



The impact of Work School Conflict and Work School Enrichment on job satisfaction and  
academic satisfaction

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WLLCAR025

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## **Abstract**

More students are combining their higher education with paid work necessitated by the increasing cost of living and the costs of tertiary education. Simultaneously, higher education in South Africa (SA) is plagued with low success rates (Department of Higher Education and Training, 2017). The increase in combining work and study could be a compounding factor toward these low success rates. The constructs Work School Conflict (WSC) and Work School Enrichment (WSE), have been used to explore the impact of working while studying. The current study builds on this research in the SA context. Working students responded to self-report survey ( $N = 379$ ). Regression analysis revealed WSC to have a negative relationship with both job satisfaction and academic satisfaction and WSE to have a positive relationship with job satisfaction and academic satisfaction. Social support from supervisors was found to buffer the negative relationship WSC has with academic satisfaction. However, no evidence was found for the other moderation hypotheses. The findings from this study support previous research regarding the positive and negative impacts holding a work and school role simultaneously can have in the school and work domains. Further theoretical and practical implications of these findings are discussed.

*Key words:* Work School Conflict, Work School Enrichment, working students, job satisfaction, academic satisfaction, social support

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## Introduction

Research on the characteristics of students entering higher degrees globally shows an increase in the number of working students (Butler, 2007; McNall & Michel, 2017; Olson, 2014). With the rising costs of tertiary education, particularly in relation to household income in South Africa (SA), (Calitz & Fourie, 2016) more students are seeking employment while at the same time attempting to complete their tertiary qualification. This pattern of working while studying is present among many students in the SA higher education context. This is especially apparent amongst postgraduate students. The SA higher education context is also characterised by low throughput (Department of Higher Education and Training, 2017; Subotzky & Prinsloo, 2011). The financial realities for many students result in the necessity for them to manage their studies while working and this may account in some part for the low success rates. Low success rates are defined by lengthy delays in time to degree completion and the number of actual graduates per cohort. There are also a few possible positive spinoffs from working while studying and managing the multiple roles and demands of these two domains. We know little about the psychological experiences of working students in South Africa and it is in this context that this study is located.

Research into holding multiple roles has been widely studied, with the key focus being on the work-family domain (Carlson & Perrewe, 1999; Frone, Russell, & Cooper, 1992; Greenhaus & Beutell, 1985; Greenhaus & Powell, 2006; Kremer, 2016). More recently, research into the work-school domain has been conducted, however, the work school interface has not been studied as extensively as the work family interface (Adebayo, 2006; Butler, 2007; Wyland, Lester, Ehrhardt, & Standifer, 2016; Wyland, Lester, Mone, & Winkel, 2013). With the increase in individuals who work and study at the same time it is worthwhile to study the impact this has from an academic as well as employer perspective

(Butler, 2007; McNall & Michel, 2017; Olson, 2014). Role theory is a suitable theoretical framework within in which to study these set of circumstances.

### **Research Aims**

This study focusses on individuals who work and study simultaneously. The aim of this research is to expand the local knowledge relating to Work School Conflict (WSC) and Work School Enrichment (WSE). With more students working to fund their studies and cover other expenses, it is of interest to understand the dynamics involved with these dual roles (Holmes, 2008). This will be achieved by firstly verifying that WSC and WSE are two distinct variables. Thereafter, relationships between WSC and WSE and two important outcomes namely job satisfaction and academic satisfaction will be investigated. The moderating role of social support at work (from supervisors and co-workers) on the relationships between WSC and academic satisfaction and WSE and academic satisfaction will also be investigated.

### **Literature Review**

This literature review begins with a discussion of the target population of this study, namely working students. The theoretical framework relating to WSC and WSE is then presented. Following this, WSC and WSE are defined and background research is presented which includes an account of the antecedents related to each construct. The outcomes relating to WSC and WSE are then presented. Social support at work is then reviewed and offered as a moderating variable on the relationships between WSC and academic satisfaction and WSE and academic satisfaction. Finally, other potential avenues of research which are outside of the scope of the present research are presented as emerged in the literature review.

### **Non-traditional students**

People who work and study concurrently are either people who work full time and return to their studies or are full time students who seek employment while they study

(Adebayo, 2006). Non-traditional student is the label used when describing individuals with these characteristics, however, there are other definitions. For example Markle (2015) defines non-traditional students as having being older than 25 or employed or enrolling in higher education at least five years after high school. Wyland et al. (2016) distinguish between traditional and non-traditional students by age and consider traditional students to be aged between 19 and 22 years old. Wyatt (2011) describes non-traditional students as students who have a combination of characteristics which traditional students do not have. These include, but are not limited to, being older than twenty-five years old, being employed full time and having social/family expectations which generally include children. Adebayo (2006) refers to non-traditional students as students who are 24 years old and older and employed either in a full time or part time capacity.

The common element of the definitions used is the fact of being employed. The differences in the various definitions relate to the age as well as family circumstances of the individuals. It appears therefore, that each study defines non-traditional student to suit their particular need. The current study defines non-traditional students as students who hold both the role of student and employee. Due to the large number of possible age and family circumstance possibilities, characteristics relating to age and family will not be used to define non-traditional students in this study.

**Non-traditional students and academic success.** The other areas of the non-traditional student's life may be seen as hindrances to their academic success (Subotzky & Prinsloo, 2011). Swain and Hammond (2011) in their qualitative study on eighteen graduates who studied part time in the United Kingdom (UK) found that work and family demands were significant constraints to success. Previous research has suggested that in order for non-traditional students to succeed, they need to find ways to incorporate their studies into their already busy lives (Kember, 1999). Family is considered to be another source of time and

role conflict for non-traditional students (Kremer, 2016). This is because some of these students, have a family system that is in one way or another reliant on them like dependents or a spouse (Kremer, 2016; Swain & Hammond, 2011). The non-traditional student as defined for the current study, would have their work role as the largest role conflict to their academic role (Kember, 1999; Markle, 2015).

As defined for this research, non-traditional students hold at least two roles namely employee and student and they potentially hold multiple additional roles. Other roles they may hold are in the domestic realm, for example spouse or parent. There are two main areas of research dedicated to the study of people who hold more than one role in society. The first and most studied is considered from a scarcity perspective, role strain presented by Goode (1960) and the second which is becoming more relevant with the emergence of the positive psychology movement, is enrichment which is generated from the role enhancement or expansion perspective (Dyson-Washington, 2006; Lenaghan & Sengupta, 2007; McNall, Nicklin, & Masuda, 2009).

### **Theoretical background**

The scarcity perspective and the enhancement perspective are two opposite ways in which to examine individuals holding multiple roles (Dyson-Washington, 2006). The scarcity perspective considers multiple role occupation from a negative perspective while the enhancement perspective has a more positive approach to it.

**Scarcity approach.** The scarcity approach holds that individuals have limited resources which can be depleted by participating in multiple roles (Marks, 1977). The theory of role strain as presented by Goode (1960) is underpinned by the scarcity approach. Role strain depicts a situation where an individual can hold more than one role and experiences tension and pressure when trying to fulfil the demands and obligations of these multiple roles. This is due to the individual having limited resources and when they are engaged in multiple

roles, each role competes for these limited resources. In other words, individuals have insufficient resources to provide to each role and this places strain on them as the individual would then need to select which role to allocate their limited resources to.

By needing to select only one role to provide the resources to, it would cause the individual to experience stress as it would leave the other role with unfulfilled demands (Goode, 1960). In the same way, the resource drain model also holds that there is a limited amount of resources available to an individual and if they are used by the one role, they are not available for use by the other role/s (Edwards & Rothbard, 2000; Hecht & McCarthy, 2010). In the non-traditional student case, the role of student and employee would be the competing roles.

The Work Family Conflict (WFC) and subsequently Work School Conflict (WSC) literature originates from this scarcity approach of role strain theory and considers holding more than one role from a negative perspective (Greenhaus & Beutell, 1985; Markel & Frone, 1998). Another term used by researchers concerned with the negative impact holding two roles has, is negative spill over (Dilworth, 2004; Edwards & Rothbard, 2000).

The early work in the role strain realm focussed on the work-family domain (Greenhaus & Beutell, 1985). The research in the work-school domain was then built on the work done in the work-family domain (Markel & Frone, 1998). Despite the focus of the present study not being on the work-family domain, having an appreciation of the research done in the work-family domain assists in understanding the basis of the work-school domain. The work-family research dominates the literature on holding multiple roles and as such sets the context for the work done in the work-school context.

***Work Family Conflict (WFC)***. According to WFC theory, the family and work roles were considered the two most important aspects of employed adults' lives. Based on the concept of role strain, Greenhaus and Beutell (1985) presented the concept of WFC. WFC

is defined as “a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect” (Greenhaus & Beutell, 1985, p. 77). In other words, being involved in the work role makes some elements of being in a family role more difficult. This perspective highlights the interplay between the demands placed on individual in each domain that is, the work domain and the family domain. Research into WFC continued to expand into the 21<sup>st</sup> Century (Amstad, Meier, Fasel, Elfering, & Semmer, 2011; Perry-Jenkins & Wadsworth, 2017).

Amstad et al. (2011) conducted a meta-analysis on the outcomes of WFC and categorised the outcomes relating to WFC into three categories, namely work-outcomes, family outcomes and domain-unspecific outcomes. Domain-unspecific outcomes in this instance refers to general outcomes like life satisfaction and general health problems. This meta-analysis found that WFC had a negative relationship with the well-being and performance indicators in each of the three categories under review. That is, where individuals found work to interfere with their family life, their performance and well-being was low at work, in their family lives as well as in general. Additionally, WFC was found to have the strongest relationship with domain-unspecific outcomes and within this category, the strongest relationship was a negative relationship with general stress (Amstad et al., 2011).

As non-traditional students are the focus of the present study, one could consider that, they would potentially experience WFC as they could hold both work and family roles. However, the emphasis of the present research is non-traditional students in their roles as student and employee. Specifically, the potential conflict experienced by these individuals relating to the interface between the work and school roles. Based on from the work done in the work-family domain, Work School Conflict (WSC) has been conceptualised and explored over the last few years (Adebayo, 2006; Butler, 2007; Kremer, 2016; Markel & Frone, 1998;

McNall & Michel, 2011; Park & Sprung, 2013; Singla, 2013; Wyland et al., 2016; Wyland et al., 2013).

**Work School Conflict (WSC).** Research suggests that Work School Conflict (WSC) could be viewed similarly to WFC (Butler, 2007; Markel & Frone, 1998). WSC is also presented in relation to the role strain perspective. Specifically, that there are two important competing domains in an individuals' life and when the individual attends to the one role, it is to the detriment of the other (Markel & Frone, 1998). WSC is therefore defined by drawing on the WFC literature concerning an individual struggling to perform in their school role due to the competing demands from the work role (Adebayo, 2006; Markel & Frone, 1998; McNall & Michel, 2011; Singla, 2013).

Three forms of inter-role conflict have been put forward in the work-family research but could play out in the work-school research as well. The conflicts are time-based conflict, strain-based conflict and behavioural-based conflict (Greenhaus & Beutell, 1985). The time-based conflict refers to an individual not having sufficient time to devote to both roles. For example, if an individual has work to complete in the evening and over the weekend, it reduces the amount of time they have to complete school work.

Strain refers to the psychological and physiological effects of the demands in one role like anxiety and fatigue (Greenhaus & Beutell, 1985). An example of this in the work school domain could be where the impact of the demands placed on the individual at work causes stress and strain and this stress has a negative impact on the individual by causing negative emotions (Rothbard, 2001). These negative emotions can then transferred to the school environment and this impacts on the individual's ability to perform in their school role (Rothbard, 2001). This transfer of emotions is also referred to as spill over (Rothbard, 2001). The individual's preoccupation with the work role and the feelings they experience because

of it would therefore impact their ability to perform in the school role. The demands from the school role would therefore not be met.

Lastly behavioural conflict refers to the way an individual carries themselves and behaves in a situation being suitable in one role but incompatible with the other (Greenhaus & Beutell, 1985). In this instance an individual who is a manager and student may be expected to take charge in the work context, but this behaviour may not be welcome when she is participating in a group task in the school environment.

WSC, its antecedents and outcomes has been researched in the last few years, however the research is not as extensive as the research in the work-family domain (Adebayo, 2006; Butler, 2007; Laughman, Boyd, & Rusbasan, 2016; Wyland et al., 2016).

*Antecedents to WSC.* Despite the current research being focussed on the outcomes of WSC, gaining insight into the antecedents linked to WSC assists in obtaining a more complete picture of the nature of WSC. Two main antecedents have been linked to WSC namely job demands and job control (Butler, 2007; Wyland et al., 2016). Job demands are defined as “those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills” (Bakker & Demerouti, 2007, p. 312). Where employees experience high job demands, it is expected that they will experience WSC. Butler (2007) conducted a study in the United States of America (USA) on full time undergraduate students who worked an average of 21.25 hours per week. Butler (2007), found a positive relationship between job demands and WSC. Wyland et al. (2016) in a study on 170 working undergraduate students also found that job demands predict WSC. Correspondingly, Adebayo (2006), in his study on 126 employed postgraduate students in Nigeria likewise found a relationship between workload, conceptualised similarly to job demands, and WSC. Similarly, in the South African context, Oosthuizen, Mostert, and Koekemoer (2011) conducted research into work-non-work

interference with married employees with children at a tertiary institution in the North West Province. This study found job demands in the form of work pressure and emotional demands had positive relationships with the Work – non-work interference measure of all the non-work roles investigated. Work – non-work interference is conceptualised similarly to WSC in that the non-work role is impacted on by being involved in the work role (Oosthuizen et al., 2011).

Oosthuizen et al. (2011) found that where employees experienced high job demand, they experienced high work – non-work interference with the four non-work roles researched namely, parent, spouse, religion and domestic. It is therefore expected that if the work role interferes with the other non-work roles, it possibly interferes with the school role as well.

The second antecedent considered in relation to WSC is job control. Job control is defined as “Control over how or what work is completed” (Butler, 2007, p. 503). This concept has also been defined as autonomy (Oosthuizen et al., 2011). Job control has been found to negatively predict WSC (Butler, 2007). That is, the more individuals were able to decide which activities to undertake and how to do so, the less WSC they experienced.

**Role Enhancement/Expansion.** The theory of role accumulation and the expansion approach are presented when viewing holding multiple roles from a positive perspective (Marks, 1977; Sieber, 1974). Role accumulation theory is based on an enhancement or expansion perspective considers that the advantages of holding multiple roles is more beneficial than the stress placed on the individual (Sieber, 1974).

Marks (1977) presented an expansion perspective in direct contrast to the scarcity hypothesis. Marks (1977) argued that human energy is abundant and can even be generated. This can enable an individual to partake in multiple roles successfully (Grzywacz & Butler, 2005). Furthermore, Marks (1977) stated that where there is commitment to a particular role,

an individual can generate energy to participate in that role and as well as generate additional energy simply by participating in the role.

When studying multiple roles from an enhancement or expansion perspective, one would think about the individual holding more than one role positively and consider that individual has sufficient resources to hold multiple roles. In fact, one would consider there to be an abundance of resources which would allow for an individual to be involved in multiple roles successfully (Lenaghan & Sengupta, 2007; Marks, 1977; Sieber, 1974).

Role enhancement theory also provides that the individual partaking in the various roles could also transfer benefits from one role into the other each other thereby increasing the positive aspects of holding multiple roles (Greenhaus & Powell, 2006; Sieber, 1974). Other researchers viewing holding multiple roles from a positive perspective refer to it as positive spill over (Edwards & Rothbard, 2000), facilitation (Wayne, Grzywacz, Carlson, & Kacmar, 2007) and enrichment (Greenhaus & Powell, 2006).

As such, Work Family Enrichment (WFE) and Work School Enrichment (WSE) research was developed based on positive consideration of holding multiple roles, specifically role accumulation theory (Butler, 2007; Greenhaus & Powell, 2006). The initial research considering holding multiple roles in a positive light was done in the work-family domain and the concept of WFE was put forward (Greenhaus & Powell, 2006). This research was expanded on in the work-school domain leading to the conceptualisation of WSE. As such, even though the current research is on WSE, it is important to understand WFE as it is the foundation upon which the WSE research is based.

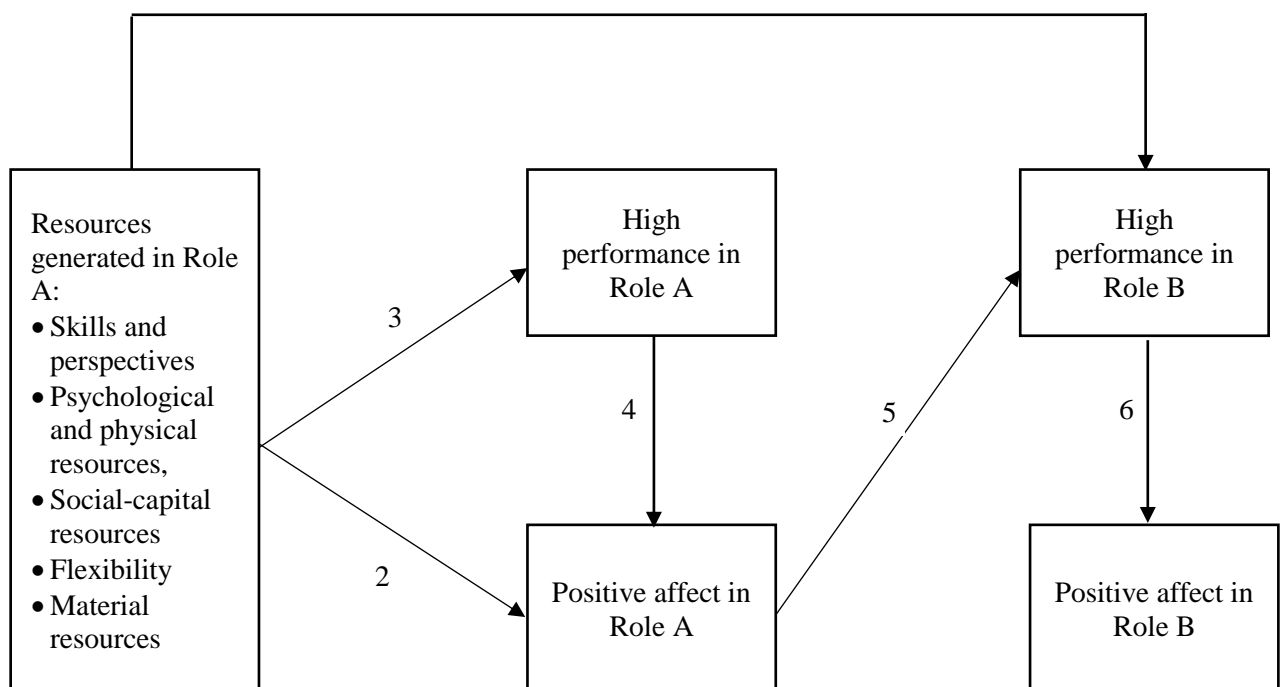
***Work Family Enrichment (WFE).*** WFE was created from the role enhancement perspective (Greenhaus & Powell, 2006). WFE is defined as “the extent to which experiences in one role improve the quality of life in the other role” (Greenhaus & Powell, 2006, p. 72). In other words, being involved in one role has a positive impact on the other role. The way in

which being involved in the one role impacts on the other is through the resources that are produced in the first role (Greenhaus & Powell, 2006). For example, an individual holding an employee role (Role A), could use what is learned and experienced in the work setting to enhance the operation of the family in the family role (Role B).

