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# Blending Work and School: Positives and Negatives of the Interface

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Blending Work and School: Positives and Negatives of the Interface

by

Neha Singla

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
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College of Arts and Sciences  
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## **Dedication**

I dedicate this dissertation to God, for giving me the strength to persist when it seemed easy to give up; to my parents for their love, support, and sacrifices in sending me to a strange land to make a better future for myself; to my mother (in-law) for allowing me to live her dream of getting a doctoral degree; to my brother for being my motivation and always setting the bar so high for me to follow; to my husband and best friend for being by my side and believing in me; and to my friends and colleagues for encouraging me to press on.

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## **Abstract**

This study draws from the extensive research on work and family, and examined a model of the antecedents and outcomes of work-school conflict and work-school facilitation. As an extension of previous research on the work-school interface, the purpose of this study is two-fold. First, this study aimed to examine the impact of conflict and facilitation on personal health. Second, the study set out to investigate the role of emotional support from friends and family, and self-efficacy as moderators. Data were obtained from 329 full-time students who were also employed part-time. The model was tested using structural equation modeling techniques. One of the primary objectives of the study was partially supported as work-school conflict was negatively related to health-related outcomes (physical and psychological well-being). However, results did not support the other study hypotheses.

## **Chapter One**

### **Introduction**

The shift from high school days to college life brings a whole new spectrum of experiences, opportunities, challenges, and expectations. The student making the shift has to mix and balance a variety of roles and he/she may not be physically, mentally, or even monetarily prepared to blend these different roles. Most research on interrole processes has focused on the work and family interface, with primary attention to the negative interaction between the two roles (Greenhaus & Beutell, 1985; Grzywacz & Marks, 2000). However, in recent times, the idea that participation in multiple roles can improve the quality of life has shifted the lens to the more positive side of the interface between several roles (Barnett & Hyde, 2001; Greenhaus & Powell, 2006). Some researchers have moved beyond the work-family domain and have studied other nonwork roles such as community, religion, and leisure (Kirchmeyer, 1992; Rice, Frone & McFarlin, 1992). Nonetheless, there is a very critical yet often overlooked aspect of individual's work and nonwork lives, i.e., school. There is a dearth of empirical research looking at the interaction between an individual's life as a student and an employee.

With the increasing rate of tuition fees and college expenses on the rise where average tuition cost increased by \$420 between 1996 and 2006 in 2-year public schools and 57% in 4-year public schools (U.S Government Accountability Office, 2006), it is becoming increasingly necessary for students to look for jobs in order to support their

education. According to the U.S Bureau of Labor Statistics (October, 2011), more high school graduates are attending college where 68.3% are enrolled as full-time students. From these full-time college students, 38.8% are a part of the labor force. While this figure may not be as high as the 68.7% of high school graduates who are not enrolled in college but are working or looking for work, the drop in the funding opportunities within universities, freezing of grants, and the current recession in the economy, is propelling the projected participation rate in the labor force. The purpose of this study is to test a model of work-school conflict and work-school facilitation by examining several work-related antecedents, school and health-related outcomes, and self-efficacy and support factors that may shed light on important boundary conditions.

### **Theoretical Context**

In today's world the trend has shifted from students working only during vacations to employment even during full term-time. This has been a result of not only financial necessity (e.g., tuition hikes, reduction in grants) but also as a means for earning extra cash to fulfill certain lifestyle needs such as entertainment and shopping.

The domain of work-nonwork interface has been examined from the role theory perspective. On one hand, according to the role scarcity hypothesis (Goode, 1960; Greenhaus & Beutell, 1985), every individual has only so many physical and psychological resources to expend, and participation in multiple roles can lead to exhaustion of those resources. These multiple demands from competing roles may necessitate sacrifices to maintain a balance between work and school life. On the other hand, the role expansion theory (Marks, 1977) focuses on the benefits of participation in

multiple roles and argues that human energy is not finite. According to this perspective, involvement in one role can provide resources that can be utilized in another role leading to overall enrichment.

