgrade not only telephone skills but also multitasking skills involving, for instance, practice in answering the telephone while replying to an urgent email, or when working on the switchboard putting a call on hold and transferring calls with professionalism. Students could criticize each other's performance. These switchboard operations do, however, differ in each company but some professionalism can be gained in advance during such practical sessions. In addition, telephone briefing sessions could be given when students enter the workplace on WIL in order to orientate them regarding switchboard operations. There could be a request that the supervisor ensures that somebody is responsible for overseeing the student's skills in answering, transferring, putting on hold, and returning to the caller on hold, involving operations specifc to that company.

The DUT curriculum allows students to participate in computer laboratories during lectures in Information Administration where they physically use the computer and this subject is taken from first year up to B Tech level. However, all lectures in other subjects are purely theoretical, and students do not physically participate and practice what is being taught. Rocca (2010) notes that not all universities allow students' participation in lectures. However, even where universities allow and encourage participation some students still do not participate but keep quiet, and it becomes difficult for the lecturers to demand that they engage. While students' confidence can increase with the chance to participate, some are reserved by nature and there is often a language barrier involved in a reluctance to participate.

It is therefore recommended that the curriculum include thoughtful ways to encourage interaction including awarding marks for participating in classroom seminars or presentations. Much creativity can be developed by the lecturers encouraging students to achieve their potential in this way. Such activities as group discussions, classroom seminars, presentations and active participation by students each week will go a long way to increasing the students' understanding and confidence. This will help to upgrade their skills for the workplace including communication and multitasking skills.

Age and gender may also have an impact on performance. Sullivan and Gershuny (2013) find that multitasking is more often undertaken by women than men in the workplace regardless of age. However managers require work to be done without consideration of age or gender. It is therefore important that comprehensive training be offered to all students, but with sensitivity to the reality that some will need more support than others in the workplace.

Overall therefore supervisors should be asked to follow the guidelines received from the university as to what students must learn in the workplace in accordance with the curriculum including, in future, multitasking skills. On the other hand, when accepting students, supervisors should be asked to inform the university more clearly exactly what their students will be required to perform and what they should know on arrival, as well as what skills they should have gained by the end of the training experience.

This study therefore recommends that there should be clear duties assigned to students when on WIL without saying that the students must not perform additional duties. Guidelines should state clearly what students should be able to do on completion of WIL, including an indication that they should be trained in performing some of these duties simultaneously or within a specified time frame.

Multitasking has become a normal way of working and is accepted behavior in current workplace systems throughout the global marketplace (Jeong and Hwang, 2016). However, as companies employ people to add value and bring income into the company, rather than using company money to offer training, supervisors are likely to be influenced by this reality and they must be able to see the benefits of their mentorship for the company.

5.2.5 To recommend improvements/ developments within the OMT curriculum wherever necessary.

DeLuca and Braunstein-Minkove (2016:6) indicate that, given the competitive nature of the field, and the rapid changes that industry continuously faces, experiential learning has become a driving force within universities around the world, and is a part of almost

all programs offered. It would therefore be advisable for the OMT curriculum to be renewed or reassessed regularly to ensure progression and evolution toward a high level of student preparedness for the workplace. This would entail a focus on the real life context of the workplace within the lectures, as well as on practical experience, and professional development of the students. Subjects taught in the OMT curriculum have remained unchanged for many years and while textbooks are being upgraded, research needs to be done to evaluate whether the books used are in line with the requirements of the workplace. The syllabus should be in line with current global realities.

One of the most important aspects of the syllabus should be training in the use of technology, which has become a worldwide business tool. Ideally new technology should be used and upgraded within the university so that students can be trained in its use allowing them to adapt more easily to the working world. It is recognized, however, that the universities may not be able to afford to purchase a range of advanced office machines, and although students cannot see the actual assets that are used in the workplace that does not mean that they cannot learn about them. It is therefore recommended that students be shown, or be informed about, the latest technological advances, even if only demonstrated on video clips in lectures. If they visit the workplace before WIL, it should be arranged that they see the company's latest technology in use. If possible the Department should also install some up-to-date office machines either in lecture venues or in a seminar room where students will run their multitasking practicals. It is suggested also that universities seek sponsorship for purchasing office machinery either from companies, or through funding from Government on the grounds that it will be beneficial to students who are tomorrow's employees

It is also recommended that the OMT Department identify and take note of any gaps in their current students' performances in the workplace. These efforts will help in the upgrading of the curriculum and will support WIL supervisors in adjusting to the current students' knowledge and in upgrading training to what is required in their company.