According to Greenhaus and Powell (2006, p. 80) there are “five types of resources that can be generated in a role: skills and perspectives, psychological and physical resources, social-capital resources, flexibility, and material resources”. These resources can be used within the current role as well as be transferred to the other role held by the individual.

There are two ways in which the performance and positive affect in Role B is influenced, namely the instrumental pathway and affective pathway (Figure 1) (Greenhaus & Powell, 2006). The instrumental pathway is in effect when a resource obtained in role A is directly transferred into role B. The affective pathway relates to where a resource creates positive affect in role A which leads to a positive outcome in role B either through increased performance or positive affect (Greenhaus & Powell, 2006).

1 – Instrumental pathway



**Figure 1.** Model of WFE adapted from Greenhaus and Powell (2006)

Schein and Chen (2011) proposed that the pathways in the above model operated in a slightly different way. Three pathways were presented in this model namely, the facilitative effect, the non-facilitative effect and the instrumental pathway. The facilitative effect occurs when a resource gained in role A enables the individual to perform in role B which leads to a positive outcome in role B. The non-facilitative effect refers to where a resource is gained in role A, but not action is taken in role B. Lastly the direct effect of gaining a resource in role A and using it in role B is referred to as the instrumental pathway.

The term facilitation as opposed to enrichment has been used to describe holding multiple roles from a positive perspective (Carlson, Kacmar, Wayne, & Grzywacz, 2006; Jaga, Bagraim, & Williams, 2013; McNall et al., 2009). In fact, the term facilitation has also been used somewhat interchangeably with enrichment in various studies (Butler, 2007; Carlson et al., 2006; McNall & Michel, 2017; McNall et al., 2009). Where facilitation differs from enrichment is that facilitation focusses on the impact experienced in the domain while the impact of enrichment is at an individual (Carlson et al., 2006; Wayne et al., 2007). For clarity, the term enrichment will be used in the present research as the impacts or outcomes discussed and investigated are at an individual level not system level. Enrichment is found to be the most comprehensive construct for impacts on an individual level (Carlson et al., 2006).

In the work family domain, in a meta-analysis conducted on the outcomes of WFE, McNall et al. (2009) found WFE to be a positive predictor of both family and job satisfaction as well as affective commitment. Additionally, evidence was found for a positive relationship between WFE and physical and mental health. In a study on WFE conducted in South Africa with employees who hold the role of employee as well as at minimum one family role such as spouse or parent Jaga et al. (2013) found WFE to have a negative relationship with depression as well as emotional exhaustion. In other words, where individual's experienced WFE, they experienced lower levels of depression and emotional exhaustion. As such,

considering the holding of multiple roles in a positive light as the construct WFE does, has been found to have positive outcomes in the South African context as well.

***Work School Enrichment (WSE)***. Drawing on the research conducted in the work-family domain on WFE by Frone et al. (1992) and Greenhaus and Powell (2006) WSE has been defined as where an individual's school role is positively impacted on as a consequence of holding the work role (Butler, 2007; Markel & Frone, 1998). Butler (2007) argues that the same considerations in the work-family domain which allow for the involvement in one role to positively impact on the other role are suitable in the work-school domain. In other words, the resources generated in the work role, can be transferred to the school role and then positively contribute to the student role. As with WFE, this transfer of resources can take place through the affective or instrumental path (Butler, 2007).

As it is in the WFE research, even though the term facilitation has been used in some the research focussing on the interface of the student and employee roles, the impacts researched are of an individual nature (Butler, 2007; McNall & Michel, 2011; Wyland et al., 2016). Therefore, the construct measured in these studies will be considered to be WSE.

***Antecedents to WSE***. Even though the present study is focussed on the outcomes of WSE and not the antecedents, the antecedents linked to WSE are explored here to obtain a more comprehensive understanding of WSE. Resource generation is an important preceding element of the enrichment process in WSE in the same way that it is in WFE (Butler, 2007). There are characteristics of both the job, the individual and their circumstances which add to an individual's available resources and therefore lead to WSE (Butler, 2007). The dominant antecedents presented in this paper in relation to WSE are job control and job school congruence.

Job control in relation to WSE is defined and measured in the same way as the job control antecedent to WSC. Job control is defined as the power an individual has over the

way in which they do their job (Butler, 2007). Job control was found to have a positive relationship with WSE (Butler, 2007; Wyland et al., 2016). That is, the more control individuals feel they have over their job, or where individuals feel as though they can decide in what way to do their jobs, they experience higher levels of WSE.

Job school congruence, defined as where there is overlap in the content of what is being taught at school and the expectations or task reality in the workplace (Butler, 2007). Where individuals are involved in studies that in some way are related to the work they perform, the expectation is that the resources in the form of skills and other perspectives are generated during their studies and transferred into the workplace (Butler, 2007). Consequently, job school congruence was found to predict WSE (Butler, 2007). Wyland et al. (2016) did not include job school congruence in their study but did note that it could be a worthy exercise to undertake and expected to find positive relationships between an overlap in work and school and WSE.

### **WSC and WSE as distinct concepts**

The original research into WSC and WSE was based on the research in the work family sphere (Butler, 2007; Greenhaus & Powell, 2006; Markel & Frone, 1998). WFC and WFE have been found to be distinctly different constructs (Carlson et al., 2006; Grzywacz & Butler, 2005). As presented by Carlson et al. (2006), conflict is psychological in nature in that it is a stress response to the situation of competing role demands. One of the main elements of the concept of conflict is the competition for finite resources from each domain of interest (Grzywacz & Butler, 2005; Markel & Frone, 1998). By each domain competing for resources, the resources can deplete and leave the individual in a position where they need to select which domain or role to provide their limited resources to (Markel & Frone, 1998).

Enrichment, however is a “developmental phenomenon” in that the resources obtained in one domain can be used in the other domain, to the benefit of the other domain

(Carlson et al., 2006, p. 149). Butler (2007) therefore concluded that WSC and WSE were in fact different constructs as the two constructs did not correlate highly and different antecedents predicted each.

In the current research, it is also considered that the WSC and WSE are distinctly different constructs. This is beneficial as it means that it is not sufficient to only measure one of the two constructs and infer the measurement of the other. Both WSC and WSE need to be measured and interpreted separately. The present study will thus attempt to establish then strengthen the argument that WSC and WSE are distinct constructs.

### **Outcomes of WSC and WSE**

The impact of students holding both a work and school role is of interest to academic institutions and organisations as findings relating to both these spheres has been found in the research.

**Individual outcomes.** From an individual outlook, the psychological health of individuals has been found to be impacted on negatively by WSC (Park & Sprung, 2013; Singla, 2013). Physical health was also investigated, but evidence was not found for a relationship between WSC and physical health (Park & Sprung, 2013).

**Academic outcomes.** From an academic perspective, impacts on academic performance and school attendance have been found (Butler, 2007; McNall & Michel, 2011; Sy, 2006).

**Work outcomes.** Lastly, when looking at the conflict from an employer standpoint, evidence for impacts on job satisfaction and turnover intentions have been found (Cheng & McCarthy, 2013; Laughman et al., 2016).

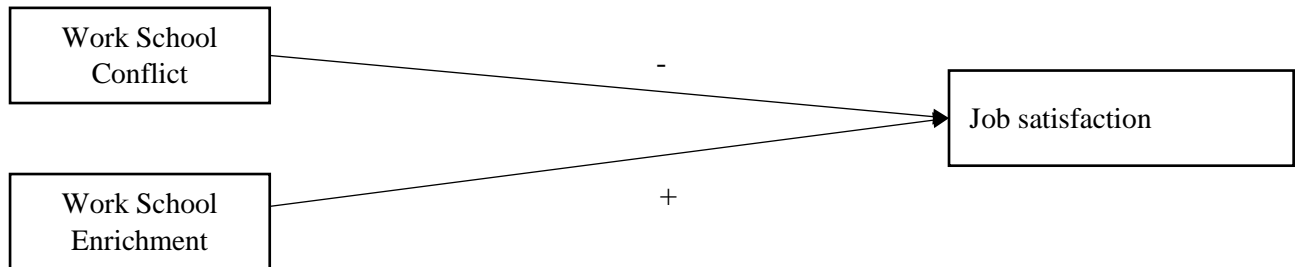
The current study is focussed two outcomes namely job satisfaction and academic satisfaction. These two outcomes were selected due to the positive impact found relating to performance in the work domain and to retention in the academic domain. For example job

satisfaction has been found to predict job performance and academic satisfaction has been found to predict intent to continue studying (Allen & McCarthy, 2015; Strahan & Credé, 2015).

**Job satisfaction.** Work or job satisfaction is defined as “pleasurable state of mind or positive feelings that employees have towards their jobs” (Biswas & Mazumder, 2017, p. 9). Job satisfaction has many benefits for the organisation as well as the individual. Job satisfaction has been shown to predict high performance, organisational citizenship behaviours as well as being linked to individual overall satisfaction or general happiness (Allen & McCarthy, 2015; Biswas & Mazumder, 2017; Bowling, Eschleman, & Wang, 2010; Erdogan, Bauer, Truxillo, & Mansfield, 2012). As such job satisfaction is a valuable construct to consider in relation to WSC as job satisfaction is linked to beneficial organisational outcomes.

**WSC in relation to job satisfaction.** It is expected that WSC has a negative relationship with job satisfaction (Figure 2). Research conducted on inter-role conflict in the work-family domain has found that the effects of the conflict are experienced in the originating domain which in this instance is the work domain (Amstad et al., 2011; Cheng & McCarthy, 2013). In other words, where the work role interferes with another role, the negative impact is experienced in the work role. This is based on the matching hypothesis which postulates that the individual experiencing the conflict has a negative view of the domain in which the conflict is originating (Figure 3). This is due to the originating domain causing the interference with the other domain (Amstad et al., 2011; Cheng & McCarthy, 2013). This negative view would be emphasized as the individual would continuously think about the originating domain as the source of the conflict and with time and continuous reflection this could lead to additional tension (Amstad et al., 2011). This effect is referred to

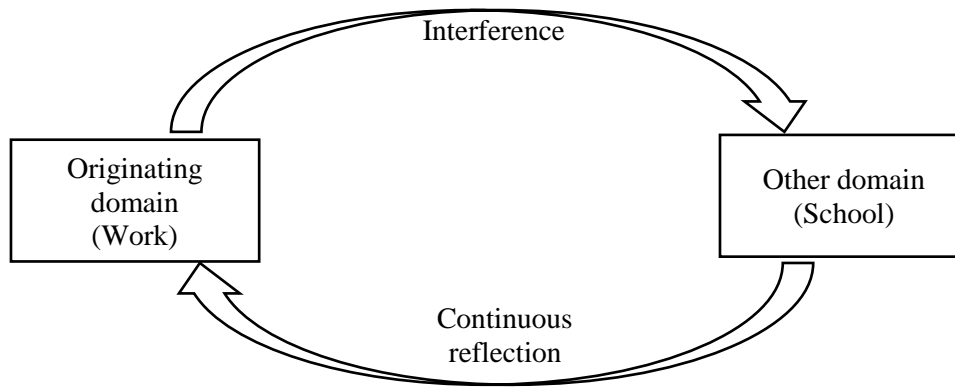
as a within domain effect where the domain in which the conflict originates is impacted on by the conflict (Wyland et al., 2016).



**Figure 2.** Conceptual model representing the proposed relationship between WSC and WSE and job satisfaction.

In the work-school sphere, the work domain could be viewed negatively as it causes the interference with the school domain. The work domain would be evaluated as negative and therefore job satisfaction could be impacted on (Rathi & Barath, 2013).

Accordingly, Cheng and McCarthy (2013) conducted a study on 218 students from a university in the USA and hypothesized that WSC would negatively predict job satisfaction. Evidence was found in support of this hypothesis and WSC was found to have a negative impact on work satisfaction. Congruently, Laughman et al. (2016) conducted a study on employed students ranging from freshman to seniors at a university in the USA. Laughman et al. (2016), also found a negative relationship between WSC and job satisfaction with these students. In the present study, with the target population being employed non-traditional students, the expectation is that WSC will have a negative relationship with job satisfaction.



**Figure 3.** Within domain effect

**WSE in relation to job satisfaction.** According to model of WFE described above, (Figure 1, p.11) one of the ways enrichment is experienced is through the affective pathway (Greenhaus & Powell, 2006). With this pathway, the resources in role A, the work role in this instance, generates positive affect in role A. This positive affect is then transferred to role B. The positive affect described for role A, the work role, could therefore be measured as job satisfaction (Figure 2, p. 17). Another way of looking at this is that the work role is positively evaluated as it is the source of the beneficial resources for both roles (Wayne, Musisca, & Fleeson, 2004). As such it is expected that WSE positively predicts job satisfaction.

Research results have shown, a positive relationship between WSE and job satisfaction (Butler, 2007; McNall & Michel, 2011, 2017). Wyland et al. (2016) also found WSE to predict job satisfaction as well as predicting job performance and interpersonal facilitation.

**Academic satisfaction.** School or academic satisfaction is defined as having a positive opinion regarding the experiences at the academic institution (Butler, 2007; McNall & Michel, 2011; Strahan & Credé, 2015). Strahan and Credé (2015) found that academic satisfaction, similar to job satisfaction, is a multidimensional construct offering a perspective on the experience of the academic institution. Mark (2013) argues that student satisfaction is

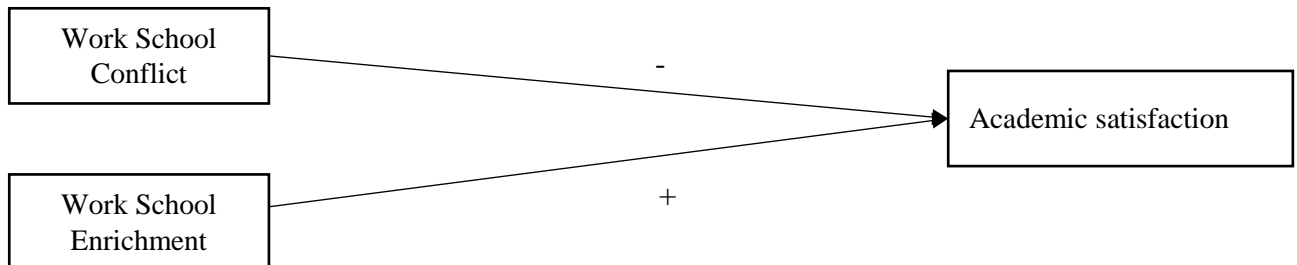
not simply a matter of happiness, but rather a complex evaluation of whether the student attains the expected quality of education expected from their academic institution.

Academic satisfaction was the focus of a study by Strahan and Credé (2015) with two large datasets with over 30 000 respondents each. In this study, academic satisfaction was shown to predict students' intent to proceed to the next academic year. In other words, where students noted that they were satisfied with their academic institution, they were more likely to continue studying at their university and not drop out which speaks to retention. Notably Strahan and Credé (2015) found the relationship between academic satisfaction and intent to re-enrol/register for the following year, to remain significant even when controlling for academic performance. That is to say that the relationship was significant regardless of whether students were performing well or poorly.

***WSC in relation to academic satisfaction.*** Academic satisfaction is expected to be negatively impacted on by WSC (Figure 4). Interestingly, Singla (2013) in a study of 329 full-time students with part time employment did not find a relationship between WSC and school performance or school (academic) satisfaction. The proposed explanation offered for her findings is that there was minimal overlap between what the students were studying and their jobs due to the part time nature of their employment. Therefore, there remains an opportunity to investigate the relationship between WSC and academic satisfaction.

***WSE in relation to academic satisfaction.*** As described in relation to job satisfaction above, in order for enrichment to occur, resources from the work role are transferred to the school role (Greenhaus & Powell, 2006). This transfer would then lead to a positive outcome in the school role, leading to positive affect, in this instance academic satisfaction (Figure 4). For example, if an individual is able to use their influencing skills learned at work successfully during a school group assignment, the individual is likely to experience academic satisfaction. The resources or influencing skills, are transferred from the work role

to the school role and the individual has a positive experience in the school role translating into academic satisfaction. Congruently WSE was found to positively predict school (academic) satisfaction (Butler, 2007; McNall & Michel, 2011).



**Figure 4.** Conceptual model representing the proposed relationship between WSC and WSE and academic satisfaction

**Social support at work as a moderating variable.** Social support is defined as a perception by an individual that they are valued by the individual/s providing the support, and that their needs are taken care of (Kossek, Pichler, Bodner, & Hammer, 2011). In the work-school domain, social support has been categorised into general support for the individual and cross-domain support (Wyland et al., 2016). Cross-domain support in the present study is defined as when people in the work role provide support for the school role (Wyland et al., 2016).

In the South African context, Subotzky and Prinsloo (2011, p. 177) in their paper discussing “a socio-critical model and framework for improving student success in open distance learning at the University of South Africa” acknowledge the potential positive impact of support outside of the academic institution on student success.

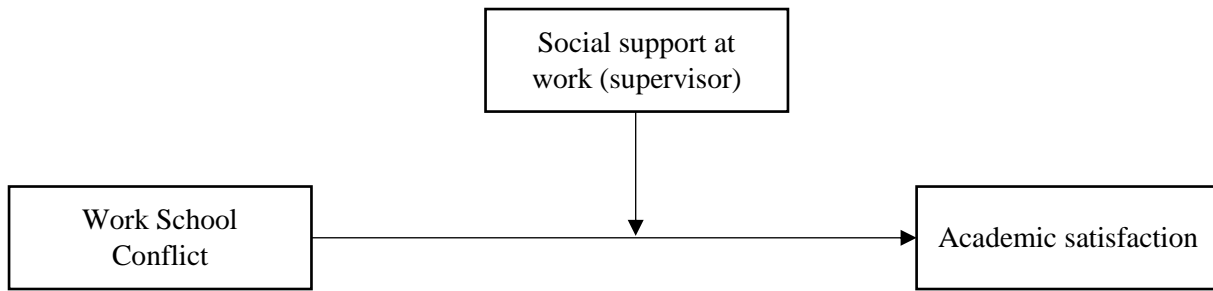
In another local study February and Koetsier (2007) conducted research on the factors that contribute to student success with 181 mostly part-time students in the faculty of Economic and Management Sciences of the University of the Western Cape (UWC). They found, in addition to students perceiving personal factors to have the main contributing

effects on their academic success, the general support of family, friends, their employers and their university were also found to be factors contributing to their success.