Furthermore, the extent of overlap between work and school roles is explained by Ashforth, Kreiner, and Fugate (2000) through the boundary theory. According to this theory, people have a tendency to slice important aspects of their lives (such as family, work, religion) into different domains that are segregated by boundaries which vary in their flexibility and permeability. Additionally, people have a role to play in each domain, and assume an identity in each role with high or low contrasting identities across roles. These two factors, i.e., boundary and role identity, determine the segmentation or integration of roles and each has its pros and cons. Highly segmented roles allow for compartmentalization and reduce distractions; however, making the switch between roles demands psychological effort. On the other hand, well integrated roles allow for ease of movement between roles, but also create confusion regarding the boundaries between roles i.e., where does one role end and the other begin? Drawing from these suggestions, people who have a strong employee identity might find it easy to not let their work life affect their school life (less work to school conflict); however, when switching roles, it may take them longer (and require more effort) to make the transition (more work to school conflict). And those who don't hold a strong employee identity and have lesser stringent boundaries between their work and school life might find it easy to identify the complementary aspects of both roles (more work to school facilitation) yet find it difficult to focus on one role or the other due to overlapping demands (less work to school facilitation). This perspective draws on the acrimony and synergy between two

separate roles that explains the process of conflict and facilitation between the work and school roles.

Despite the lack of research in the specific domain of work and school, some studies have shown that owing to employment commitments students have less time for academics (Silver & Silver, 1997), feel more tired (Broadbridge, Swanson & Taylor, 2000), miss lectures (Leonard, 1995), and show a decline in academic performance (Sorensen & Winn, 1993). At the same time, students have also suggested that being employed during their school life has helped them with time management and reduced their stress related to inability to buy books (Sorensen & Winn, 1993). Term-time employment has also been helpful in collecting data for assignments (Hodgson & Spours, 2001), and acquiring academically relevant knowledge and skills (Callender & Kemp, 2000).

Even though this review suggests that researchers have examined both the positive and negative outcomes of being employed during student life, there has been very little research that examines this from a theoretical perspective. Also, the mediating role of conflict and facilitation in governing the relationship between the causes and outcomes has been overlooked. Markel & Frone (1998) identified the importance of moving beyond number of work hours and looking at job characteristics, such as work load, that may affect school-related outcomes other than absence or class cutting (Greenberger, Steinberg & Vaux, 1981; Barling, Rogers & Kelloway, 1995). This effort by Markel and Frone was extended by Butler (2007) who added the mediating role of work-school facilitation and also looked at job characteristics, such as job demands and

job control as antecedents, and school performance and satisfaction as the potential consequences.

As is the case with the positive side of the work-family interface, another newly researched aspect in this area of research are the factors of employee's physical and psychological well-being (Frone, Russell & Cooper, 1997; LaPierre & Allen, 2006). Along with the effects that conflict and facilitation have on the domain-related factors (i.e., work and school), they also affect the individual's physical and mental health and with the different roles that students are expected to play, it becomes pertinent to address this issue in the current study.

Social support is another critical factor in the study of work-nonwork roles which can take on the form of emotional support (love, care, trust); instrumental support (time, money, energy); appraisal support (providing relevant information for self-evaluation); and informational support (advice, suggestions, information) (ten Brummelhuis, Oosterwal, Bakker, 2012). Support from family and friends can take any or all of these different forms of social support and provide the resources that an individual needs to cope with the demands that work and school roles place on them. Aside from support from others, an individual's own capabilities play an important role in the extent to which work demands have a positive or negative effect.