Students should also take the initiative in requesting that the Department implement workshops, and they should be encouraged to seek out other professional development

opportunities or training workshops, courses, or seminars offered within the University. This will enhance their knowledge and allow them to visualize workplaces more easily before going on WIL. Invitations by the university to industry guests to address students will also increase awareness of what will be required from them in the working world, while WIL co-ordinators could be asked to organise tours for students before starting WIL to see the workplace and to visit the offices where they will be working.

Students need clear knowledge regarding multitasking, time management and planning skills. Combining active multitasking learning with these additional educational approaches, including practical use of machines, should produce significant learning gains for students.

Overall therefore it is recommended that students and graduates master as many of their office management skills as possible prior to commencing work. Improvements in the curriculum both on campus and in the WIL workplace could play a major role in terms of students' performance in the workplace and it is hoped that these findings will assist in the University's curriculum renewal programme.

5.3 RECOMMENDATIONS FOR FUTURE RESEARCH

It is also recommended that further research should be carried out to investigate the long term effects on performance of including multitasking in the curriculum. The focus of a future study might also be to explore the impact of both time management and multitasking effectiveness as these can be seen to be working hand in hand. For instance, Lusardi and Mitchell (2013) indicate that time management and multitasking play an equally important role in an Administrator's work schedule. Such a study could further examine the impact of time management without multitasking, since some research, as indicated in Chapter 2, is critical of the effectiveness of multitasking and its potentially negative impact on performance. This could question whether it is advisable to see multitasking as a mainstay of the workplace rather than concentrating on time management

5.4 LIMITATIONS OF THE STUDY

This study was a case study conducted at DUT. It did not involve a nationwide survey. The study also focused specifically on preparing students for multitasking and related skills, and did not explore the full range of office management skills taught. However the evidence gathered indicated that this aspect of office work has been given far too little attention within curricula at universities and also during WIL, despite the research indicating strongly that this is one of most sought-after skills currently required in offices.

5.5 CONCLUSION

This case study has performed an in-depth analysis of the degree of preparedness of DUT OMT students for multitasking in the workplace. To accomplish the aim three groups of respondents were targeted in order to collect as much relevant data from key sources as possible. The findings indicated strong agreement that multitasking is an important skill in the workplace and should be taught from undergraduate level prior to students undertaking WIL. Although a significant number of respondents saw themselves as well prepared by the University and believed that they coped well when required to multitask, a clear gap, or counter finding, emerged in that the majority of graduate respondents indicated that they had had to teach themselves multitasking when they first entered employment. As multitasking is only offered in a theoretical way in the OMT curriculum, and only at honours level, the results of this study reinforce the need for curriculum renewal in preparing students at university for multitasking particularly in practical ways.

It is hoped that the findings of the study will assist towards implementing new curriculum strategies to equip students for the workplace in terms of upgrading multitasking skills and also working more closely with workplaces to establish what skills they most require from OMT students. Further, it hopes to indicate the need for workplace supervisors to engage more with students and to provide closer mentorship allowing all stipulated duties, including multitasking, to be thoroughly supervised and acknowledged.

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APPENDIX A

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Durban University of technology

Dear Ms Mbatha

PERMISSION TO CONDUCT RESEARCH AT THE DUT

Your email correspondence in respect of the above refers. I am pleased to inform you that the Institutional Research Committee (IRC) has granted full permission for you to conduct your research at the Durban University of Technology. However, kindly note that the committee requires you to provide proof of full ethical clearance prior to you commencing with your research at the DUT.

We would be grateful if a summary of your key research findings can be submitted to the IRC on completion of your studies.