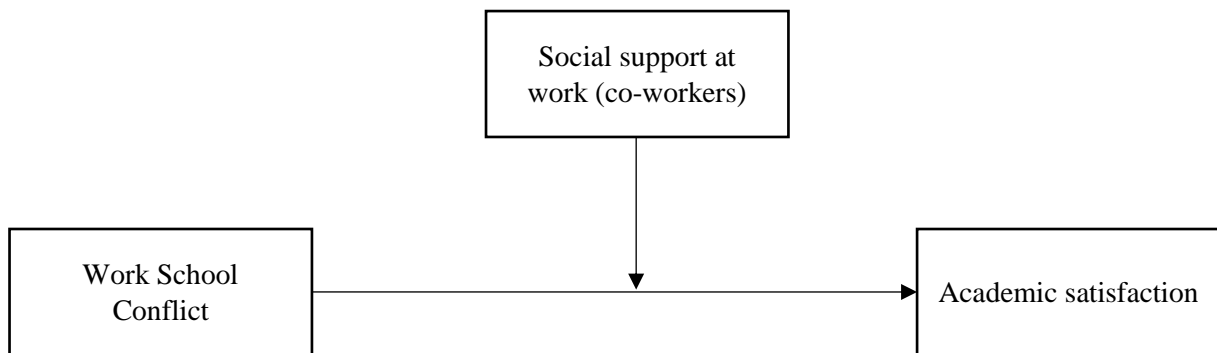
Internationally, the social support received in the work environment has also been shown to have a positive effect on employees who were studying (Hung & Hing Wong, 2007; Swain & Hammond, 2011). Social support has been researched as a direct antecedent to WSC and WSE previously (Adebayo, 2006; McNall & Michel, 2017; Wyland et al., 2016). In a study in Nigeria on 126 postgraduate students, Adebayo (2006), found a negative relationship between the general social support received by students from their supervisors and co-workers and WSC. That is, where students had social support, they experienced less WSC. In terms of the more focussed cross-domain interpersonal social support, a negative relationship has been found between cross-domain interpersonal support and WSC (McNall & Michel, 2017; Wyland et al., 2016).

Pertaining to WSE, research has also shown that when employees experience social support for their academic role at work (cross domain support), their level of WSE increased (McNall & Michel, 2011; Wyland et al., 2016). In other words, if individuals perceive their organisation to take an interest in and support their academic role, they are more likely to experience WSE.

The current research, however, departs slightly from considering social support as an antecedent. It rather considers the role of social support at work from supervisors as well as co-workers as individual moderating variables on relationship between WSC and academic satisfaction (Figure 5 and Figure 6) as well on the relationship between WSE and academic satisfaction (Figure 7 and Figure 8).



**Figure 5.** Conceptual model representing the proposed moderator relationship between WSC, social support at work (supervisor) and academic satisfaction



**Figure 6.** Conceptual model representing the proposed moderator relationship between WSC, social support at work (co-workers) and academic satisfaction

According to Baron and Kenny (1986, p. 1174), moderating variables “affect the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable”. This is also referred to as the interaction effect (Hair, Black, Babin, & Anderson, 2010).

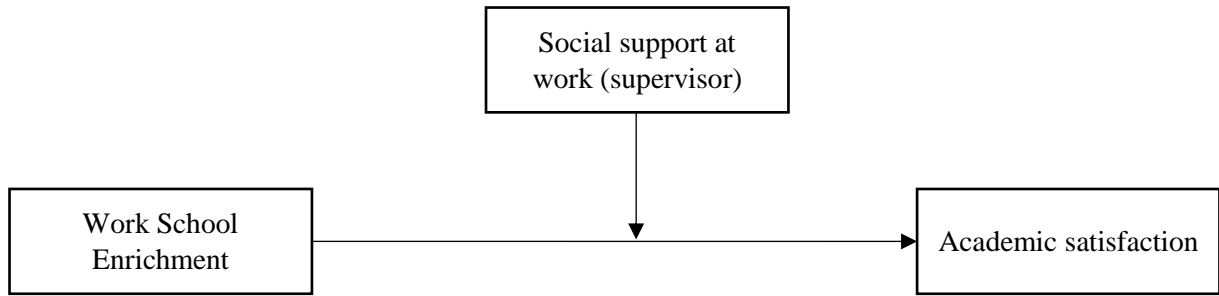
As discussed above, it is predicted that where an individual’s work interferes with school (WSC), they will experience lower academic satisfaction (Markel & Frone, 1998). The support an individual receives in the workplace for the school role (social support at work) is predicted to buffer the negative relationship between WSC and academic satisfaction as shown in Figure 5 and Figure 6. In other words where individuals experience social support at work, the negative impact of WSC on academic satisfaction is expected to be reduced. One of the ways this could be achieved is by the social support assisting in the

reduction of the demands in the workplace (Beutell, 2010). For example, co-workers and supervisors would be more understanding of an individual's school commitments and assist with reducing the workload on the individual.

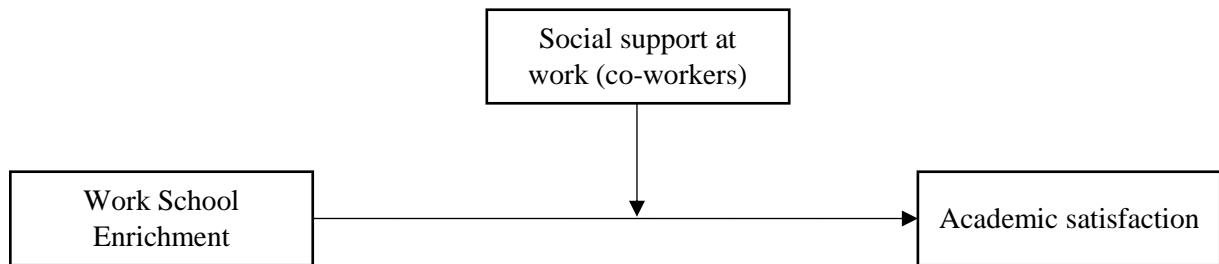
In the work-family domain, Rathi and Barath (2013) found co-worker social support to buffer the negative relationship between Work Family Conflict (WFC) and family satisfaction. More recently, also in the work-family domain, social support from supervisors has also been found to buffer the relationship between WFC and employee commitment in a study on employees at a banking institution in Kenya (Mukanzi & Senaji, 2017). It therefore holds that social support has a buffering role in situations where work interferes with another role.

Even though these examples are based in the work-family domain, as the research in the work-school domain is based on the work in the work-family domain (Butler, 2007; Greenhaus & Powell, 2006; Markel & Frone, 1998), it is predicted that a similar relationship will be found with WSC, academic satisfaction and social support.

In terms of enrichment, as the generation of resources is key, where additional resources are present, the impact could be expected to be increased (Greenhaus & Powell, 2006). In other words, the relationship between WSE and academic satisfaction should be positively impacted on where a resource such as social support is present as shown in Figure 7 and Figure 8 below. Social support has been viewed as an important resource as in addition to having an impact in the current role, it can also assist in securing additional resources (Beutell, 2010; Hobfoll, 2001).



**Figure 7.** Conceptual model representing the proposed moderator relationship between WSE, social support at work (supervisor) and academic satisfaction.



**Figure 8.** Conceptual model representing the proposed moderator relationship between WSE, social support at work (co-workers) and academic satisfaction

The theoretical framework underlying these proposed relationships is the Conservation of Resources (COR) theory (Hobfoll, 1989, 2001). Conservation of resources theory holds that people try to hold onto, look after and increase their resources (Hobfoll, 1989, 2001). Additionally, any threat to a reduction in resources is considered a source of stress. The resources referred to here are “those objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions, or energies.” (Hobfoll, 1989, p. 516).

The COR theory points out that stressful situations are easier to manage if the individual has more resources (Hobfoll, 2001). This is demonstrated in the present study, where the presence of social support at work is predicted to reduce the WSC experienced. For example, if an individual receives social support in their work role for their school role, this

could assist them integrating the two roles more effectively. In this way, social support also assists in the integration of various roles (Rathi & Barath, 2013).

### **Delineating the current research project**

The present study focusses in on a segment of the full ambit of potential areas of study within the work school interface. There are several different avenues of investigation possible relating to the interface between working and studying. For example, investigating the antecedents to WSC and WSE, the bi-directional nature of WSC and WSE as well as including family as another role in the model.

**Antecedents to WSC and WSE.** Several antecedents of WSC and WSE have been discussed above in relation to WSC and WSE. These antecedents are important in relation to the discussion of WSC and WSE and presents another avenue of potential research opportunity (Butler, 2007; Wyland et al., 2016). It is, however, beyond the scope of the current study.

**Bi-directional relationships.** It is important to note that the constructs WSC and WSE, have been found to be bidirectional in the same way that WFC and WFE are (McNall & Michel, 2011; Wyland et al., 2016). The conflict and enrichment which arises because of holding both roles can originate in either the work domain or school domain.

When the conflict originates in the work domain it is referred to as Work School Conflict (WSC). In the WSC instance, as discussed in the present research, the work role interferes with the school role (Butler, 2007). In School Work Conflict (SWC) instance, the conflict originates in the school role and the school role is said to interfere with the work role (Wyland et al., 2016).

The enrichment perspective is similar in that when the enrichment originates in the work domain as in the current research, it is referred to as Work School Enrichment (WSE) (Wyland et al., 2016). The involvement in the work role is said to improve the circumstances

in the school role. When the enrichment originates in the school domain it is referred to as School Work Enrichment (SWE) and involvement in the school role has a positive impact on the work role (Wyland et al., 2016).

In other words, SWC is a different construct to WSC and SWE is a different construct to WSE (McNall & Michel, 2011; Wyland et al., 2016). These bi-directional relationships although acknowledged, are not the focus of the current study and will not be investigated in the present research. The focus of this research will only be on WSC and WSE and the outcomes relating to these constructs.

**Work School Family Conflict.** Research has been found which focusses on the interface between not only work and school, but also includes the family domain (Olson, 2014; Trautner, 2015). Suchak (2014) investigated the relationship between role conflict (work, family and school) in relation to student adjustment. The focus of the study by Olson (2014) was to develop and validate a scale to measure conflict between work, family and school. This avenue of research, however, is beyond of the scope of the present study.

### **Research propositions**

1. Work School Conflict (WSC) and Work School Enrichment (WSE) are distinctly different constructs
2. A direct, negative relationship exists between WSC and job satisfaction
3. A direct, negative relationship exists between WSC and academic satisfaction
4. The relationship between WSC and academic satisfaction is moderated by social support from supervisors such that social support from supervisors buffers the negative relationship between WSC and academic satisfaction
5. The relationship between WSC and academic satisfaction is moderated by social support from co-workers such that social support from co-workers buffers the negative relationship between WSC and academic satisfaction

6. A direct, positive relationship exists between WSE and job satisfaction
7. A direct, positive relationship exists between WSE and academic satisfaction
8. The relationship between WSE and academic satisfaction is moderated by social support supervisor such that when social support supervisor increases the relationship is stronger
9. The relationship between WSE and academic satisfaction is moderated by social support from co-workers such that when social support from co-workers increase the relationship is stronger

### **Final notes**

Research into WSC and WSE has taken off over the last two decades, but not as extensively as the work family research upon which it is based (Butler, 2007; McNall & Michel, 2017; Wyland et al., 2016). Several researchers have also called on more research to be done at the work school interface in light of the increasing number of individuals who hold both roles (McNall & Michel, 2017; Wyland et al., 2016). As such, the present research intends on expanding on the research base into WSC and WSE.

The above literature review provided insight into the theoretical and empirical foundation of WSC and WSE. An overview was presented of the theoretical framework of these constructs starting with role strain and role accumulation respectively. An overview of some of the work done in the work-family domain was presented to provide insight into the foundation of the work in the work-school domain. The antecedents of WSC and WSE were presented as background information to ensure a more comprehensive understanding of the constructs.

Attention was then drawn to the idea that WSC and WSE are markedly different constructs. With the research into WSC and WSE originating in the work family literature which holds that WFC and WFE are distinctly different constructs (Carlson et al., 2006;

Grzywacz & Butler, 2005), the present research intends on validating that WSC and WSE are also distinctly different constructs.

The focus then shifts to the outcomes of WSC and WSE, which is the focus of the present study. A decision was made to focus on job satisfaction and academic satisfaction to expand on the research already conducted and due to the positive each of these outcomes have in the work and academic domains. Job satisfaction is of interest and relevance to organisations as has been found to predict performance (Allen & McCarthy, 2015; Bowling et al., 2010; Chao, Jou, Liao, & Kuo, 2015; Judge, Thoresen, Bono, & Patton, 2001). Job satisfaction has been found to be negatively predicted by WSC and positively predicted by WSE (Laughman et al., 2016; Wyland et al., 2016).

Academic satisfaction has been shown to have a relationship with a students' intent to continue studying (Strahan & Credé, 2015). The present research intends on extending the existing research where no relationship was found between academic satisfaction and WSC (Singla, 2013) and WSE was found to predict academic satisfaction (Butler, 2007; McNall & Michel, 2011).

In conclusion, the current study will first endeavour to confirm that WSC and WSE are different constructs. Thereafter the relationships between WSC and WSE two specific outcomes will be investigated while considering the potential moderating effect of social support at work from supervisors and co-workers.

## **Method**

This section is designed to present the research method in the present study. This section is split into five parts namely; research design, participants, procedure, measurement instruments and lastly data analysis.

### **Research Design**

A quantitative, descriptive research design was utilised in the current study. Descriptive research provides insight into a situation by gathering information and using this information to describe the various elements related to the situation (Kelley, Clark, Brown, & Sitzia, 2003). A survey was used to collect data in the current study and was administered electronically using the Qualtrics survey tool. A survey was selected as the data collection tool as it allows the researcher to collect data from a large sample (Kelley et al., 2003). Data were collected at one point in time indicating the use of a cross-sectional research design (Kelley et al., 2003). The questionnaire relied on self-report data where individuals presented their views based on the questions asked (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

### **Participants**

The sample used for this study consisted of individuals who fulfilled two main characteristics, they were students registered at a higher education institution and concurrently employed. The final dataset used to run the analysis consisted of 379 employed students. Details relating to the cleaning of the dataset can be found below in the data analysis section.

Regarding the demographic characteristics of the sample, a majority (53.8%) of the individuals who responded indicated that they considered their employee role to be their primary role, compared to their student role. Most of the respondents were below the age of 35 (75.7%) with the mean age of respondents being 31 ( $SD = 8.4$ , Range = 21 – 60). In terms

of gender most of the respondents were female (54.9%), followed by male (34.6%). Ten percent of respondents did not answer the question on gender and 0.5% selected the “Prefer not to answer” category (see Table 1 for additional demographic characteristics).

Table 1

*Demographic statistics of working students race, hours worked and marital status*

<b>Characteristic</b>		<b>Frequency</b>	<b>Percentage</b>
Race	African	77	20.3%
	Coloured	63	16.6%
	Indian	23	6.1%
	White / Caucasian	156	41.2%
	Prefer not to answer	22	5.8%
	Missing	38	10%
Number of hours worked per week	Less than 20 hours	95	25.1%
	Between 20 and 39 hours	93	24.5%
	40 hours or more	191	50.4%
Marital status	Married	114	30.1%
	Not married	175	46.2 %
	Living with partner	52	13.7%
	Missing	38	10%

*Notes.* Missing = Respondents did not answer that question.

Most of the respondents (58.8%) do not have any dependants (Range = 0 – 10). From the respondents with dependents, the most frequent number of dependants was two with 12.4% of the sample having two dependants. Nearly all the respondents (77.3%) were students at the University of Cape Town. In terms of qualification, the majority of respondents were Masters degree students (35.1%), followed by PhD students (12.4%) with 10% not providing their qualification. (see Table 2 for more detailed dependant and qualification characteristics).

Table 2

*Demographic statistics of working students Number of dependents and qualification.*

Characteristic		Frequency	Percentage
Number of dependants	0	223	58.8%
	1	39	10.3%
	2	47	12.4%
	3	19	5.0%
	4	6	1.6%
	5	3	.8%
	7	1	0.3%
	8	1	0.3%
	10	1	0.3%
	Missing	39	10.3%
Qualification	Degree	7	1.8%
	Honours degree	45	11.9%
	Masters degree	133	35.1%
	MBA	37	9.8%
	PhD	47	12.4%
	Postgraduate Diploma	31	8.2%
	Other	41	10.8%
	Missing	38	10%

*Notes.* Missing = Respondents did not answer that question. Other = Qualification other than the one listed.

### **Procedure**

The problem was first conceptualised by reading literature regarding individuals who hold roles as students as well as employees. Once the research questions were formulated based on the literature, the subscales were selected. Before proceeding with data collection, ethical clearance was sought from the Commerce Faculty's Ethics in Research Committee at

the University of Cape Town (UCT). Additionally, permission to use students was granted by the UCT Director of Student Affairs. Once all permissions required were obtained, a survey was created online using the Qualtrics survey tool. The survey consisted of Likert-type scale items to which respondents needed to select one response from a list of potential responses. The survey is discussed in more detail below.

**Pilot study.** A pilot study was then conducted with five members of the target population. Pilot studies assist researchers in identifying if any changes need to be made to the survey (Kelley et al., 2003). According to Kelley et al. (2003) a number of factors should be considered in pilot studies including the understanding of the questions and instructions, the sufficiency of response categories and clarity of the question content. These recommended factors as well as two additional factors were reviewed in the pilot study.

The pilot participants consisted of three students for the University of Cape Town, one from the University of the Western Cape and one from the University of Stellenbosch Business School. Three of these pilot participants met with the researcher together and completed the survey simultaneously. The last two pilot participants were sent a link to the survey via electronic mail and completed it independently. Two of the pilot participants completed the pilot survey on their cell phone and the rest completed the survey on computers. This decision was made as it was expected that some students would complete the survey on a computer while some would complete it on their cell phone. The survey was set up to accommodate computer as well as cell phone responses.

After completing the survey, the pilot participants were presented with a series of questions relating to the survey. The answers to these questions were recorded and discussed for clarity. The first question was regarding the overall flow of the survey. Most of the pilot participants were comfortable with the overall flow of the survey and a positive comment was

made regarding the use of the yellow background used in the survey as it was considered eye-catching.