The aim of this study is to develop a better understanding of the potential causes and results of problems and benefits for full-time students who are employed part-time. To this end, a model has been developed (see Figure 1) to examine certain positive and negative job characteristics (i.e., work cost, work overload, role involvement, and work

reward), as antecedents and how they relate to the individual's physical and psychological well-being, and school-related outcomes, namely school performance, school satisfaction, and adjustment to school. This study is an extension of the research by Markel and Frone (1998), and Butler (2007) and predicts that work-school conflict and work-school facilitation will mediate the relationship between the antecedents and the consequences. Furthermore, the relationship between the antecedents and work-school conflict and facilitation will be moderated by two support variables i.e., emotional support from family and friends, and the participant's self-efficacy. As highlighted above, due to the lack of research in the work-school interface, the proposed relationships have been drawn from the work-family literature. Also, in contrast to the work-family research that proposes a bi-directional relationship between work and family (Frone, 2003), the current study focuses on the work to school relationships only. The following sections present the study hypotheses and describe the supporting research for these predictions.

### **Proposed Antecedents**

**Work cost.** Work cost can be understood as the negative aspects of work or the extent to which there is a sense of aversion with respect to components of one's job. It refers to the sacrifices that one may need to make in one role domain in order to fulfill commitments in another domain. Matsui, Tsuzuki and Onglacto (1999) did a rewards/costs analysis study on Japanese college women and found a negative relationship between work cost and work orientation. This implies that the less aversive someone is towards their work domain, the more motivated they are to be involved in their work role. Alternatively, the greater the work cost, the greater will be the work-

school conflict, as the likelihood for making sacrifices in the school domain will increase in order to meet the demands of the work domain. Matsui, et.al (1999) also found a small negative relationship between work cost and home orientation implying that negative aspects of work take away from one's involvement in the other role. Based on these findings, the following hypothesis is proposed:

*Hypothesis 1: Work cost is positively associated with work-school conflict.*

**Work overload.** In addition to giving up some resources, having too many things to do and not having enough time to do them can lead to exhaustion which may prevent one from adequately participating in multiple role domains. Work overload may lead to psychological preoccupation with one role, such that even while an individual is physically in the second role, he or she is mentally concerned about the first role. Supporting this notion, studies have shown that work overload does have a positive relationship with work-family conflict (Frone, Yardley & Markel, 1997; Parasuraman, Purohit, Godshalk & Beutell, 1996). If individuals experience overload from their work domain, it can prevent them from actively participating and enjoying their participation in the school domain. Based on these findings, the following hypothesis is proposed:

*Hypothesis 2: Work overload is positively associated with work-school conflict.*

**Work reward.** In contrast to work cost, the concept of work reward addresses the positive aspects of the job and the extent to which employees consider their job description as attractive. Siegrist's (1996) model of effort-reward imbalance includes three dimensions of occupational gratifications namely, money, esteem, and status control which can be interpreted in terms of salary, respect, and job security respectively



(Kinman & Jones, 2008). In their rewards/costs analysis study, Matsui, et.al (1999) found a small positive correlation between work rewards and home orientation, implying that those who feel their work life provides them with certain benefits draw the strength to improve their home life and spend more time and effort with their family. Based on these findings, the following hypothesis is proposed:

*Hypothesis 3: Work reward is positively associated with work-school facilitation.*

**Role involvement.** Role involvement can be defined as the psychological involvement with one domain that makes them unavailable to meet the demands of the other domain (Aryee, et.al, 2005). Drawing from resource drain theory, preoccupation with one role makes it difficult to invest time, attention, and energy in a secondary role. On the other hand, Greenhaus and Parasuraman (1999) proposed that role involvement can also be interpreted as an opportunity to learn new skills to be used in another role. Rothbard (2001) described role involvement as intrinsic motivation that helps an individual to acquire the necessary resources from one domain and use them in another domain. Based on these opposing findings, the following two hypotheses are proposed:

*Hypothesis 4a: Role involvement is positively associated with work-school conflict.*

*Hypothesis 4b: Role involvement is positively associated with work-school facilitation.*