Kindest regards.
Yours sincerely

[redacted]

PROF. S. MOYO
DIRECTOR: RESEARCH AND POSTGRADUATE SUPPORT

APPENDIX B

Institutional Research Ethics Committee
Research and Postgraduate Support Directorate
2nd Floor, Berwyn Court
Gate 1, Steve Biko Campus
Durban University of Technology

P O Box 1334, Durban, South Africa, 4001

Tel: 031 373 2375
Email: lavishad@dut.ac.za
http://www.dut.ac.za/research/institutional_research_ethics

www.dut.ac.za

22 June 2017

IREC Reference Number: **REC 7/15**

Mrs P P Kubheka
Unit 5, Logbro Place
145 Wyebank Road
Kloof
3610

Dear Mrs Kubheka

Analyzing the preparedness of Office Management and Technology graduates for multitasking in the workplace

The Institutional Research Ethics Committee acknowledges receipt of the **late submission** of the results of your pilot study. Provisional approval was granted to you on 4 March 2015. Please be advised that you were required to submit the results of the pilot study to the IREC before commencing with data collection, failure to do so could result in penalty.

Please note that FULL APPROVAL is granted to your research proposal.

Yours Sincerely,

[redacted]

Professor J K Adam
Chairperson: IREC

DUT DURBAN UNIVERSITY OF TECHNOLOGY
2017 -06- 22
INSITUTUTIONAL RESEARCH ETHICS COMMITTEE
P O BOX 1334 DURBAN 4000 SOUTH AFRICA

APPENDIX C

LETTER OF INFORMATION

Title of the Research study: Analysing the preparedness of Office Management and Technology graduates for multitasking in the workplace.

Principal researcher: Mrs Phumelele Precious Kubheka, M Tech Commercial Administration

Supervisor/s: Dr J Skinner (Supervisor); Dr S Ngwane (Co Supervisor)

Brief Introduction and purpose of the study: The study aims to find out if the Office Management and Technology graduates are well prepared for multitasking in the workplace, with a view to recommending some changes in the curriculum if these are found to be necessary.

Outline of the procedures: The questionnaire will take roughly 10-15 minutes to complete. The respondents are requested to fully complete the questionnaire as this will allow the researcher to analyse and interpret the responses accurately.

Benefits: It is hoped that the study will benefit the Institution, students as well employers, as it will be known if the curriculum set is benefiting the students and employers will also benefit as they will employ suitable candidates from the University, students will also be best employees.

Withdraw from participating: Participation is voluntary, respondents may withdraw at any time.

Remuneration of the study: No remuneration will be received by the respondents for participating in this study.

Confidentiality: Respondents responses will be kept confidential and their names will not be mentioned in the research report or any other publication.

Persons to contact for queries: Mrs Phumelele Kubheka (0726487085), Dr J Skinner (Supervisor) 0836585951, Dr S Ngwane (Co supervisor) 081 019 8535

LETTER OF CONSENT FOR PARTICIPATING STUDENTS AND GRADUATES

Thank you for agreeing to participate in this study. Your participation should assist us in determining whether any aspects of the Work Integrated Learning experience of students at DUT can be improved with the hope that the information gained will assist students, staff and employers in the future. Your participation is much appreciated and you can be assured that you may withdraw if you wish at any point – and also that your name will not be used. Your confidentiality is assured.

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, _____ (name of researcher), about the nature, benefits and risks of this study.
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth and initials will anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

_____ _____ _____ _____

Full names of participant Date Time Signature

I, _____ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

_____ _____ _____

Full name of Researcher Date Signature

APPENDIX D

B TECH/RECENT EMPLOYEE QUESTIONNAIRE

Please answer all questions as incomplete questionnaire cannot be used.
Please indicate the appropriate box by using a tick (√)

1.1 To which age group you belong to?

18-25	
26-30	
31-35	

1.2 Please indicate your gender

Female	
Male	

1.3 To which of the following racial or ethnic groups you belong? (This question is voluntary)

African	
White	
Indian	
Coloured	

1.4 Are you currently employed?

Yes	
No	

1.4.1 If you answered ‘no’ to Question 1.4 please answer this question.
While on Work Integrated Learning (WIL), I found that I had to teach myself multitasking.

Strongly Agree	Agree	Disagree	Strongly Disagree	N/A (I had no multitasking duties)

1.4.2 If you answered ‘yes’ to Question 1.4 please answer this question.

I feel that I had to teach myself multitasking while first in employment.