The second question to the pilot participants referred to the clarity of the survey's instructions. Generally, there was consensus that the instructions were adequately detailed, clear and sufficient to enable the individual to answer the survey. There were two suggestions, however. The first suggestion was regarding the rating scales. There are two, five-point rating scales used in this survey. One of the subscales use the Likert-type rating scale never to always while four of the subscales use the Likert-type rating scale strongly agree to strongly disagree. In the first iteration of the survey, there was no indication of when the survey was moving from the one rating scale to the other. The recommendation from the pilot study was to highlight when the rating scales change from one to the other as it was confusing when taking the survey. This request was considered realistic and practical and a decision was made to include a note before the section where the rating scales change to advise of the change in rating scale. The wording "Please note the change in response scale" was used.

The second suggestion regarding the instructions was to move the demographic questions to the beginning of the survey. The decision was made to leave the demographic questions at the end of the survey as it was intentionally placed there. The demographics were deliberately not placed at the beginning of the survey in order not to distract the respondent and potentially prevent them from completing the survey.

The third pilot study question referred to the level of comfort completing the survey. All the pilot participants were comfortable answering all the study questions. The fourth pilot study question was regarding the clarity and content of the survey items. A question was raised regarding the use of the word "this" with reference to the word "university". An example item is "I feel comfortable at this university". A decision was made to refer to "my

university” opposed to “*this* university” to remove any confusion as to which university the item relates to. For example, “I feel comfortable at *my* university”. This decision was made to align the items referring to university with other items in the larger survey which refer to “my company” for example, “In general, I like working at my company”. Additionally, it was deemed important for respondents to know that regardless of their academic institution, they are to consider the items in relation to the university they attend.

The final pilot study question requested feedback on the sufficiency of response categories for each item. The overwhelming feedback was to change the one response scale option from a scale of “Never to Very often” to “Never to Always”. This recommendation was considered feasible as it provided an absolute response option in response to the question. After conferring with other researchers, the changes were made to the survey on the Qualtrics platform.

**Data collection.** Data were collected over a 6-week period between August and September 2017 with two non-probability sampling techniques used to identify respondents, namely convenience and snowball sampling. These two sampling techniques are considered appropriate for this research due to its efficiency and based on the time constraints of the project (Atkinson & Flint, 2001).

Firstly, to attract participants, an electronic, attention-grabbing flyer was created, see Appendix A. This flyer had images depicting the study, a high-level description of the study and a link to the online survey. Secondly, a research invitation note was drawn up, see Appendix B. The researcher included an incentive for participation. The opportunity to partake in a luck draw could be classified as a lottery type incentive as people are placed in a pool of individuals who could potentially win a prize (Laguilles, Williams, & Saunders, 2011). Where individuals are encouraged to participate in research by use of a lottery type of incentive, a larger number of respondents is likely to be obtained (Laguilles et al., 2011). As such a lucky

draw was advertised in both the flyer and research invitation note which indicated that participants in the research had an opportunity to win one of two R1000 gift vouchers to a mall.

The convenience sampling method was then chosen to select the sampling frame. Convenience sampling infers that the sample is easily accessible to the researcher (Kelley et al., 2003). Both the flyer and the research invitation note were distributed to a number of UCT faculties as well as the University of Cape Town Graduate School of Business department that runs the Masters in Business Administration (MBA) programme. One of the two options, either the flyer or the research invitation note were used to disseminate the survey link depending on the method available in the area. A few weeks into the data collection process, the researcher noted that there was a lower than expected number of responses and the response rate was tapering off. She identified the need to extend the sampling frame. An additional set of Faculties were then identified to distribute the survey link to. In addition, text messages and emails containing the research invitation note and the link to the survey were sent to individuals known to the researcher with the request to send the link on to individuals who they know are working and studying. The last method utilised the snowball sampling method (Kelley et al., 2003). This method was used to enable the researcher to make the most of the initial respondents social and work networks in order to obtain a larger sample size by increasing the sampling frame (Atkinson & Flint, 2001).

Once respondents clicked on the link to the survey, they landed on the cover page of the survey. The cover page contained information about the nature and confidentiality of the research, the approximate time it would take to complete the survey, as well as the voluntary nature of the survey. Information relating to the lucky draw was also included on the cover page. The respondent was then encouraged to click on the next button to start the survey. The first question presented to the respondent was used as a qualifying question. The question “How many hours do you work a week?” was used with four options to select from. The first

option was “I do not work”, the second option “Less than 20 hours”, third option “Between 20 and 39 hours” and lastly “40 hours or more”. If the respondent selected the first option, “I do not work”, they were directed to the end of the survey and thanked for their time. If any of the other three options were selected, the respondent was directed to the next set of questions.

As the respondents proceeded through the survey, they were informed of their progress in terms of percentage completed and number of pages left to complete. All the questions were mandatory questions and respondents could not proceed until they completed the question. The only exception for this mandatory answering rule was at the end of the survey where the respondent was requested to leave their cell phone number or email address if they would like to be included in the lucky draw.

### **Measurement instruments**

A questionnaire using five subscales relating to Work School Conflict (WSC), Work School Enrichment (WSE), job satisfaction, academic satisfaction and social support at work (supervisor and co-workers) was assembled for this research. The Likert-type rating scale Strongly agree to Strongly disagree was used in four of the subscales with the other subscale using the Likert-type rating scale Never to Always. A summary of the subscales is presented below, refer to Appendix C for the full set of items and response scales for the each of the subscales.

**Work School Conflict (WSC) subscale.** WSC was measured using four items from the Work School Conflict scale from Markel and Frone (1998). This scale was selected as it has been used by other studies to measure WSC (Butler, 2007; Markel & Frone, 1998; Park & Sprung, 2013). Additionally, good internal consistencies were found. The researchers who used this scale stated a Cronbach alpha reliability of the scale of .86 (Markel & Frone, 1998) and .92 (Park & Sprung, 2013). An example item from this subscale is “I spend less time studying and doing homework because of my job”. The scale was adapted slightly for this audience by

replacing the word “school” with “university”. This adaptation was done for clarity as the targeted sample was individuals studying at university. An example of an adapted item is “My job demands and responsibilities interfere with my university work”. A five-point Likert-type response scale ranging from Never to Always was used for all but one item in this subscale. One of the items implies that students go to their university campus, namely “Because of my job, I go to university tired”. However, all qualifications do not necessarily require class attendance. A “Not Applicable” option was therefore included for this item in addition to the five-point Likert-type scale.

**Work School Enrichment (WSE) subscale.** The five items from the Work School Facilitation Scale developed by Butler (2007) was used in this study to measure Work School Enrichment. Despite the name of the scale referring to facilitation opposed to enrichment, the items in the scale refer to elements of enrichment as it focusses on the individual as opposed to the entire system (Wayne et al., 2007). As such, this scale is considered to measure WSE and is suitable for use in the present study. Butler (2007) reported a Cronbach Alpha reliability of the scale for his sample of .85. An example item from this subscale is “Having a good day at work makes you a better student”. This scale was adapted in the same way as the WSC subscale by replacing the word “school” with the word “university”. The change was made after feedback from the pilot study that the term “university” is commonly used by university students in South Africa. As in the WSC scale, a five-point Likert-type scale ranging from Never to Always was used for this scale.

**Social support subscales.** This subscale contained two categories in the present study namely supervisor social support and co-workers social support. The Work caregiving support subscales assembled by Gordon, Pruchno, Wilson-Genderson, Marcinkus Murphy, and Rose (2012) for measuring supervisor and co-worker caregiving support, were adapted for use in the present study. Gordon et al. (2012) split the Work caregiving support scale into two

components namely Supervisor caregiving support and co-worker caregiving support, each containing four items. This scale was selected as it measures cross-domain or content specific social support as opposed to general social support. In other words, social support for caregiving was targeted in the original subscale and was adjusted to target social support for academic studies in the present research.

***Social support supervisor subscale.*** The Supervisor caregiving support scale was reported with a Cronbach alpha reliability of .87 (Gordon et al., 2012). In order to use this scale in the present study, it was adapted in two ways. Firstly “caregiving” was replaced with “academic” and secondly the word “supervisor” was prefixed with the word “work”. Replacing “caregiving” with “academic” was to ensure the subscale was relevant to the academic realm and not referring to the caregiving area. While the word “work” was included to limit confusion between work and academic supervisors as the intent was to measure work supervisor social support. An additional note was also included in the section of the survey that contained the items in the Supervisor Social Support subscale. This note stated, “Work supervisor in this instance refers to the person you directly report to at work”. The reason the note was included was assure individuals who do not report to supervisors and perhaps report directly to first line managers would rate whomever they report directly to under the “work supervisor” category. An example of an adapted supervisor social support item is “My supervisor understands my academic demands”.

***Social support co-worker subscale.*** A Cronbach alpha reliability measure of .88 was reported by Gordon et al. (2012) for the co-worker caregiving support scale. In order to use the items in the present study, “caregiving” was replaced with “academic”. An example of an adapted co-worker social support item is “I feel comfortable bringing up the issue of my academic responsibilities with my co-worker/s”.

**Job satisfaction subscale.** A three item subscale from Messersmith, Patel, Lepak, and Gould-Williams (2011) was used to measure job satisfaction in this study. The scale has been shown to be reliable as a Cronbach alpha of .83 has been reported. The response scale for this subscale has a five-point Likert-type scale ranging from strongly disagree to strongly agree. An example item from this scale is “All things considered, I feel pretty good about this job”.

**Academic satisfaction subscale.** Six items from the school satisfaction subscale developed by Butler (2007) was used in this study. Three areas of satisfaction are measured with this scale namely satisfaction with the university, satisfaction with their educational experience and satisfaction with being a student (Butler, 2007). The Cronbach alpha reliability reported for this subscale by Butler (2007) with his sample was .95. A five-point Likert-type scale ranging from strongly disagree to strongly agree was used for this subscale. This scale was adapted by replacing the word “school” with the word “university” in the same way that the WSC and WSE subscales were adapted to ensure relevance in the current study. An example item from this scale is “My university meets my expectations”.

**Demographics variables.** Once all the subscales were completed, the respondents were presented with several demographic questions. Questions relating to their role as a student namely academic institution, faculty and qualification were asked. Additionally, other demographic details such as race, gender, marital status and number of dependents was requested.

### **Data analysis**

The data collected were directly downloaded in a format compatible with IBM Software Package for the Social Sciences (SPSS) version 24. Before any statistical analysis was conducted, it was necessary to clean and code the dataset (Pallant, 2011). Exploratory Factor Analysis (EFA) was used to assess the validity of the scales (Pallant, 2011). The reliability of each subscale was tested using Cronbach alpha internal consistency measure.

Descriptive statistics were then utilized to determine what the sample comprised of demographically. Regression analysis was conducted to analyse the data and t-tests as well as Analysis of Variance (ANOVA) was used to check for any group differences.

The total dataset consisted of 425 cases however, several cases were removed. The first criterion used for removing cases was where the minimum criterion of being employed was not met. Twenty-six cases were removed during this phase. Thereafter, cases which did not complete at least 75% of each subscale in the survey were removed. Finally, the dataset was reviewed for evidence of any response sets and other anomalies. A final sample size of 379 was achieved. In terms of coding, one item was negatively worded, and this item was recoded to be reverse scored. Additionally, one of the four items in the WSC subscale reflected a “Not Applicable” option. The data was updated in SPSS to account for this by treating the “Not Applicable” response as a missing value.

For each statistical test run, a choice between listwise and casewise deletion of data was made based on the requirements of the statistical measure. This decision is presented in each statistical analysis below. Where data were removed listwise, if any data point was missing for a respondent, the entire response would be excluded from the analysis. In other words, analysis was only run where a complete set of data were available. Where data were removed casewise, the case would only be excluded if data were missing for the specific statistical test being run.

## **Results**

The objective of this study was to investigate the relationships between Work School Conflict (WSC) and Work School Enrichment (WSE) and two of these construct's outcomes, namely job satisfaction and academic satisfaction. The current chapter presents the statistical analysis. The first section presents the results from the Exploratory Factor Analysis (EFA) and Cronbach's alpha as used to assess validity and reliability of the scales respectively. The next section details the correlation and regression analysis used to investigate the relationships between the variables. The third section presents the moderation analysis using regression analysis. Finally, the results from the ANOVA run to determine group differences is presented.

### **Principle Axis Factoring (PAF)**

EFA is conducted on a scale to determine if it is only measuring what they were intended to measure by studying the relationships between the items (Field, 2009; Hair et al., 2010). In this study, EFA was run on each subscale and an iterative process was utilised to determine the number of factors associated with each subscale. Principal Axis Factoring (PAF) was selected instead of Principal Components Analysis (PCA) as PAF focusses on the variance that is shared between items (Henson & Roberts, 2006). In this way PAF concentrates on the latent factor/s. In contrast, the intent of PCA is to condense the number of items (Henson & Roberts, 2006). As such the focus of PCA is to reduce data without necessarily focussing on the latent factors (Henson & Roberts, 2006). PAF was therefore considered the most appropriate to use of the current data.

Before commencing with the factor analysis, several conditions need to be met. From a sample size perspective, the minimum of five data points per item in each subscale should be aimed for, however, ten data points per item is more acceptable (Hair et al., 2010). In this

study, each subscale had more than ten data points per item, this condition was therefore met. Running a factor analysis was deemed appropriate based on this condition.

Two statistical measures also need to be conducted to ensure the suitability of a factor analysis namely Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett’s test of sphericity (Pallant, 2011). A KMO value of .5 represents the minimum value representing sampling adequacy (Burns & Burns, 2008). Bartlett’s test of sphericity calculates the significance of all the intercorrelations between the items under review (Beavers, 2013; Hair et al., 2010). The Bartlett’s test of sphericity needs to be significant ( $p < .05$ ) in order to proceed with the factor analysis (Burns & Burns, 2008). All the above-mentioned conditions were met for each subscale therefore it was appropriate to continue with the factor analysis. Refer to Appendix D for the detailed KMO and Bartlett’s test of sphericity for each subscale.

**Work School Conflict EFA.** Exploratory Factor analysis was run on the four-item WSC subscale with a sample of 266 after listwise deletion of missing data. An eigenvalue of 2.908 was found for the one factor extracted. This factor explained 72.704% of the variance. Factor loadings ranging between .649 and .909 were attained. The full set of factor loadings can be found in Table 3.

Table 3

*Factor Analysis Results for the WSC subscale*

Code	Item	WSC
WSC1	My job demands and responsibilities interfere with my university work	.857
WSC2	I spend less time studying and doing homework because of my job	.909
WSC3	My job takes up time that I'd rather spend at university or on university work	.775
WSC4	Because of my job, I go to university tired	.649
Eigenvalue		2.908
% Variance explained		72.704%

Notes.  $N = 266$  after listwise deletion of missing data. WSC = Work School Conflict

**Work School Enrichment EFA.** The five-item WSE subscale was evaluated with factor analysis. A sample of 351 was achieved after listwise deletion of data. One factor with eigenvalue greater than one was found. The factor had an eigenvalue of 2.431, explaining 48.62% of the variance. Factor loadings of between .434 and .725 were attained. The full set of factor loadings can be found in Table 4.

Table 4

*Factor Analysis Results for the WSE subscale*

Code	Item	WSE
WSE1	The things you do at work help you deal with personal and practical issues at university	.663
WSE2	The things you do at work make you a more interesting person at university	.725
WSE3	The skills you use on your job are useful for things you have to do at university	.679
WSE4	Having a good day at work makes you a better student	.474
WSE5	Talking to someone at work helps you deal with problems at university	.434
Eigenvalue		2.431
% Variance explained		48.62%

*Note:* N = 351 after listwise deletion of missing data. WSE = Work School Enrichment

**WSC and WSE EFA.** An exploratory factor analysis was also run combining the items in the WSE and WSC scales to determine that the two constructs are distinct. Principal axis factoring was done with varimax rotation. Two factors were extracted in this subscale with eigenvalues of 3.178 and 2.366 explaining 35.31% and 26.28% of the variance respectively. Factor loadings for factor 1, WSC ranged from .639 to .902. Factor loadings for factor 2, WSE, ranged from .459 to .789. This provides evidence for proposition one which

states WSC and WSE are distinctly different constructs. Factor loadings for each item can be found in Table 5.

Table 5

*Factor Analysis Results for the combined WSC and WSE scale*

Code	Item	WSC	WSE
WSC1	My job demands and responsibilities interfere with my university work	<b>.855</b>	.025
WSC2	I spend less time studying and doing homework because of my job	<b>.902</b>	.009
WSC3	My job takes up time that I'd rather spend at university or on university work	<b>.775</b>	-.186
WSC4	Because of my job, I go to university tired	<b>.639</b>	-.092
WSE1	The things you do at work help you deal with personal and practical issues at university	-0.113	<b>.702</b>
WSE2	The things you do at work make you a more interesting person at university	-.061	<b>.789</b>
WSE3	The skills you use on your job are useful for things you have to do at university	-.124	<b>.671</b>
WSE4	Having a good day at work makes you a better student	.046	<b>.523</b>
WSE5	Talking to someone at work helps you deal with problems at university	-.034	<b>.459</b>
Eigenvalue		3.178	2.366
% Variance explained		35.31%	26.28%

*Note:* N = 258 after listwise deletion of missing data.

**Job Satisfaction EFA.** An exploratory factor analysis was also run on the three-item Job satisfaction subscale with a sample of 347 after listwise deletion of missing data. One factor was extracted with an eigenvalue of above 1. The eigenvalue of 2.295 was attained

explaining 76.493% of the variance. Factor loadings ranged between .747 and .886. Table 6 contains the factor loadings for each of the three items.

Table 6

*Factor analysis results for the job satisfaction subscale*

Code	Item	JS
JS1	In general, I like working at my company	.747
JS2	In general, I don't like my job (reverse scored)	.783
JS3	All things considered, I feel pretty good about this job	.886
Eigenvalue		2.295
% Variance explained		76.49%

*Note:* N = 347 after listwise deletion of missing data. JS = Job Satisfaction

**Academic satisfaction EFA.** The six-item Academic satisfaction subscale was also evaluated using exploratory factor analysis on a sample of 347 after listwise deletion of data. One factor was extracted with an eigenvalue above one, namely 4.057. The one factor extracted explained 67.62% of the variance in the subscale. The factor loadings ranged from .659 to .870. Refer to Table 7 for full set of factor loadings.