## **Moderating Effects of Self-Efficacy and Social Support**

**Self-efficacy.** Self-efficacy can be defined as an individual's beliefs about their ability to successfully perform a given behavior or task (Bandura, 1977). Those high on self-efficacy are inclined towards trying new things and attempting challenging tasks, they seek more opportunities, and are more likely to acquire new skills and perspectives leading to greater success (Wayne, Grzywacz, Carlson & Kacmar, 2007). Because the context of this study looks at the effect of school-related variables, academic self-efficacy or the perceived capability to manage one's own learning behavior, master and fulfill one's academic subjects and expectations will be the primary focus (Muris, 2001). A meta-analysis by Allen, et.al (2012) found that self-efficacy may protect individuals from experiencing work-family conflict as those that are high in self-efficacy have the "psychological resiliency" to deal with the demands of the two roles. For the current study, the following hypotheses are proposed between the antecedents, and work-school conflict and work-school facilitation:

*Hypothesis 5a:* Academic self-efficacy moderates the relationship between the proposed antecedents and work-school conflict such that the higher the level of self-efficacy, the weaker the relationship between the proposed antecedents and work-school conflict.

*Hypothesis 5b:* Academic self-efficacy moderates the relationship between the proposed antecedents and work-school facilitation such that higher the level of self-efficacy, the stronger the relationship between the proposed antecedents and work-school facilitation.

**Support from family.** Despite the debate regarding the definition of social support, it has been empirically proven that there are two primary types of social support – emotional and instrumental. Emotional support is characterized by sympathetic and caring behavior, whereas instrumental support comprises tangible assistance (Beehr, 1975). Research in the work domain has proposed and tested three different sources of support, namely supervisor, coworker, and external sources, such as family or friends (King, Mattimore, King, & Adams, 1995). Wayne, Randel, and Stevens (2006) conducted a study examining the relationship between both types of social support (emotional and instrumental) and work-family enrichment. Results of the study found a significant relationship only for emotional social support, indicating that there is a positive transfer between the work and family domains when individuals perceive their family's affect and behavior as supportive. Research with student samples also suggest that families play an important role in educational success (Riley, 1996), and that emotional and financial support from families is key to academic success (Lango, 1995). Drawing from these findings, the following hypotheses are proposed:

*Hypothesis 6a:* Family emotional social support moderates the relationship between the proposed antecedents and work-school conflict such that higher the level of support, the weaker will be the relationship between the proposed antecedents and work-school conflict.

*Hypothesis 6b:* Family emotional social support moderates the relationship between the proposed antecedents and work-school facilitation such that higher the levels

of emotional support from the family, the stronger will be the relationship between proposed antecedents and work-school facilitation.

**Support from friends.** Certain nonfamilial sources of support have also been reported as mitigating sources of stress, reducing psychological maladjustment, and improving feelings of psychological well-being among college students (Ognibene & Collins, 1998). With college students, it has been proposed that family and friends may both act as sources of support providing them with comfort and support to help deal with a variety of responsibilities (Procidano & Heller, 1983). In a study by Rodriguez, Mira, Myers, Morris and Cardoza (2003), they looked at the impact of perceived social support provided by family and friends on psychological well-being and distress in a sample of Latino college students. Results from a paired *t*-test show that the Latino students reported significantly greater support from their friends than families, and this support protected the students against psychological distress. Based on these findings, the following hypotheses are proposed:

*Hypothesis 7a:* Emotional support from friends moderates the relationship between the proposed antecedents and work-school conflict such that higher levels of support, weaker the relationship between the proposed antecedents and work-school conflict.

*Hypothesis 7b:* Social (emotional) support from friends moderates the relationship between the proposed antecedents and work-school facilitation such that higher levels of support from friends, stronger the relationship between the proposed antecedents and work-school facilitation.

## **Mediating Effect of Work-School Conflict and Work-School Facilitation**

**Work-school conflict.** In the work-family literature, work-family conflict has been defined as “a form of interrole conflict in which role pressures from the work and family domains are mutually incompatible in some respect” (Greenhaus & Beutell, 1985, p. 77). From this definition, work-school conflict may be understood as the conflict that arises when role pressures from the work domain are incompatible with the school domain and therefore interfere with the individual’s participation in the school domain. Markel and Frone (1998) defined work-school conflict as the interference in the school domain by the demands and responsibilities placed on the individual from his/her work domain. Several studies have shown that work-family conflict mediates the relationship between several job-related antecedents (e.g., role conflict, organizational commitment, and work overload) and the person’s family-related outcomes (e.g., family performance), and also some individual outcomes such as health (Boyar & Mosley, 2007; Carlson, Kacmar & Williams, 2000; Frone, et.al, 1997).