Strongly Agree	Agree	Disagree	Strongly Disagree	N/A (I have no multitasking in my current employment)

1.5 I believe that a student needs to be taught how to multitask within the academic curriculum

Strongly Agree	Agree	Disagree	Strongly Disagree

1.6 The Office Management and Technology academic curriculum prepared me adequately for multitasking

Strongly Agree	Agree	Disagree	Strongly Disagree

1.6.1 Please provide reason for your answer

1.7 From which level of study, if any, do you think students should be taught how to multitask?

1st year	
2nd year	
3rd year	
B Tech	
I do not believe that multitasking can/should be taught at university	

1.8 I believe that multitasking should be taught in modules that have practical's.

Strongly Agree	Agree	Disagree	Strongly Disagree	N/A

1.9 I believe that most companies currently require all office management personnel to be competent at multitasking

Strongly Agree	Agree	Disagree	Strongly Disagree	N/A

1.10. Please give any additional comments with regard to multitasking in the workplace which you believe could help us to make recommendations for improving these skills

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Many thanks for your time

APPENDIX E

THIRD YEAR/GRADUATES QUESTIONNAIRE

Please answer all questions as the incomplete questionnaire cannot be used.
Please indicate the appropriate box by using a tick (√)

1.1 To which age group do you belong?

18-20	
21-25	
26-30	
31-35	

1.2 Please state your gender

Female	
Male	

1.3 To which of the following racial or ethnic group you belong? (This question is voluntary)

African	
White	
Indian	
Coloured	

1.4 Multitasking has been defined as the ability to undertake competently more than one task at the same time and multitasking success as 'the ability to draw on a wide range of cognitive functions when acting to achieve multiple goals'. At which level of study do you think students should be taught how to multitask?

1st year	
2nd year	
3rd year	
I do not feel that this training is necessary	

1.5 Please indicate your level of agreement with the following statements:
I was given the opportunity to develop good skills of multitasking while on work integrated learning (WIL)

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree

1.6 I feel that the academic curriculum at university has prepared me well for multitasking.

Strongly Agree	Agree	Satisfactory	Disagree	Strongly Disagree

1.7 I believe that the University should teach multitasking to students before they go out to WIL

Strongly Agree	Agree	Disagree	Strongly Disagree

1.8 I believe that students should have practical training/ role-play in multitasking while at the University.

Strongly Agree	Agree	Disagree	Strongly Disagree

1.9 While on WIL, when I was given multitasking to perform, I coped well.

Strongly Agree	Agree	Disagree	Strongly Disagree	N/A (I was not given any multitasking duties during WIL)

1.10 Were there any challenges you came across while on WIL regarding multitasking?

Yes	*No*	*N/A* (I was not given any multitasking duties during WIL)

If you answered 'yes' please describe these challenges below.

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……

……

……

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1.11 Please give any other comments you would like to share concerning the development of your office management skills, particularly in relation to effective multitasking.

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Many thanks for your time.

APPENDIX F

WIL SUPERVISORS IN THE WORKPLACE QUESTIONNAIRE

Please answer all questions as the incomplete questionnaire cannot be used.
Please indicate the appropriate box by using a tick (√)

1.1 Please state your gender

Female	
Male	

1.2 Please state your race. (This question is voluntary)

African	
White	
Indian	
Coloured	

1.3 Have you previously been a supervisor of Office Management and Technology students?

Yes	No

1.4 Which of the following categories does the student you are currently supervising/ have supervised before belong to?

3rd year student doing WIL	
B Tech student employed temporarily	
B Tech student employed permanently	

1.5 Do you feel that the university makes it clear exactly what skills students should acquire during WIL?

Strongly Agree	Agree	Satisfactory	Disagree	Strongly Disagree

1.6 Please rate the general level of competence of the students you have supervised/ are supervising.

Very Good	Good	Satisfactory	Weak	Very weak

1.7 Multitasking has been defined as the ability to undertake competently more than one task at a time, and multitasking success as 'the ability to draw on a wide range of cognitive functions when acting to achieve multiple goals'. Are your students required to multitask while doing WIL?

Yes	No	Sometimes

1.7.1 If you answered ‘yes’ to Question 1.7 please briefly explain, giving examples of multitasking competencies which you see as important and able to be taught during WIL

1.7.2 If you answered ‘yes’ to Question 1.7, when do you think students should be prepared for multitasking?

a)	While studying on campus	
b)	During WIL	
c)	Both a) and b)	
d)	Once employed	
e)	After some years of working	

1.7.3 If you answered ‘no’ to Question 1.7 please briefly explain why not

1.8 Do you believe that multitasking is an important skill in today’s business world?

Yes	No

1.9 Please give any additional ideas which you consider important for developing student skills in the workplace

Many thanks for your time