Table 7

*Factor Analysis Results for the academic satisfaction subscale*

Code	Item	AS
AS1	I enjoy being a student on this campus	.659
AS2	My university meets my expectations	.862
AS3	I feel comfortable at my university	.736
AS4	I am satisfied with my education at my university	.739
AS5	I am pleased with the services I receive at my university	.817
AS6	Overall, I am satisfied with my experience at my university	.870
Eigenvalue		4.057
% Variance explained		67.62%

*Note:* N = 347 after listwise deletion of missing data. AS = Academic Satisfaction

**Social support work EFA.** The eight-items from the social support supervisor and social support co-workers' subscale were evaluated using PAF with direct oblimin rotation. Two factors were extracted in this subscale as expected, with eigenvalues of 4.918 and 1.394. 61.48% of the variance was explained by one factor while a further 17.42% of the variance was explained by the other factor. The four social support supervisor items had factor loadings between .716 and .904. The four items from the social support co-workers' subscale had factor loadings of between .840 and .957 for the social support co-workers factor. Table 8 contains the factor loadings for each item.

Table 8

*Factor Analysis Results for the social support subscales*

Code	Item	Social support supervisor	Social support co-workers
SSS1	My work supervisor understands my academic demands	<b>.879</b>	-.075
SSS2	My work supervisor listens when I talk about my academic responsibilities	<b>.904</b>	-.018
SSS3	My work supervisor acknowledges that I have academic obligations	<b>.804</b>	.052
SSS4	I feel comfortable bringing up the issue of my academic responsibilities with my work supervisor	<b>.716</b>	.088
SSC5	My co-worker/s understand my academic demands	.033	<b>.864</b>
SSC6	My co-worker/s listen when I talk about my academic responsibilities	-.070	<b>.957</b>
SSC7	My co-worker/s acknowledges that I have academic obligations	.042	<b>.840</b>
SSC8	I feel comfortable bringing up the issue of my academic responsibilities with my co-worker/s	.023	<b>.765</b>
Eigenvalue		1.394	<b>4.981</b>
% Variance explained		17.42%	<b>61.48%</b>

*Note:* N = 351 after listwise deletion of missing data. SSS = Social support supervisor, SSC = Social support co-workers.

## Reliability analysis

Cronbach's alpha ( $\alpha$ ) was used to assess the reliability of each subscale. To be considered reliable using Cronbach's alpha reliability test, subscales should have a Cronbach's alpha of above .7 (Field, 2009; Hair et al., 2010). Higher ratings would indicate higher levels of internal consistency between the items (Field, 2009). The subscales used in this study were found to have Cronbach's alpha of between .732 and .917, exceeding the minimum criterion of .7. Additionally, each subscale had an acceptable minimum of three items. Each item in every subscale was also reviewed to determine whether the removal of the item would have a significant positive impact on the reliability of the subscale. No problematic items were identified in this way therefore, no items were removed. See Table 9 for the Cronbach's alpha for each subscale.

Table 9

### *Cronbach's alpha for subscales*

Variable	Cronbach's alpha
1. Work School Conflict	.870
2. Work School Enrichment	.732
3. Job Satisfaction	.843
4. Academic Satisfaction	.903
5. Social support supervisor	.896
6. Social support co-workers	.917

*Note:* N = 351 after listwise deletion of missing data.

## Descriptive statistics

The distribution of the data was examined by conducting a descriptive analysis on the data. The data's normality was examined by reviewing the skewness (symmetry) and kurtosis

(width and height). The means ( $M$ ) and Standard Deviation ( $SD$ ) were also produced and reviewed. Skewness and Kurtosis is concerned with the distribution of the scores compared to the normal distribution (Pallant, 2011). If the distribution of the results were normal, both the skewness and kurtosis would be zero and the closer the scores are to zero. (Pallant, 2011). Normally distributed scores are, however, not common in the social sciences (Pallant, 2011). See Table 10 for the descriptive statistics of each subscale.

All the subscales were negatively skewed with skewness values ranging from -0.43 (WSC) to -0.82 (job satisfaction). This indicates that the scores are clustered around the higher scores of the scale (Field, 2009; Hair et al., 2010; Pallant, 2011). The kurtosis scores of the subscales vary. Four of the six scales have positive kurtosis scores of between 0.26 (social support supervisor) to 0.69 (academic satisfaction). These subscales are leptokurtic as they are more peaked than the normal distribution or Gaussian curve (Hair et al., 2010). The subscales with negative kurtosis scores are the WSC subscale (-.25) and social support co-workers (-.05) these subscales are platykurtic which indicates that there are more cases in the tails (Hair et al., 2010).

Each subscale used a five-point rating scale and as such the closer the mean is to five the higher the variable is rated. Results show high means for *academic satisfaction* ( $M = 3.86$ ,  $SD = 0.72$ ) and *job satisfaction* ( $M = 3.75$ ,  $SD = 0.88$ ). Additionally, moderate means were found for WSE ( $M = 3.61$ ,  $SD = 0.68$ ), *social support supervisor* ( $M = 3.6$ ,  $SD = .92$ ), *social support co-workers* ( $M = 3.55$ ,  $SD = 0.922$ ), and WSC ( $M = 3.46$ ,  $SD = 0.94$ ). From these statistics, the following is observed. A higher mean for WSE is reported than WSC. Respondents also rated *academic satisfaction* higher than *job satisfaction* on average.

Table 10

*Descriptive Statistics and Distribution Values*

	N	M	SD	SE	Skewnes s	Kurtosis	Minimu m	Maximu m
Work school conflict	360	3.46	.94	.05	-.43	-.25	1.00	5.00
Work school enrichment	351	3.61	.68	.04	-.44	.31	1.00	5.00
Job satisfaction	347	3.75	.88	.05	-.82	.53	1.00	5.00
Academic satisfaction	347	3.86	.72	.04	-.70	.69	1.33	5.00
Social support supervisor	351	3.6	.92	.13	-.65	.26	1.00	5.00
Social support co-workers	351	3.55	.92	.130	-.48	-.05	1.00	5.00

*Note:* *N* = number of respondents after listwise deletion of missing data; *M* = mean; *SD* = standard deviation; *SE* = standard error of mean. Mean scores based on available responses.

**Correlation Analysis**

To evaluate the bivariate relationships between variables, a Pearson Product-Moment correlation analysis was run. To analyse the findings, the recommendations as per Cohen (1988) were used. As such a correlation coefficient of above .5 is considered a large coefficient effect. A correlation coefficient of .3 is considered a medium coefficient effect. Lastly a correlation coefficient of .1 is considered a small coefficient (Cohen, 1988).

**Correlation between WSC and job satisfaction as well as WSC and academic satisfaction.** A negative correlation was found between *WSC* and both *job satisfaction* as well as *academic satisfaction*. A small negative relationship was found between *WSC* and *job satisfaction* ( $r = -.204, p < .01$ ), providing support for proposition two which states that a direct, negative relationship exists between *WSC* and *job satisfaction*. Additionally, a small negative relationship was found between *WSC* and *academic satisfaction* ( $r = -.127, p < .01$ ), providing support for proposition three that predicts that direct, negative relationship exists between

*WSC* and *academic satisfaction*. Therefore, as levels of *WSC* increase, levels of *job satisfaction* and *academic satisfaction* decrease but the relationships are small in nature.

**Correlation between WSE and job satisfaction as well as WSE and academic satisfaction.** A positive relationship was found between *WSE* and both *job satisfaction* as well as *academic satisfaction*. A positive medium strength relationship was found between *WSE* and *job satisfaction* ( $r = .412, p < .01$ ). This provides support for proposition six which states that a direct, positive relationship exists between *WSE* and *job satisfaction*.

Furthermore, a small, positive, statistically significant relationship was found between *WSE* and *academic satisfaction* ( $r = .175, p < .01$ ) providing support for proposition seven which states that a direct, positive relationship exists between *WSE* and *academic satisfaction*. Thus, as *WSE* increases so does *job satisfaction* and *academic satisfaction*. See Appendix E for detailed correlation analysis.

### **Regression analysis**

Following the findings of the correlation analysis where significant relationships between the variables were found, regression analysis was used to evaluate the proportion of variance of the dependent variables explained by the independent variables. The proportion of variance explained is termed the coefficient of multiple determination ( $R^2$ ) (Burns & Burns, 2008). Larger  $R^2$  values indicate that the independent variable explains more of the variance in the dependent variables (Burns & Burns, 2008; Hair et al., 2010; Pallant, 2011).

**Testing Assumptions.** Prior to conducting the regression analysis, several assumptions need to be met. Cook's distance was reviewed for influential cases. In each instance, Cook's distance was below one indicating that influential cases were unlikely (Field, 2009). The Durbin-Watson test was also conducted on each regression statistic and errors were found not to be related to one another as each Durbin-Watson statistic was found to be close to 2 (Field, 2009).

To test the assumption of normality of errors, a histogram of the standardised residuals was generated and evaluated. The Normal Probability Plot (P-P) of regression standardised residuals was generated to observe whether the observed data points fell close to the diagonal line (Pallant, 2011). The standardised residuals were not normally distributed for any of the regression analysis conducted. Similarly, the P-P plot indicated that the observed data points varied from the diagonal line. As such the analysis found that the residuals were not normally distributed (Pallant, 2011). The analysis was therefore re-run using bootstrapping to attain more confidence in the results found. The P-P regression standardised residuals for each regression analysis can be found in Appendix F.

The bootstrapping technique creates numerous random subsamples from the original sample in order to create robust intercept and confidence intervals based on the original sample data (Field, 2009). The default option on the SPSS programme of 1000 samples for bootstrapping at a 95% confidence interval was selected to conduct the analysis.

**WSC in relation to job satisfaction.** Proposition two posited that a direct, negative relationship exists between *WSC* and *job satisfaction*. Table 11 summarises the results of the simple linear regression analyses run with and without bootstrapping. *WSC* was found to explain 4.1% of the variance in *job satisfaction*  $R^2 = .041$ ,  $F(1,345) = 14.920$ ,  $p < .001$ , 95% CI[-0.302, -0.085]. In comparing the regression run with and without bootstrapping, the standard error shifted from 0.050 without bootstrapping to 0.052 with bootstrapping which is a small shift. A small shift from without bootstrapping to with bootstrapping suggests that the regression coefficients without bootstrapping are sufficient. The standard error for the constant changed from .180 to .170 which is also a small shift. With zero not falling within the confidence interval values and the corresponding significance of  $p = .002$ , it is concluded that there is a real relationship between the variables (Field, 2009). Evidence is therefore

found for proposition two that a direct negative relationship exists between WSC and *job satisfaction*.

Table 11

*Summary of Simple Regression Analyses for WSC and Job Satisfaction with and without bootstrapping*

Variable	Without bootstrapping			With bootstrapping			
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	95% Confidence Interval	
						<i>Lower</i>	<i>Upper</i>
Work School Conflict (WSC)	-0.194**	.050	-.204**	-.194*	.052	-0.302	-0.085
$R^2$				.041			
$F(1, 345)$				14.920**			

Note: \* $p < .05$ , \*\*\* $p < .001$

**WSC in relation to academic satisfaction.** Proposition three hypothesised a direct negative relationship exists between WSC and *academic satisfaction*. The regression model used to test this hypothesis found WSC 95% CI [-0.180, -0.011] to explain 1.6% of the variance in *academic satisfaction*  $R^2 = .016$ ,  $F(1,345) = 5.68$ ,  $p = .018$ . The standard error shifted from 0.041 without bootstrapping to 0.042 with bootstrapping which is a small shift. The standard error for the constant changed from 0.148 to 0.147 which is also a small shift. Zero also does not fall within the confidence interval. As such evidence is provided for proposition three that a direct negative relationship exists between WSC and *academic satisfaction*. Table 12 summarises the results of a simple linear regression run with and without bootstrapping.

Table 12

*Summary of Simple Regression Analyses for WSC and Academic Satisfaction with and without bootstrapping*

Variable	Without bootstrapping			With bootstrapping			
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	95% Confidence Interval	
						Lower	Upper
Work School Conflict (WSC)	-.098*	.041	-.127*	-.098*	.042	-0.180	-0.011
$R^2$				.016			
$F(1, 345)$				5.680*			

Note: \* $p < .05$ .

**WSE in relation to job satisfaction.** To test proposition six that a direct, positive relationship exists between *WSE* and *job satisfaction* and the amount of variance explained by *WSE* in *job satisfaction*, a simple linear regression was conducted. The independent variable in the equation was *WSE* and *job satisfaction* was the dependent variable. As the data did not satisfy the assumption of normality, it was necessary once more to run the analysis using bootstrapping. Table 13 summarises the results of the simple linear regression analyses run with and without bootstrapping. *WSE* was found to explain 17.0% of the variance in *job satisfaction*  $R^2 = .170$ ,  $F(1,345) = 70.457$ ,  $p < .001$ , 95% CI [0.410, 0. 669]. The standard error also shifted from 0.065 without bootstrapping to 0.071 with bootstrapping which is a small shift. The standard error for the constant changed from 0.238 to 0.262 which is also a small shift. With zero not falling within the confidence interval and the corresponding significance of  $p < .001$ , it is concluded that there is a real relationship between the variables

(Field, 2009). Evidence is therefore found for proposition six that a direct positive relationship exists between *WSE* and *job satisfaction*.

Table 13

Summary of Simple Regression Analyses for *WSE* in relation to *Job Satisfaction* with and without bootstrapping

Variable	Without bootstrapping			With bootstrapping			
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	95% Confidence Interval	
						Lower	Upper
Work School Enrichment (WSE)	.544**	.065	.412**	.544*	.071	0.410	0.669
$R^2$				.170			
$F(1, 345)$				70.457**			

Note: \* $p < .05$ . \*\* $p < .001$

**WSE in relation to academic satisfaction.** To test proposition seven and determine the amount of variance explained by *WSE* in *academic satisfaction*, a simple linear regression was conducted with *WSE* as the independent variable and *academic satisfaction* as the dependent variable. *WSE* was found to explain 3.1% of the variance in *academic satisfaction*  $R^2 = .031$ ,  $F(1, 345) = 10.911$ ,  $p < .05$ , 95% CI [0.065, 0.312]. The standard error also shifted from 0.057 without bootstrapping to 0.063 with bootstrapping which is a small shift. The standard error for the constant changed from 0.209 to 0.227 which is also a small shift. With zero not falling between these two values and the corresponding significance of  $p < .05$ , it is concluded that there is a real relationship between the variables (Field, 2009). Evidence

is therefore found for proposition seven that a direct positive relationship exists between *WSE* and *academic satisfaction*. A summary of the regression analysis with and without bootstrapping can be found in Table 14.

*Table 14*

*Summary of Simple Regression Analyses for WSE and Academic Satisfaction with and without bootstrapping*

Variable	Without bootstrapping			With bootstrapping			
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	95% Confidence Interval	
						Lower	Upper
Work School Enrichment (WSE)	.188*	.057	.175*	.188*	.063	0.065	0.312
$R^2$					.031		
$F(1, 345)$					10.911		

Note: \* $p < .05$ .

### **Moderation analysis**

To determine whether social support at work moderates the relationships between the independent variables (WSC and WSE) and academic satisfaction, hierarchical multiple regression was conducted. Social support from supervisors and social support from co-workers was predicted to independently buffer the relationship between WSC and academic satisfaction. Social support from supervisors and social support from co-workers was also predicted to moderate the relationship between WSE and academic satisfaction.

The first step of the analysis was to centre the independent variables (WSC and WSE) and moderator variables (social support supervisor and social support co-workers). This was done by subtracting each variable's mean score from the variable score. Secondly, the

interaction term was created by multiplying each variable score (WSC and WSE) and each moderator score (social support supervisor and social support co-workers) together. In other words, an interaction term for each interaction was created, see Table 15 for a list of all the interaction terms. Lastly, a regression analysis was run by regressing the independent variables (WSC and WSE) and the moderating variables (social support supervisor and social support co-workers) on the dependent variable (academic satisfaction) in model one and adding the interaction term to the regression equation in the second model. This model was run using bootstrapping based on the findings that the dataset is not normally distributed.

Table 15

List of interaction terms created for moderation analysis

WSC x social support supervisor

WSC x social support co-workers

WSE x social support supervisor

WSE x social support co-workers

*Note:* WSC = Work School Conflict; WSE = Work School Enrichment

**WSC and academic satisfaction as moderated by social support supervisor.** As seen in Table 16, in the first analysis conducted without bootstrapping, in model one, WSC 95% CI [-0.152, 0.028] does not significantly predict *academic satisfaction*  $R^2 = .026$ ,  $F(2, 343) = 4.539$ ,  $p = 0.174$ . In model two, when WSC is moderated by *social support supervisor* 95% CI [-0.191 -.018], a proportion of variance in *academic satisfaction* is explained ( $R^2 = .042$ ,  $F(1, 342) = 10.217$ ,  $p = .018$ ). In other words, WSC does not explain any variance in *academic satisfaction* on its own, but when it is moderated by *social support supervisor*, it explains 4.2% of the variance in *academic satisfaction*.

Table 16

*Hierarchical regression analysis for WSC and academic satisfaction moderated by social support supervisor without bootstrapping*

Variable	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
WSC	-.062	.046	-.080	-.040	.046	-.052
Social support supervisor	.084*	.046	.109*	.113*	.047	.146*
WSC x Social support supervisor				-.105*	.044	-.131*
$R^2$		.026			.042	
<i>F</i> for change in $R^2$		4.539*			10.217*	

*Note:* WSC and social support supervisor were centered. N = 346 after casewise deletion of missing data, \* $p < .05$ .

To ensure confidence in the relationships found, the regression analysis was also conducted with bootstrapping as the data was found not to be normally distributed. When the regression analysis was rerun with bootstrapping, the second model with the interaction term included 95% CI [-0.210, -0.008] was also found to be significant  $R^2 = .042$ ,  $F(1, 342) = 10.217$ ,  $p = .018$ . Evidence is therefore found for proposition four that the relationship between *WSC* and *academic satisfaction* is moderated by *social support from supervisors* such that *social support from supervisors* buffers the negative relationship between *WSC* and *academic satisfaction*. A summary of this analysis can be found in Table 17.

Table 17

*Hierarchical regression analysis for WSC and academic satisfaction moderated by social support supervisor with bootstrapping*

Variable	Model 1		Model 2	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
WSC	-.062	.052	-.040	.055
Social support supervisor	.084	.054	.113	.059
WSC x Social support supervisor			-.105*	.051
$R^2$		.026		.042
<i>F</i> for change in $R^2$		4.539*		10.217*

Note: WSC and social support supervisor were centered. Bootstrap results based on 1000 bootstrap samples. \* $p < .05$ .

#### **WSC and academic satisfaction as moderated by social support: co-workers.**

Proposition five was also tested with regression analysis by regressing *WSC* and *social support co-workers* on *academic satisfaction* in the first model and including the interaction term (WSC x social support co-workers) in the second model. To gain confidence in the findings, the regression analysis was repeated using bootstrapping to calculate the confidence intervals and standard errors.