**Work-school facilitation.** Frone (2003) defines work-family facilitation as “the extent to which participation at work (home) is made easier by virtue of the experiences, skills, and opportunities gained or developed at home (work)” (p.145). From this definition, it can be extrapolated that work-school facilitation is the ease in participating in the school domain as a result of the knowledge and skills acquired in the work domain. Work-school facilitation occurs when participation in the work role enhances or energizes participation in the school role (Voydanoff, 2004a). Similar to the research in the conflict domain, studies have also looked at the mediating role of work-family

facilitation such as Boyar and Mosley (2007) who found that work-family conflict and facilitation mediated the relationship between antecedents and satisfaction-related consequences.

Based on the above findings, the following hypotheses are proposed:

*Hypothesis 8a:* Work-school conflict mediates the relationship between work-related antecedents and health- and school-related outcomes.

*Hypothesis 8b:* Work-school facilitation mediates the relationship between work-related antecedents and health- and school-related outcomes.

## **Proposed Consequences**

### **Health-Related Outcomes**

*Physical and Psychological Well-Being.* Physical well-being has been described in several different ways from an overall assessment of self-rated perception of one's health, to objective measures such as hypertension status or alcohol use (Frone, et.al, 1997). In a longitudinal study, Frone, et.al found that work-family conflict was positively related to poor physical health and alcohol use. Psychological well-being is the inability to manage workload and the pressures from school can increase the stress levels of students which can negatively affect their mental well-being. LaPierre & Allen (2006) found a negative relationship between work-family conflict and affective well-being demonstrating that as the interference between two roles increases, it negatively affects the psychological well-being of the individual. Amstad, et.al (2011) did a meta-analytic study of work-family conflict and its outcomes and found the strongest (negative)

association between work to family conflict and domain unspecific outcomes such as psychological strain, health problems, somatic/physical symptoms. Similarly, McNall, Nicklin, and Masuda (2010) did a meta-analytic review of the outcomes of work-family enrichment and found a positive relationship between work to family enrichment and life satisfaction, family satisfaction, and physical and mental health. Grzywacz (2000), and Grzywacz and Bass (2003) also found a positive relationship between work-family facilitation and physical health, mental health, and well-being. Based on these findings, the following hypotheses are proposed:

*Hypothesis 9a:* Work-school conflict is negatively associated with health-related outcomes.

*Hypothesis 9b:* Work-school facilitation is positively associated with health-related outcomes.

### **School-Related Outcomes**

***School Performance.*** School performance is defined as the involvement and demonstrated competence at school (Butler, 2007). Because Grade Point Average (GPA) is found to have a high correlation with school effort and school attendance (Butler, 2007), I intend to collect only the participants' GPA scores as indicators of their performance in school. This includes the student's grades, the effort that they expend in class, and their attendance. Broadbridge and Swanson (2006) conducted a focus group study with undergraduate students and found that the prominent negative effects of the role conflict due to term-time employment included missing lectures and reduced time for

academic study and academic performance. Similarly, in their meta-analysis, Amstad, et.al (2011) found work interfering with family to be related to poor family performance.

***School Satisfaction.*** School satisfaction may be defined as students' attitudes towards their university and the educational experiences it offers (Butler, 2007). It is the extent to which the individual feels a part of the university and thinks that they made the right choice by joining this university. The above-mentioned meta-analyses (Amstad, et.al, 2011; McNall, et.al, 2010) also found a negative relationship between work to family conflict and family satisfaction, and positive relationship between work to family enrichment and satisfaction in the family domain.