As seen in Table 18, in the first analysis conducted without bootstrapping, in Model 1, *WSC* (95% CI [-0.145, 0.027]) does not significantly predict *academic satisfaction* on its own  $R^2 = .035$ ,  $F(2, 343) = 6.284$ ,  $p = .181$ . In model 2, when the interaction term (WSC x social support co-workers) is added, 95% CI [-0.153, 0.018], *academic satisfaction* is still not predicted  $R^2 = .042$ ,  $F(1, 342) = 8.677$ ,  $p = .123$ .

Table 18

*Hierarchical regression analysis for WSC and academic satisfaction moderated by social support co-workers without bootstrapping*

Variable	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
WSC	-.059	.044	-.076	-.043	.045	-.056
Social support co-workers	.114*	.043	.148*	.126*	.044	.164*
WSC x Social support co-workers				-.068	.044	-.084
$R^2$		.035			.042	
$F$ for change in $R^2$		6.284*			8.677	

*Note:* WSC and social support supervisor were centered. N = 346 after casewise deletion of missing data, \* $p < .05$ .

To ensure confidence in the findings, due to the data not being normally distributed, the regression analysis to test the moderating hypothesis was repeated with bootstrapping. As seen in Table 19, WSC 95% CI [-0.161, 0.034], was not found to predict *academic satisfaction*  $R^2 = .042$ ,  $F(1, 342) = 6.284$ ,  $p = .271$ . Once more, when adding the interaction term in model 2, 95% CI[-0.151, 0.020], *social support co-workers* was not found to buffer the relationship between WSC and *academic satisfaction*  $R^2 = .042$ ,  $F(1, 342) = 8.677$ ,  $p = .132$ . No evidence is therefore found for proposition five that the relationship between WSC and *academic satisfaction* is moderated by *social support from co-workers* such that *social support from co-workers* buffers the negative relationship between WSC and *academic satisfaction*.

Table 19

*Hierarchical Regression Analysis for WSC and academic satisfaction moderated by social support co-workers with bootstrapping*

Variable	Model 1		Model 2	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
WSC	-.059	.052	-.043	.051
Social support co-workers	.114*	.049	.126	.050
WSC x social support co-workers			.068	.046
<i>R</i> <sup>2</sup>	.035		.042	
<i>F</i> for change in <i>R</i> <sup>2</sup>	6.284*		8.677	

*Note:* WSC and social support co-workers were centered. Bootstrap results based on 1000 bootstrap samples, \**p* < .05.

**WSE and academic satisfaction as moderated by social support supervisor.**

Proposition eight was also tested using regression analysis. The analysis was run with and without bootstrapping to compare findings. For the regression analysis without bootstrapping in the first model *WSE* and *social support supervisor* were regressed on *academic satisfaction*, in the second model the interaction term (*WSE* x *social support supervisor*) was added to the equation. The analysis was repeated in the same way, but bootstrapping was used to calculate the confidence intervals and standard errors.

As seen in Table 20, *WSE* 95% CI[0.042, 0.274] independently predicts *academic satisfaction* in model 1  $R^2 = .040$ ,  $F(2,343) = 7.237$ ,  $p = .008$ . However, the relationship between *WSE* and *academic satisfaction* is not moderated by *social support supervisor* 95% CI[-0.039, 0.165] as found when the interaction term is added into the second regression model  $R^2 = .045$ ,  $F(1,342) = 8.729$ ,  $p = .223$ .

Table 20

*Hierarchical Regression Analysis for WSE and academic satisfaction moderated by social support supervisor without bootstrapping*

Variable	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
WSE	.158*	.059	.147*	.166*	.059	.155*
Social support supervisor	.079	.043	.102	.080	.043	.104
WSE x social support supervisor				.063	.052	.065
$R^2$		.040			.045	
<i>F</i> for change in $R^2$		7.237*			8.729	

*Note:* WSE and social support supervisor were centered.  $N = 346$  after casewise deletion of missing data; \* $p < .05$ .

The analysis was also run using bootstrapping and had the same results. As shown in Table 21 WSE independently predicts *academic satisfaction* in both model's one, 95% CI[0.034, 0.286] and model two 95% CI[0.046, 0.289]  $R^2 = .040$ ,  $F(2, 343) = 7.237$ ,  $p = .017$  and  $F(1, 342) = 8.729$ ,  $p = .011$ . However, when the interaction term is added in model two 95% CI [-0.070, 0.183], the model is not significant  $R^2 = .045$ ,  $F(1,342) = 8.729$ ,  $p = .299$ . Therefore, no evidence is found for proposition eight which states that the relationship between WSE and *academic satisfaction* is moderated by *social support supervisor* such that when *social support supervisor* increases the relationship is stronger.

Table 21

*Hierarchical Regression Analysis for WSC and academic satisfaction moderated by social support supervisor with bootstrapping*

Variable	Model 1		Model 2	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
WSC	.158*	.068	.166*	.067
Social support supervisor	.079	.049	.080	.050
WSC x social support supervisor			.063	.063
$R^2$	.040		.045	
$F$ for change in $R^2$	7.237*		8.729	

*Note:* WSC and social support supervisor were centered. Bootstrap results based on 1000 bootstrap samples, \* $p < .05$ .

#### **WSE and academic satisfaction as moderated by social support co-workers.**

Regression analysis was utilised to test whether the relationship between *WSE* and *academic satisfaction* is moderated by *social support co-workers* as per proposition nine. As seen in Table 22 in model one, WSE 95% CI[0.024, 0.260] was found to predict *academic satisfaction*  $R^2 = .046$ ,  $F(2,343) = 8.228$ ,  $p = .019$ . However, in model two, when the interaction term was added 95% CI[-0.124, 0.101], the model was not significant  $R^2 = .046$ ,  $F(1,342) = 8.267$ ,  $p = .843$ .

Table 22

*Hierarchical Regression Analysis for WSE and academic satisfaction moderated by social support co-workers without bootstrapping*

Variable	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
WSE	.142*	.060	.132*	.141*	.060	.131*
Social support supervisor	.100*	.043	.130*	.100*	.043	.130*
WSE x social support co-workers				-.011	.057	.011
$R^2$		.046			.046	
$F$ for change in $R^2$		8.228*			8.267	

*Note:* WSE and social support co-workers were centered. N = 346 after casewise deletion of missing data. \* $p < .05$ .

As shown in Table 23 to confirm these findings, the regression analysis was rerun with bootstrapping and the same results were found as the analysis without bootstrapping. When the interaction term (WSE x social support co-workers) was added in model two 95% CI[-0.146, 0.104], *social support co-workers* was not found to moderate the relationship between *WSE* and *academic satisfaction*  $R^2 = .046$ ,  $F(1,342) = 8.267$ ,  $p = .843$ . Therefore, no evidence is found for proposition nine that the relationship between *WSE* and *academic satisfaction* is moderated by *social support from co-workers* such that when social support from co-workers increase the relationship is stronger.

Table 23

*Hierarchical Regression Analysis for WSE and academic satisfaction moderated by social support co-workers with bootstrapping*

Variable	Model 1		Model 2	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
WSE	.142*	.067	.141*	.068
Social support co-workers	.100*	.047	.100*	.047
WSC x social support co-workers			-.011	.060
$R^2$	.046		.046	
$F$ for change in $R^2$	8.228*		8.267	

*Note:* WSC and social support co-workers were centered. Bootstrap results based on 1000 bootstrap samples, \* $p < .05$ .

Table 24

*Summary of Propositions and Findings*

Proposition	Data analytic procedure	Support
1. Work School Conflict (WSC) and Work School Enrichment (WSE) are distinctly different constructs	EFA	Supported
2. A direct, negative relationship exists between WSC and job satisfaction	Linear regression with bootstrapping	Supported
3. A direct, negative relationship exists between WSC and academic satisfaction	Linear regression with bootstrapping	Supported
4. The relationship between WSC and academic satisfaction is moderated by social support supervisor such that social support supervisor buffers the relationship between WSC and academic satisfaction	Linear regression with bootstrapping	Supported
5. The relationship between WSC and academic satisfaction is moderated by social support co-workers such that social support co-workers buffers the relationship between WSC and academic satisfaction	Linear regression with bootstrapping	Not supported
6. A direct, positive relationship exists between WSE and Job Satisfaction	Linear regression with bootstrapping	Supported
7. A direct, positive relationship exists between WSE and Academic Satisfaction	Linear regression with bootstrapping	Supported
8. The relationship between WSE and academic satisfaction is moderated by social support supervisor such that when social support supervisor increases the relationship is stronger	Linear regression with bootstrapping	Not supported
9. The relationship between WSE and academic satisfaction is moderated by social support co-workers such that when social support co-workers increases the relationship is stronger	Linear regression with bootstrapping	Not supported

## Group differences

No group differences were predicted in the current study, however, the data was explored to determine whether any group differences exist. In order to determine whether there are significant differences between two groups, a t-test can be performed while where there are more than two groups, an ANOVA can be performed (Field, 2009). A t-test was conducted to examine if there were differences between the groups based on primary role and gender for each of the outcome variables. ANOVA was conducted to examine the differences in the experience of WSC and WSE across race, marital status and number of hours worked.

**Independent samples t-test: Primary role.** Independent samples t-tests were conducted on all the outcome variables to ascertain if there were significant differences between respondents indicating student as their primary role and respondents indicating employee as their primary role. For WSC, Levene's statistic for equality of variances was not significant ( $F = 0.430, p = .51$ ) therefore equal variances were assumed. The t-test found a statistically significant difference ( $t_{338} = -5.96, p < .001$ ) with a medium effect size  $r = .31$ . Participants whose primary role is employee had significantly higher mean levels of WSC ( $M = 3.84, SD = .98$ ) than individuals whose primary role is student ( $M = 3.29, SD = .95$ ). See Table 25 for the detailed t-test statistics.

For WSE, Levene's test for equality of variances was significant indicating that the variances were different ( $F = 14.481, p < .001$ ). The t-test revealed no significant differences for WSE based on primary role ( $t_{237.6} = -0.670, p = .504$ ). For social support supervisor, Levene's test was not significant. The t-test indicated a statistically significant difference ( $t_{338} = 3.3, p < .05$ ) with a small effect size  $r = .18$ . Respondents whose primary role is student ( $M = 3.85, SD = 0.84$ ) have statistically significant higher levels of social support from their supervisor than respondents whose primary role is employee ( $M = 3.52, SD = 0.95$ ).

Levene's test for equality of variances for the social support co-workers measure was significant, indicating that the variances were different ( $F = 5.891, p = .016$ ). The t-test found a statistically significant difference ( $t_{338} = 3.21, p = .001$ ) in the mean level of social support from co-workers experienced by individuals whose primary role is employee ( $M = 3.43, SD = 0.97$ ) compared to those whose primary role is student ( $M = 3.75, SD, 0.85$ ). A small effect size of  $r = .17$  was found. Levene's test for equality of variances was not significant for job satisfaction ( $F = 1.53, p = .22$ ) and academic satisfaction ( $F = .540, p = .46$ ) indicating that the variances were the same. No differences were found for job satisfaction ( $t_{338} = -0.168, p = .867$ ) or academic satisfaction ( $t_{338} = 1.73, p = .085$ ). Table 25 contains the t-test statistics.

Table 25

*Results of the t-tests and descriptive statistics of WSC, WSE, job satisfaction and academic satisfaction by primary role*

Outcome	Primary role						95% CI for		
	Student			Employee			Mean		df
	M	SD	n	M	SD	n	Difference	t	
Work School	3.13	0.90	136	3.72	0.87	204	-0.78, -0.39	-5.96**	338
Conflict									
Work School	3.59	0.75	136	3.64	0.58	204	-0.20, 0.10	-0.67	237.6
Enrichment									
Job Satisfaction	3.74	0.81	136	3.76	0.92	204	-0.21, 0.18	-0.168	338
Academic	3.95	0.70	136	3.82	0.71	204	-0.02, 0.29	1.73	338
Satisfaction									
Social support	3.85	0.84	136	3.52	0.95	204	0.12, 0.53	3.3*	338
supervisor									
Social support	3.75	0.85	136	3.43	0.97	204	0.11, 0.52	3.21*	313.2
co-workers									

*Note:* SD = Standard Deviation, M = Mean, df = degrees of freedom, \* $p < .05$ , \*\* $p < .001$

**Independent samples t-test: Gender.** Levene’s test was not significant for any of the outcome variables therefore equal variances were assumed. The t-tests run found no significant differences in any of the outcome variables based on gender. Detailed t-test statistics can be found in Table 26.

Table 26

*Results of the t-tests and descriptive statistics of WSC, WSE, job satisfaction and academic satisfaction, social support supervisors and social support co-workers by gender*

Outcome	Gender						95% CI		
	Female			Male			for Mean		
	M	SD	n	M	SD	n	Difference	t	df
Work School Conflict	3.51	0.94	208	3.43	0.90	130	-0.112, 0.278	0.742	336
Work School Enrichment	3.63	0.66	208	3.60	0.65	130	-0.098, 0.190	0.604	336
Job Satisfaction	3.76	0.91	208	3.75	0.83	130	-0.186, 0.186	0.078	336
Academic Satisfaction	3.83	0.71	208	3.93	0.71	130	-0.255, 0.045	-1.315	336
Social support supervisor	3.64	0.92	208	3.68	0.94	130	-0.237, 0.151	-0.405	336
Social support co-workers	3.67	0.93	208	3.53	0.94	130	-0.158, 0.232	0.320	336

*Note:* SD = Standard Deviation, M = Mean, df = degrees of freedom, \* p < .05, \*\*p< .001

**Analysis of Variance (ANOVA).** Several assumptions need to be considered to proceed with the ANOVA. In order to ensure confidence in the findings bootstrapping was applied when conducting the ANOVA due to the data not adhering to the assumption of

normality (Sainani, 2012). Bootstrapping provided estimates for the mean, standard deviation, estimates for mean differences between the groups and confidence intervals for the mean difference (Field, 2009). The assumption of homogeneity of variance is important as it assumes that the scores are spread similarly in each group, if variances are not equal the ANOVA results may not be accurate (Field, 2009). This assumption can only be safely violated if groups were equal (Field, 2009). Where the homogeneity of variance assumption was violated through the indication of a significant Levene's statistic, the Welch F statistic was used (Field, 2009). As the groups were not equal in the present study, further measures need to take place.

To locate the specific group differences, a post hoc test needs to be run. In the current study, with the groups not being of equal size, the Games-Howell post hoc test was selected and used. (Field, 2009). For effect size,  $r$  was calculated using the square root of eta squared ( $\eta^2$ ) (Field, 2009). Cohen (1988's) guidelines were used when interpreting the effect size where .10 is considered a small effect, .25 is considered a medium effect and .40, is considered a large effect. The group differences are summarised in Table 27.

**ANOVA race.** In terms of race, the Levene's statistic was only significant for social support co-workers ( $p = .013$ ) indicating that the variances of the groups are not equal, as such the Welch F was used in this case. For the other variables, Levene's statistic was not significant WSC ( $p = .184$ ), WSE ( $p = .617$ ), job satisfaction ( $p = .576$ ), academic satisfaction ( $p = .177$ ), social support supervisor ( $p = .487$ ) and equal variances were assumed. As seen in Table 28, the only significant differences were found with academic satisfaction as an outcome variable [ $F(4, 335) = 3.38, p < .05$ ]. The post-hoc Games-Howell test revealed a statistically significant difference in the mean level of academic satisfaction of African respondents ( $M = 4.12, SD = 0.80$ ) and Coloured respondents ( $M = 3.76, SD = 0.70$ ), African

respondents and White respondents ( $M = 3.81, SD = 0.64$ ) as well as African respondents and the respondents who preferred not to provide their race group ( $M = 3.87, SD = 0.70$ ). A small to medium effect size was found ( $r = .20$ ). No significant differences were found between the mean level of academic satisfaction for the Indian race group ( $M = 3.41, SD = .71$ ) and the other race groups.

Table 27  
*Summary of group differences*

	<b>Primary role</b>	<b>Race</b>	<b>Marital status</b>	<b>Number of hours worked</b>
<b>Work School Conflict (WSC)</b>	Primary role employee had statistically significantly higher mean levels of WSC than primary role as student		Married participants level of WSC was statistically significantly higher than unmarried participants	WSC was experienced significantly less by participants who worked less than 20 hours per week compared to those who work between 20 and 39 hours and 40 or more hours per week
<b>Job Satisfaction</b>				Participants who work less than 20 hours per week's mean job satisfaction is statistically significantly lower than respondents who worked between 20-39 hours per week
<b>Academic Satisfaction</b>		Statistically significant differences found between African and the other race groups reported		
<b>Social support supervisors</b>	Respondents whose primary role is student have higher levels of social support from their supervisor than respondents whose primary role is employee		Married respondents reported lower social support from supervisors than unmarried respondents	Respondents who work less than 20 hours per week receive more social support from supervisors than respondents who work 40 or more hours per week
<b>Social support co-worker</b>	Respondents whose primary role is student have more social support from co-workers than respondents whose primary role is employee			Respondents who work less than 20 hours per week receive more social support from co-workers than respondents who work 40 or more hours per week

Table 28

*Summary of ANOVA Race*

		Sum of Squares	df	Mean Square	F	p value
WSC	Between Groups	5.347	4,00	1.337	1.564	.184
	Within Groups	287.262	336	.855		
WSE	Between Groups	2.042	4	.683	1.202	.310
	Within Groups	142.316	335	.425		
Job Satisfaction	Between Groups	4.601	4	1.150	1.500	.202
	Within Groups	256.927	335	.767		
Academic Satisfaction	Between Groups	6.578	4	1.644	3.375*	.010
	Within Groups	163.213	335	.487		
Social support supervisor	Between Groups	2,59	4	0,65	0,76	0,55
	Within Groups	284,78	335	0,85		
Social support co-workers	Between Groups	1,57	4	0,39	0,429	0,79
	Within Groups	294,87	75.3	0,88		

Note: \*  $p < .05$ .

**ANOVA marital status.** In terms of marital status, with the groups being unequal, the Games-Howell post hoc test was utilised. The only significant differences between groups relate to WSC and social support co-workers, see Table 29 for detailed ANOVA statistics relating to marital status. In terms of WSC, Levene's statistic was not significant ( $p = .255$ ). A statistically significant difference was found between married and unmarried respondents [ $F(2, 338) = 3.47, p = .032$ ]. Married respondents' level of WSC ( $M = 3.63, SD = 0.85$ ) was statistically significantly higher than unmarried respondents ( $M = 3.35, SD = 0.96$ ). However, a small effect size was found ( $r = .14$ ).