***Adjustment to School.*** Adjustment to school deals with the social life of the student and to what extent he or she gets an opportunity to participate in activities other than academic requirements, such as sports. In a qualitative study, Broadbridge and Swanson (2006) found that some of the most often reported positive effects of term-time employment were enhancement of social skills, confidence, communication skills, and interacting with different people.

Based on the above findings, the following hypotheses are proposed:

*Hypothesis 10a:* Work-school conflict is negatively associated with school-related outcomes.

*Hypothesis 10b:* Work-school facilitation is positively associated with school-related outcomes.





## Chapter Two

### Method

#### Participants

Data were collected from undergraduate students at a Southeastern University in the US since the majority of them are employed part-time and are from varied backgrounds with different major areas of study, thereby providing diversity to the sample. Participation was voluntary and extra credit (0.5 points) was given for participating in this study. The final sample consisted of 707 participants of which 56 had dependents and were removed from further analyses as having additional familial responsibilities could have been an interference beyond work and school tasks. Data for seven other participants were dropped as they only completed the demographic items and did not provide responses for the other study variables. Of the remaining 644 participants, 347 were enrolled as full-time students and held part-time employment (i.e., at least 20 hours or more) and this was considered the “test sample”. The remainder of the sample ( $n = 297$ ) included participants that did not meet the study criteria, i.e., they were full-time students but were not employed for at least 20 hours, and this group of participants was labeled the “comparison sample”.

Of the 347 participants in the test sample, there were 287 females and 58 males (2 participants did not report their gender). The majority of the participants were white ( $n =$

184), and the mean age was 21.84 ( $SD = 4.11$ ; 8 participants did not report age). The majority of the participants were in their senior year ( $n = 133$ ) with psychology ( $n = 222$ ) as their area of major. The participants' relationship status was primarily single (78%), and most were enrolled for 12 credits and worked an average of 25.43 hours per week ( $SD = 7.57$ ). A variety of industries were represented, with the majority of participants working in the food and restaurant industry ( $n = 106$ ). For the question about job titles, most participants chose the "Other" category that included Nanny, Teller, Tutor, Desk Clerk, to name a few, and the second most selected job title was that of Server ( $n = 88$ ). Thirty-four percent considered their job to overlap with their area of major and 36% indicated an overlap between area of major and work. More than 50% ( $n = 180$ ) said their primary reason for employment was to meet expenses other than school fees, while only 8% selected gaining work experience as their primary reason for employment.

Of the 297 participants in the comparison sample, there were 220 females and 77 males. Majority of the participants were white ( $n = 172$ ), and the mean age was 21.90 ( $SD = 11.37$ ; 5 participants did not report age). The distribution of participants for the year of education was (almost) evenly distributed between freshman, sophomore, junior, and senior. Most of the participants had psychology ( $n = 157$ ) as their area of major and the relationship status was primarily single ( $n = 240$ ).

## **Procedure**

A single-source, cross-sectional survey design was used for this study. Participants were asked to complete an online survey consisting of scales assessing the study variables. All participants were asked for demographic information such as their

age (in years), gender, ethnicity, year of education, area of major, GPA, relationship status, and if they had any dependents that they supported financially. Participants were then asked for their student and employment status and those participants that met the study criteria i.e., enrollment in at least 9 credit hours and 20 hours of work per week, were asked to provide information about the extent of overlap between their major of study and work responsibilities, and their reason for employment. Additionally, these participants were asked to respond to questions about their work life, support from family and friends, and items related to their school life, along with health-related factors. However, participants that did not meet the study criteria were taken to the latter half of the survey and responded to items about their school life, and health-related factors only and comprised the comparison sample. Lastly, participants were asked to report their GPA a second time (first time was at the start of the survey), provide a unique identifier, and email a copy of their most recent GPA with the identifier in the subject line to match their survey responses with the email.