For WSE, the Levene's statistic was significant ( $p = .013$ ) indicating that the variances between the groups are not equal, as such the Welch F was used. No statistically significant difference was found between the groups  $F(2, 136.528) = 1.5, p = .227$ . Levene's statistic was not significant for social support supervisors ( $p = .267$ ) and social support co-

workers ( $p = .679$ ). In terms of social support from supervisors, a statistically significant difference was found between individuals who were married and not married  $F(2,337) = 4.042$ ,  $p = .018$ . Married respondents reporting than ( $M = 3.51$ ,  $SD = 0.92$ ) lower social support from supervisors than unmarried respondents ( $M = 3.79$ ,  $SD = 0.88$ ). A small effect size was found ( $r = .15$ ). No statistically significant difference was found between the living with partner group ( $M = 3.50$ ,  $SD = 1.0$ ) and the other two groups. For social support from co-workers, no statistically significant relationships were found  $F(2,337) = 2.913$ ,  $p = .056$ .

Table 29  
*Summary of ANOVA Marital Status*

		Sum of Squares	df	Mean Square	F	p
WSC	Between Groups	5.878	2	2.939	3.465*	.032
	Within Groups	286.731	338	.848		
WSE	Between Groups	1.367	2	.683	1.5	.227
	Within Groups	142.992	136.52	.424		
Job Satisfaction	Between Groups	.056	2	.028	.036	.965
	Within Groups	261.472	337	.776		
Academic Satisfaction	Between Groups	.984	2	.492	.982	.376
	Within Groups	168.807	337	.501		
Social support supervisor	Between Groups	6,732	2	3,366	4.042*	.018
	Within Groups	280,631	337	0,833		
Social support co-workers	Between Groups	5,038	2	2,519	2.913	.056
	Within Groups	291,400	337	0,865		

Note: \* $p < 0.05$

**ANOVA number of hours worked.** Regarding the number of hours worked, Levene's statistic was not significant WSC for ( $p = .430$ ), academic satisfaction ( $p = .065$ ), social support supervisor ( $p = .062$ ) nor social support co-workers ( $p = .087$ ). However, for WSE

Levene's statistic was significant ( $p = .009$ ) so too with job satisfaction ( $p = .001$ ), therefore the Welch F statistic was used in these cases.

Statistically significant differences were found in the level of WSC, job satisfaction, social support supervisors and social support co-workers experienced by the various groups. WSC was experienced less by respondents who worked less than 20 hours per week compared to those who work between 20 and 39 hours and 40 or more hours per week  $F(2, 357) = 35.184, p < .001$ . A significant difference was also found in the average level of WSC experienced between respondents working 20-39 hours per week and those who work 40 or more hours per week. Participants who work less than 20 hours per week on average had lower levels of WSC ( $M = 2.8, SD = 0.86$ ), compared to respondents who work 20-39 hours per week ( $M = 3.65, SD = 0.76$ ) and respondents who work 40 or more hours per week ( $M = 3.69, SD = 0.90$ ). A large effect size was found in this analysis ( $r = .41$ ).

A statistically significant difference was also found between these groups in the mean job satisfaction scores reported in the survey  $F(2, 197.201) = 4.548, p < .05$ . Respondents who work less than 20 hours ( $M = 3.91, SD = .63$ ) indicated higher job satisfaction scores than respondents who worked between 20-39 hours per week ( $M = 3.56, SD = .91$ ) and those who work 40 or more hours per week ( $M = 3.76, SD = .09$ ). A small effect size was found ( $r = .14$ ).

Social support received from supervisors was found to differ depending on the number of hours worked  $F(2, 348) = 4.682, p = .010$ . Respondents who work less than 20 hours per week ( $M = 3.90, SD = .78$ ) have statistically significantly more social support from supervisors at work than respondents who work 40 or more hours per week ( $M = 3.53, SD = .95$ ). A small effect size was found ( $r = .16$ ). No significant differences were found between

respondents who work 20-39 hours per week ( $M = 3.60$ ,  $SD = .95$ ) compared to the other two groups.

For social support received from co-workers a similar result was found  $F(2,348) = 5.171$ ,  $p = .006$ . For respondents who work 20-39 hours per week ( $M = 3.51$ ,  $SD = .95$ ), no statistically significant differences were found compared to the other two groups. However, a statistically significant difference was found between respondents who work less than 20 hours per week ( $M = 3.82$ ,  $SD = .81$ ) and those who work 40 hours or more per week ( $M = 3.44$ ,  $SD = .95$ ). A small effect size of  $r = .17$  was found. See Table 30 for detailed ANOVA statistics for number of hours worked.

Table 30

*Summary of ANOVA Number of Hours worked*

		Sum of	df	Mean	F	p
		Squares		Square		
WSC	Between Groups	51.896	2	25.948	35.18**	.000
	Within Groups	263.281	357	.737		
WSE	Between Groups	2.700	2	1.350	3.064	.056
	Within Groups	151.110	164.384	.441		
Job Satisfaction	Between Groups	5.580	2	2.790	4.548*	.012
	Within Groups	262.763	197.201	.766		
Academic Satisfaction	Between Groups	.409	2	.204	.396	.673
	Within Groups	176.890	343	.516		
Social support supervisor	Between Groups	7,763	2	3,881	4.682*	.010
	Within Groups	288,498	348	0,829		
Social support co-workers	Between Groups	8,678	2	4,339	5.171*	.006
	Within Groups	291,972	348	0,839		

Note: \* $p < 0.05$ , \*\* $p < .001$

## Discussion

The aim of this study was to investigate WSC and WSE experienced by non-traditional students. The impact the work role has on the school role was investigated from a positive as well as negative perspective. The bi-directional influence, or the impact of the school role on the work role was excluded from the current study due to the limited time and resources for this project. The relationships between WSC and job satisfaction and WSC and academic satisfaction were investigated. The results of this study found evidence of a negative relationship between WSC and job satisfaction as well as between WSC and academic satisfaction. Similarly, the statistical relationships between WSE and job satisfaction as well as between WSE and academic satisfaction were investigated. Evidence of a positive relationship between WSE and job satisfaction as well as between WSE and academic satisfaction was found.

It was also predicted that social support at work (from supervisors and co-workers) moderates the relationships between WSC and academic satisfaction and WSE and academic satisfaction. The only moderation effect found, was for the buffering role social support from supervisors has on the relationship between WSC and academic satisfaction. No evidence was found for the other moderation effects. Social support from co-workers therefore does not reduce the negative impact WSC has on academic satisfaction. The positive relationship WSE has with academic satisfaction is also not influenced by social support from supervisors nor co-workers.

This final chapter discusses the findings of the research conducted in relation to the literature reviewed and propositions made. Suggestions for future research are presented together with the findings. Thereafter, study limitations, further suggestions for future research and study implications are presented.

### **The psychometric properties of the subscales utilised**

The subscales used in the current study were all obtained from research conducted from outside SA. As such, it is important to reflect on the applicability of these scales in the South African context. A reliability analysis on the subscales in the current research showed a Cronbach's alpha for each of the subscales above the minimum of .7, which is evidence of the subscales' reliability for the sample used (Field, 2009). The EFA conducted on the WSC, WSE, academic satisfaction and job satisfaction subscales in current study found the items in each subscale to load onto one factor, as expected. These subscales were therefore considered to measure the intended constructs. The social support subscale loaded onto two factors as expected, with social support from supervisors and co-workers clearly separated. The subscales used in the current research are therefore considered reliable and valid and as such suitable for use in the current context.

### **The distinction between WSC and WSE**

The present study has found WSC and WSE to be distinct constructs. The factor analysis clearly indicated two underlying factors when running the WSC and WSE scales simultaneously. The items in each scale also loaded together correctly with the other items from each subscale.

A small, but significant correlation was found between WSC and WSE. In other words, as individuals' levels of WSE increased, their levels of WSC decreased. As the relationship is small, it is concluded that there is evidence that these two constructs are not simply the direct opposite of one another. This means that decreasing the levels of WSC does not automatically increase the levels of WSE (Butler, 2007). This finding supports similar findings in the work-family domain where WFC and WFE were found to be distinct constructs (Carlson et al., 2006; Grzywacz & Butler, 2005). As research into WSC and WSE was constructed based on the work done on WFC and WFE (Butler, 2007; Markel & Frone,

1998), this finding supports the notion that this theoretical foundation is relevant as there are similarities between the work-family and work-school domains.

On average, slightly higher levels of enrichment were reported by the participants than conflict. This may indicate that on average, individuals find their work role to enrich their school role slightly more than what it interferes with their school role. A possible reason for this could be that the individuals conducted their studies in a field that was close enough to their field of work that there were opportunities for overlap. As such, the congruence between work and school roles is a potential area for additional research. Butler (2007) too recommended that further work be conducted in relation to job-school congruence, with a particular focus on the underlying elements of the job-school congruence construct.

### **WSC in relation to job satisfaction and academic satisfaction**

WSC occurs when the role an individual holds in the work domain interferes with their functioning in the school domain (Adebayo, 2006; Butler, 2007; Markel & Frone, 1998; McNall & Michel, 2011, 2017; Wyland et al., 2016). The proposed explanation for this conflict is that when an individual is attempting to satisfy the needs of both domains, stress and strain is experienced in each domain (Park & Sprung, 2013). This is due to the individual overexerting themselves to meet the demands of each role. The experience of the stress and strain then manifests in several ways, one of these ways is potential dissatisfaction (Park & Sprung, 2013).

**The relationship between WSC and job satisfaction.** As expected, a negative relationship was found between WSC and job satisfaction. This means that the more individuals find their work role interfering with the school role, the more dissatisfied they are at work. This finding is consistent with the other research conducted on employed students (Cheng & McCarthy, 2013; Laughman et al., 2016). A possible reason for this interaction is found in the research conducted in the work-family domain by Rathi and Barath (2013).

Rathi and Barath (2013) proposed that because work can be a source of conflict, the work domain is then evaluated negatively. This leads to negative beliefs and attitudes relating to work which translates into lower work role satisfaction (Rathi & Barath, 2013).

An example of this how this relationship unfolds could be if an individual has a work and academic deadline in the same week and decides to put all their time and energy into the work deadline to the detriment of the academic one. The individual would evaluate the work deadline as the cause of the negative impact in the academic realm and subsequently have a negative outlook regarding the workplace therefore lower job satisfaction (Wyland et al., 2016). Another way in which this relationship could unfold is that the quality of the work task produced is low due to the split focus leading to job dissatisfaction. Future work may also be compromised due to the low job satisfaction as job satisfaction has consistently been found to predict performance (Allen & McCarthy, 2015; Chao et al., 2015; Farooqui & Nagendra, 2014; Judge et al., 2001).

**The relationship between WSC and academic satisfaction.** As hypothesized, a negative relationship was found between WSC and academic satisfaction as confirmed by the regression analysis. In other words, when individuals experience their work role to interfere with their school role, they are more likely to experience dissatisfaction in their academic role. Academic satisfaction is evaluated based on the multidimensional opinion an individual has regarding their academic institution which includes the campus, services and perceived quality of education (Butler, 2007; Mark, 2013; McNall & Michel, 2011; Strahan & Credé, 2015).

An example of WSC negatively predicting academic satisfaction could be if the academic institution plans a social event during a work day, during work hours. The individual would potentially not be able to attend the school event due to work commitments. The opportunity to form positive attitudes regarding their academic role would therefore be

compromised. The individual may form negative attitudes as they may perceive that the needs of working students were not taken into consideration in the planning of the social event.

Incongruent results were found concerning the relationship between WSC and academic satisfaction in the literature. Neither Butler (2007) nor Singla (2013) found a significant relationship between WSC and academic satisfaction and Markel and Frone (1998) found an indirect relationship via school readiness and school performance. The present study therefore provides additional insight into the relationship between WSC and academic satisfaction. Given the limitations of the current study (which will be discussed later) further investigation of this relationship is important to corroborate this study's findings.

Researchers posit that there may be other variables which could explain the relationship between WSC and academic satisfaction (Butler, 2007; McNall & Michel, 2011). A potential avenue of additional research could include consideration of the influence of the race of the participant.

In South Africa specifically, in the past, students who were not White, did not have access to the same standard of tertiary education as White individuals (Akoojee, Nkomo, & Nkomo, 2008; Boughey, 2002). As such, current students who are not White may come from home environments where there is limited exposure to higher education. The 2016 report on the state of education in South Africa indicated that of the 20-24 year olds who completed tertiary education, more than 70% of them were the first to do so in their family (Lehohla, 2016). Due to South Africa's past, this proportion is likely to be mostly individuals who are not White. Additionally, the Coloured and African demographic groups had the lowest proportion of post-secondary graduates in South Africa at 8.1% and 9,1% respectively. This was compared to the White population at 38,3% and Indian/Asian population at 21,0%.

The limited exposure to tertiary education in the family may lead the student to have a sense of gratitude for being in the position to be able to study. These individuals may therefore not judge the institution as harshly as individuals who have a family history of attending a higher education institution. The outcome variable related to this judgement in the current study is academic satisfaction.

The current study did not investigate the influence of race on the relationship between WSC and academic satisfaction, but in exploring the data did find a statistically significant higher average level of academic satisfaction experienced between African respondents compared to Coloured respondents, White respondents and respondents who preferred not to provide their racial classification. As such, future research could extend on these findings.

**Comparing the relationships between WSC and job satisfaction and WSC and academic satisfaction.** WSC was found to explain more of the variance in job satisfaction than in academic satisfaction. This finding provides support for the matching hypothesis which postulates that the effect of the conflict is felt more in the originating domain (Amstad et al., 2011). For example, if an individual is constantly needing spend late nights at work instead of being at home studying where they want to be, they would be unhappy in both roles, but unhappier in their work role. They would therefore evaluate their work role more negatively than they would their school role.

**Additional findings relating to WSC.** The current findings relating to WSC were further evaluated to ascertain if certain groups within the sample experienced higher mean levels of WSC than other groups. In addition to conducting analyses relating to the specific hypothesis posed, the data relating to WSC was examined for group differences. Statistically significant group differences were found in the data relating to the number hours worked per week, primary role as well as marital status. In other words, certain groups were found to experience higher mean levels of WSC than other groups based on the number of hours

worked per week, primary role and marital status. These detailed findings are discussed below.

***Number of hours worked and WSC.*** The present study found that individuals who worked less than 20 hours per week experienced less WSC than individuals who worked 20-39 hours per week and 40 or more hours per week. A large effect size was reported for this finding. A reason for this finding is that the more time the individual needs to spend at work, the less time they have to spend on activities in their school role.

For example, if an individual needs to work Monday to Friday for 8 hours day to complete their 40-hour work week, it will reduce the time they have to spend on their academic role. This person will potentially only have weekday evenings and weekends to attend to their school role. This contrasts with an individual who works less than 20 hours per week, who would potentially have more time to dedicate to their academic role as they would not need to work every week day for 8 hours a day. The individual with less work hours would therefore have time during day and during the week in addition to weekends to dedicate to their academic role. In summary, the individual who has more work hours would have less time for their academic role and as such experience more WSC. This finding corroborates other studies that found number of work hours to predict WSC (Butler, 2007; Markel & Frone, 1998).

The significant differences in the experience of WSC depending on the number of hours worked, is aligned with one of the three forms of inter-role conflict; time-based conflict (Creed, French, & Hood, 2015; Greenhaus & Beutell, 1985). Time based conflict is apparent where more than one role vies for the limited time a person has at their disposal (Creed et al., 2015). In this case, both the student and work role would be competing for the limited time the individual has available and when they select a role to invest time in, it would be to the detriment of the other role.

**Primary role and WSC.** Interestingly the present study also found support for the premise put forward by Wyland et al. (2016) that the role the individual considers as the primary role, has an impact on WSC. The results of the present study show that individuals who consider their employee role as their primary role, experience higher WSC than individuals who consider their student role as their primary role.

A potential explanation for these findings is that studying employees may consider their work role being more important than the school role as it could, for example, be their sole source of income. Also, the stakes are higher at work, so these individuals may do just enough to pass in their academic role but need to do well in their work role. This is particularly important given that their work role is likely linked to their livelihood. As such, the studying employee would focus more of their attention on their employee role, which would ultimately lead to WSC as the school role would receive less attention.

**Marital status and WSC.** Married participants reported higher mean levels of WSC than unmarried participants in the current study. A likely cause of this is because of the additional interaction with their family role. Married individuals may, for example, have additional responsibilities in their homes which may interfere with their school role. As such, the conflict expressed in the current study may be a result of another role conflict experienced. This provides additional evidence for the theory of role strain where each role is in direct competition with the other for the individual's finite resources (Goode, 1960). The inter-role conflict between work, family and school has also been researched, (Olson, 2014) but is beyond the scope of the present study. This finding highlights the need for additional research into the interplay between work, home and school roles.

## **Work School Enrichment in relation to job satisfaction and academic satisfaction**

Enrichment occurs when resources are transferred from one role to the other (Greenhaus & Powell, 2006). In the case of WSE, resources are being transferred from the work role to the academic role.

**The relationship between WSE and job satisfaction.** The regression analysis confirmed that WSE and job satisfaction are positively related. This means that the more individuals feel that their work role enriches their academic role, the more satisfied they are in their work role. This result is consistent with previous research (Butler, 2007; McNall & Michel, 2011, 2017).

Where the work role is the source of the resources which enrich the academic role, the individual would be evaluating their experiences in the work role positively as it assists them to perform in their academic role. An example of this would be when a student is able to relate the theory presented in a classroom situation to their experiences at work, this would assist them with not only understanding the content presented, but also retaining it (Wyland et al., 2016). This positive academic experience could translate into the individual having an additional appreciation for their work role as it assisted them in their academic role. They may even evaluate their participation in their work role as an opportunity to obtain additional resources which could assist even more with their academic role. The work role would then be considered valuable as it is a source of resources beneficial to the academic role.

**The relationship between WSE and academic satisfaction.** As expected, a positive relationship was found between WSE and academic satisfaction. This was confirmed by both the correlational analysis as well as the regression analysis. This means that the more an individual experiences their work role to have a positive impact on the academic role through the transfer of resources, the more satisfied they are in their academic role. This finding is congruent with results in studies by Butler (2007) and McNall and Michel (2011). Academic

satisfaction has been linked with the intent to continue studying and as such has direct relevance for academic institutions (Strahan & Credé, 2015).

**Additional findings regarding WSE.** Congruent with findings by McNall and Michel (2011), the present study found WSE to explain more of the variance in job satisfaction than academic satisfaction. In other words, impact of WSE is felt more in the originating domain (work) than in the other domain (school). So, because of the ability to transfer resources from work to school (WSE), the individual produces more favourable results in the form of job satisfaction in the work domain. The positive outcome being experienced in the domain in which the enrichment originates was also found in the work family research (Wayne et al., 2004).

### **The moderating role of social support at work**

Of the four propositions made in relation to social support as a moderator, evidence was only found for one moderating effect. Social support from supervisors was found to moderate the relationship between WSC and academic satisfaction. This means that if individuals receive social support from their supervisors it reduces the level of WSC they experience. For example, if an individual whose work role interferes with their school role (WSC) can discuss their academic demands with their work supervisor, they would experience more academic satisfaction than someone who is not able to discuss their challenges with their work supervisor. The finding in the current study is similar to the findings in the work-family domain by Mukanzi and Senaji (2017) who found supervisor social support to moderate the relationship between WFC and employee commitment.

Contrary to the current study's propositions, social support from co-workers was not found to play a buffering role on the negative relationship between WSC and academic satisfaction. These results differ from previous research, albeit in the work-family domain, by Rathi and Barath (2013) which found co-worker social support to buffer the negative

relationship between WFC and family satisfaction. The reason for this difference could be that co-worker support is not as beneficial to the school role in the work-school domain as it is to the family role in the work-family domain.

Neither social support from supervisors nor social support from co-workers was found to moderate the relationship between WSE and academic satisfaction. The current study's proposition of social support (both supervisor and co-worker) as a moderating variable on the relationship between WSE and academic satisfaction was based on the expectation that with increased resources, a greater positive impact would be experienced (Greenhaus & Powell, 2006). In other words, where the additional resources in the form of social support (both supervisor and co-worker) was experienced, the positive impact WSE has on academic satisfaction would be increased. However, the present study does not provide support for this proposition.

**Other factors relating to social support at work.** In examining the data obtained in the current study several group differences were found in relation to social support at work.

***Primary role and social support at work.*** Respondents who indicated employee as their primary role or studying employees, reported lower social support from both supervisors and co-workers than respondents who indicated student as their primary role or working students. A potential reason for this could be that the working students' supervisors and colleagues were aware that the primary focus of the working student is their academic role. There is therefore more acknowledgement and support for the academic role.

This contrasts with the studying employee whose supervisor and colleagues may just see their academic role as another role they fulfil, not as important as their work role. As such, that the studying employee's supervisor and colleagues may resent their studies as it detracts their focus from work. Another possibility may be that the supervisor and colleagues they may be jealous of the opportunity the studying employee has to further their education if

they have not had similar opportunities. This could be more prudent if the studying employee is completing a qualification which is at a higher level than the one attained by their supervisor and/or colleagues.

### **Limitations and additional suggestions for future research**

As with all research, there are some limitations associated with the way the research was conducted. As such the limitations for the current study are presented below. Several suggestions of future research have already been presented together with the findings above, however two additional suggestions are presented below.

**Limitations.** In terms of research design, non-probability sampling was utilised and therefore the generalisability of the findings is limited (Bhattacharjee, 2012). Also, with the cross-sectional nature of the research, causal links cannot be drawn in any of the relationships found (Field, 2009). The intent of the research was, however, to explore the relationships between WSC, WSE and job as well as academic satisfaction. With evidence for these relationships found, it is a useful base from which to build studies to investigate causal relationships.

With the self-report method utilised for the current study, common method bias is another potential limitation (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Future research could opt for qualitative research or obtain data from various sources to counteract this limitation. Additionally, as most of the participants were from one university the generalisability of the study may be limited as there may be certain characteristics of students from that university which are unique to them.

**Additional areas for future research.** The work-school domain is an understudied area of research and the current research has only focussed on a portion of the realm of possible research areas within the field. Due to the limited scope of the current research

considering time constraints, it was not possible to investigate the other areas of interest which arose during the literature review and when exploring the data obtained.

***Antecedents.*** Future research should investigate the antecedents of WSC and WSE. The antecedents could be the levers to adjust when attempting to decrease WSC and increase WSE. Several antecedents to WSC were found in the literature review including job demands and job control (Butler, 2007; Wyland et al., 2016). Similarly, several antecedents to WSE were cited including job control and job-school congruence (Butler, 2007; Wyland et al., 2016). However future research should attempt to confirm which additional antecedents could predict WSC and WSE, this could be ascertained through qualitative research, for example. Additionally, the strongest predictors of WSC and WSE could be investigated to determine where efforts should be placed to have the greatest results.

***Bi-directionality.*** The current study only focusses on one direction of conflict and enrichment, that is work to school. However, it is also possible for school to impact on work in the form of school-work conflict and school work enrichment (McNall & Michel, 2011; Wyland et al., 2016). This therefore is another avenue of research.

### **Implications of the present study**

**Theoretical implications.** The current research contributes to the growing research base in the work-school domain from both the conflict as well as enrichment perspectives. The findings from this study support both the scarcity as well as the enhancement perspectives on multiple role participation (Goode, 1960; Marks, 1977; Sieber, 1974). It therefore suggests that holding more than one role, in this particular case in the work and school domains, has the propensity to not only cause interference, but there are also potential positive benefits for the various domains in which the roles are held. These findings specifically provide support for the potential for individuals to experience WSC and WSE

supporting previous research (Adebayo, 2006; Butler, 2007; Markel & Frone, 1998; McNall & Michel, 2011; Wyland et al., 2016).

**Practical implications.** The impact of working and studying on the individual should be considered by organisations as well as academic institutions. Both entities need to consider that their employees and students may potentially be experiencing WSC and or WSE and the possible consequences of it as the impact thereof has been found in each of these domains (work and school). Ways to reduce the conflict and increase enrichment should be considered to increase positive implications of WSE and reduce the negative implications of WSC.

***Practical implications linked to job satisfaction.*** A negative relationship was found between WSC and job satisfaction and a positive relationship was found between WSE and job satisfaction in the current study. Numerous positive outcomes related to job satisfaction have been found for example an increase in job performance (Allen & McCarthy, 2015; Bowling et al., 2010; Erdogan et al., 2012). It is therefore beneficial for organisations to try find strategies to assist their employees who study to reduce their work role interfering with their academic role (WSC) where possible. At the same time, it is also beneficial for organisations to assist their employees who study to find ways to enrich their academic role (WSE) where possible.

Employers could attempt to reduce the incidence of WSC by reducing the factors which have been shown to bring about WSC as applicable. For example, it has been found that an increase in job demands increases WSC (Butler, 2007). Therefore, reducing job demands could reduce WSC. Therefore, if it is possible in the role the individual holds in the organisation, the job demands could be reduced while they study. Research has found that where individuals have more control over their roles, they are less likely to experience WSC and more likely to experience WSE (Butler, 2007). This is another lever the organisation could use to increase job satisfaction. Study friendly policies and procedures could be

introduced in the organisation. This could include study leave policies and flexible working hours.

Despite social support at work not being found to be a moderator on the investigated relationships, social support was found to be a negative predictor of WSC and a positive predictor of WSE in the correlation analysis as well as in previous research (Adebayo, 2006; McNall & Michel, 2011; Wyland et al., 2016). As such, it is noted that social support is influential in the work-school domain. Organisations should take heed of the powerful impact social support has on the experience of WSC and WSE and find ways of ensuring managers and colleagues are supportive of working students.

***Practical implications linked to academic satisfaction.*** The present study found academic satisfaction to be negatively predicted by WSC and positively predicted by WSE. With academic satisfaction being linked to retention, it is an important construct for academic institutions (Strahan & Credé, 2015). As such, academic institutions should encourage students to try and find ways of reducing the conflict between work and school. For example, to increase WSE, academic institutions, through their educators could encourage students to find ways of linking their experiences in their work role to their studies. One way to do this is to set assignments which require students to apply examples from work.

Academic satisfaction could even be of importance to organisations, particularly those who fund their employees' studies. These organisations would have a vested interest in the success of the studies as well as an interest in the job performance and satisfaction.

## **Conclusion**

The present research adds to the research into the work-study interface. WSC and WSE research relies heavily on work done in the work-family domain and is not as extensively researched as the WFC and WFE yet (Butler, 2007; McNall & Michel, 2011,

2017). Thus, research in the work-study domain continues to validate the similarities and provide evidence for the differences between the work-study and work-family domains.

The findings from the present study provides additional support for the negative relationship between WSC and job satisfaction and academic satisfaction as found in previous research (Adebayo, 2006; Butler, 2007; Wyland et al., 2016). Additionally, this study provides evidence for the positive relationship between WSE and job as well as academic satisfaction supporting previous research (Butler, 2007; Wyland et al., 2016). Causal relationships are not evidenced by the current research; however, it does provide evidence that these relationships to exist which provides a baseline for future research.

Based on these findings, employers should pay attention to their employees who are simultaneously studying and working. Depending on these individuals' experience of WSC and WSE, there are potential positive or negative outcomes for the organisation in terms of job satisfaction. Similarly, academic institutions should be aware of the students who work while they are completing a qualification. The potential impact of working while studying may correspond with students experiencing WSC and WSE and this may have implications for academic satisfaction.

Both employers and academic institutions should try to assist their employees and students to enhance WSE and reduce WSC in order to increase job satisfaction and academic satisfaction. This can be done by focussing on the levers specific to each of their environments as found in the research.

Partnerships between organisations and academic institutions may assist with a shared understanding of the nature of the requirements of the working student. This would be particularly relevant where an organisation has many employees studying at a particular academic institution.

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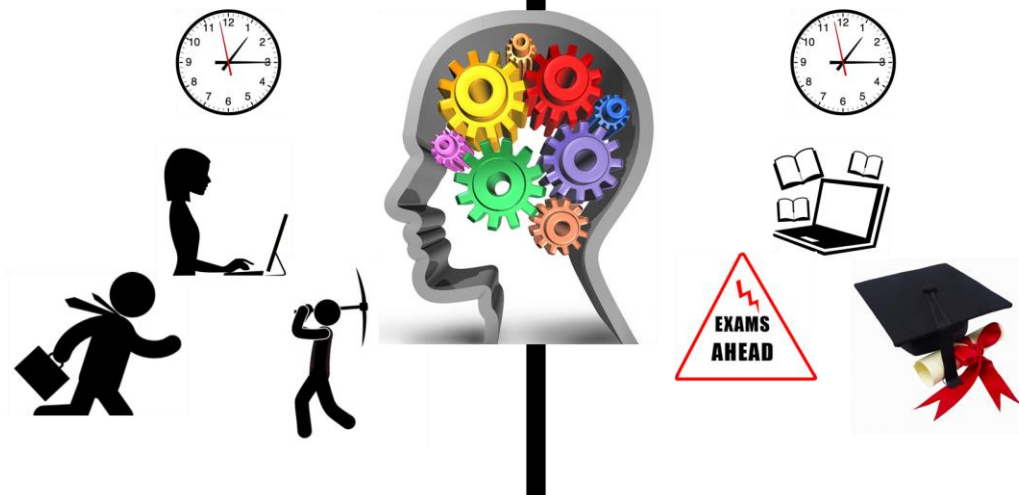
Wyland, R. L., Lester, S. W., Mone, M. A., & Winkel, D. E. (2013). Work and School at the Same Time A Conflict Perspective of the Work–School Interface. *Journal of Leadership & Organizational Studies*, 20(3), 346-357.

## APPENDIX A

# WORK

# STUDY

**Are you currently working and studying?** We are interested in your views!  
Please complete this survey on Work University Conflict and Work University Enrichment.  
You can **WIN** one of two **R1000** Cavendish Square gift vouchers!



## **APPENDIX B**

### **Organisational Psychology Masters Study**

Dear participant

Thank you for taking the time to complete the survey, it is greatly appreciated. This study focuses on individuals holding a role as both student and employee.

It will only take you 5 - 8 minutes to complete the questionnaire. Participation in this study is voluntary and you are free to withdraw at any point during the study. Survey results will be kept confidential and all information provided will only be used for the purposes of this research. This research is approved by the University of Cape Town (UCT) Commerce Faculty Ethics in Research Committee and the UCT Executive Director of the Department of student affairs. By completing this survey, you consent to participate in the study.

At the end of the study there will be a lucky draw to win 1 of 2 R1000 Cavendish Square gift vouchers. If you would like to be included in the lucky draw, please provide your email address or cellphone number at the end of the survey.

Feel free to contact the researcher on [wllcar025@myuct.ac.za](mailto:wllcar025@myuct.ac.za) should you have any questions.

Click the next button to get started!

## APPENDIX C

A list of the measures included in the present study

### **Work School Conflict (from Markel and Frone (1998))**

*Five-point response scale Never, Rarely, Sometimes, Often, Always*

1. My job demands and responsibilities interfere with my university work
2. I spend less time studying and doing homework because of my job
3. My job takes up time that I'd rather spend at university or on university work
4. Because of my job, I go to university tired

### **Work School Enrichment (from Butler (2007))**

*Five-point response scale Strongly disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly agree*

1. The things you do at work help you deal with personal and practical issues at university
2. The things you do at work make you a more interesting person at university
3. The skills you use on your job are useful for things you have to do at university
4. Having a good day at work makes you a better student
5. Talking to someone at work helps you deal with problems at university

### **Job Satisfaction (from Messersmith et al. (2011))**

*Five-point response scale Strongly disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly agree*

1. In general, I like working at my company
2. In general, I don't like my job (reverse scored)
3. All things considered, I feel pretty good about this job

### **Academic Satisfaction (from Butler (2007))**

*Five-point response scale Strongly disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly agree*

1. I enjoy being a student on this campus
2. My university meets my expectations
3. I feel comfortable at my university
4. I am satisfied with my education at my university
5. I am pleased with the services I receive at my university
6. Overall, I am satisfied with my experience at my university

### **Social Support – Work (from Gordon et al. (2012))**

*Five-point response scale Strongly disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly agree*

1. My work supervisor understands my academic demands
2. My work supervisor listens when I talk about my academic responsibilities
3. My work supervisor acknowledges that I have academic obligations
4. I feel comfortable bringing up the issue of my academic responsibilities with my work supervisor
5. My co-worker/s understand my academic demands
6. My co-worker/s listen when I talk about my academic responsibilities
7. My co-worker/s acknowledges that I have academic obligations
8. I feel comfortable bringing up the issue of my academic responsibilities with my co-worker/s

## APPENDIX D

Factor Analysis		Work School Conflict	Work School Enrichment	Job Satisfaction	Academic Satisfaction	Social Support at Work
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.812	.764	.715	.877	.882
Bartlett's Test of Sphericity	Approx. Chi-Square	570.595	353.793	443.824	1285.415	2090.510
	Degrees of freedom	6	10	3	15	28
	Significance	.000	.000	.000	.000	.000

## APPENDIX E

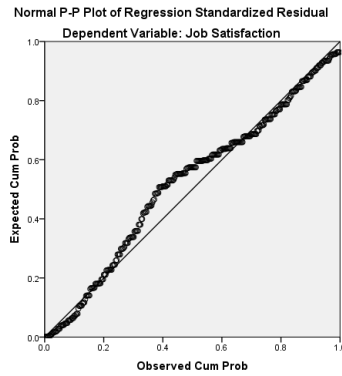
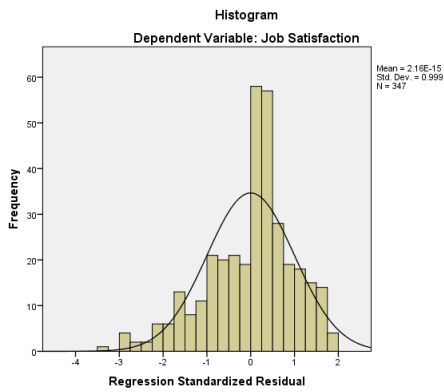
### *Correlation Matrix of Variables Under Investigation*

Variable	1	2	3	4	5
Work School Conflict					
Work School Enrichment	<b>-.108*</b>				
Job Satisfaction	<b>-.204**</b>	<b>.412**</b>			
Academic Satisfaction	<b>-.127*</b>	<b>.175**</b>	.063		
Social support supervisor	<b>-.430**</b>	<b>.278**</b>	<b>.405**</b>	<b>.143**</b>	
Social support co-workers	<b>-.347**</b>	<b>.335**</b>	<b>.267**</b>	<b>.174**</b>	<b>.562**</b>

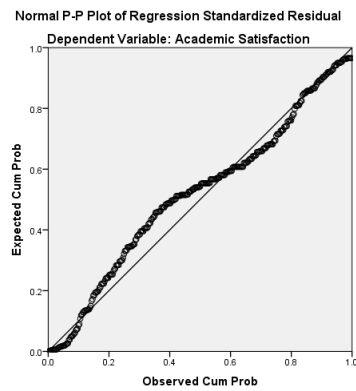
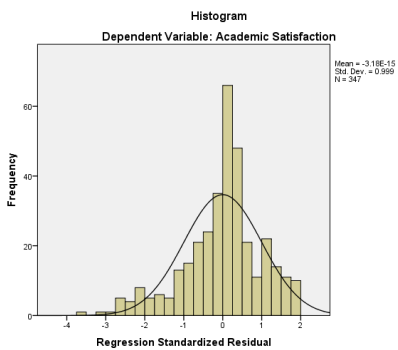
Note. N = 346 after listwise deletion of missing data; \*  $p \leq .05$ , \*\*  $p \leq .01$ .

## APPENDIX F

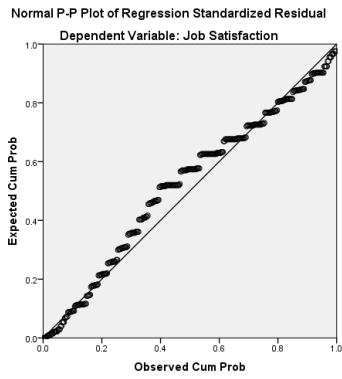
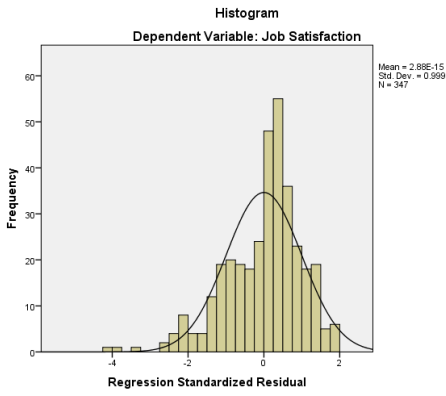
Histogram of the standardised residuals and Normal Probability Plot (P-P) of regression standardised residuals for WSC and Job Satisfaction.



Histogram of the standardised residuals and Normal Probability Plot (P-P) of regression standardised residuals for WSC and Academic Satisfaction



Histogram of the standardised residuals and Normal Probability Plot (P-P) of regression standardised residuals for WSE and Job Satisfaction



Histogram of the standardised residuals and Normal Probability Plot (P-P) of regression standardised residuals for WSE and Academic Satisfaction