## **Measures**

The complete version of the survey included measures of work cost, work overload, role involvement, work reward, academic self-efficacy, family support, support from friends, work-school conflict, work-school facilitation, physical well-being, psychological well-being, school satisfaction, and school adjustment, along with demographic characteristics. In addition, data on an objective measure of the participants' GPA was collected via university transcripts emailed by the participant to the researcher. The comparison sample responded only to the outcome measures i.e., physical well-

being, psychological well-being, GPA, school satisfaction, school adjustment, and the demographic characteristics. The specifics of each measure are described below. In all cases (except demographic characteristics), scale scores were calculated by adding the item responses, with higher scores indicating greater standing on the variable. For a list of scale items, please see the Appendices.

**Work cost.** A five-item measure developed by Matsui, Tsuzuki and Onglatco (1999) was modified and used to assess the negative aspects of the participant's work. Participants indicated the extent of their agreement with each statement on a 5-point scale (1=strongly disagree and 5=strongly agree). Matsui et.al. (1999) reported a coefficient alpha of .80 for this scale.

**Work overload.** A combination of two-items from Beehr, Walsh, and Taber's (1976) scale and three-items from Cammann, Fichman, Jenkins and Klesh's (1979) scale of work overload was used to measure participants' work load. Responses were made on a five-point Likert-type scale that ranged from 1 (strongly disagree) to 5 (strongly agree). Aryee, et.al (2005) reported a coefficient alpha of .82 for this scale.

**Role involvement.** A four-item measure developed by Lodahl and Kejner (1965) was used to assess participants' involvement with their work. Participants responded to a 5-point Likert-type scale that ranged from 1 (strongly disagree) to 5 (strongly agree). A coefficient alpha of .85 was reported by Aryee, et.al (2005).

**Work reward.** The positive aspects of the participant's work were assessed by a modified four-item measure developed by Matsui, Tsuzuki and Onglatco (1999).

Participants indicated the extent of their agreement with each statement on a 5-point scale (1=strongly disagree and 5=strongly agree). Matsui et.al. (1999) reported a coefficient alpha of .75 for this scale.

**Self-efficacy.** An eight-item measure developed by Muris (2001) was used to assess the respondents' academic self efficacy. This scale is part of a longer general self-efficacy scale that also includes emotional and social self-efficacy. Participants provided their responses on a 4-point Likert-type scale ranging from 1 (not at all) to 4 (extremely well). The coefficient alpha for this scale was found to be .86 (Suldo, Saffer and Shaunessy, 2007).

**Support from family.** Emotional Support provided by the family was measured using ten-items from the King, et.al (1995) Family Support Inventory for Workers (FSIW). This scale includes items on emotional support as well as instrumental support. However, only those items deemed relevant to the family and school context were included. Responses were collected on a 5-point rating scale ranging from 1 (strongly disagree) to 5 (strongly agree). King, et.al (1995) reported a coefficient alpha of .95 for the family emotional support scale.

**Support from friends.** In order to measure emotional support provided by friends, the FSIW was modified and used such that the term "family" was replaced with "friends". The same ten items from the family support scale were used and responses were recorded on a 5-point rating scale (1=strongly disagree and 5=strongly agree).

**Work-school conflict.** The interference from work to school was measured by a four-item scale developed by Markel and Frone (1998) where the responses were made on a 5-point scale (1=strongly disagree and 5=strongly agree). A coefficient alpha of .88 was reported by Butler (2007). Two-items from the Broadbridge and Swanson's (2006) role congruence scale were also added where the scale has three different factors of academic/workload, future career and self/social development and the coefficient alphas for each factor are .73, .83, and .77, respectively.

**Work-school facilitation.** A combination of 4-items from the measure developed by Butler (2007) and six-items from Broadbridge and Swanson's (2006) role congruence scale were used to assess work-school facilitation. Participants indicated their extent of agreement using a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Butler reported a coefficient alpha of .85 for his scale and the alpha for the 10-item scale in this study was .90.

**Physical well-being.** The adapted version (LaPierre & Allen, 2006) of Spector and Jex's (1998) Physical Symptoms Inventory was used to assess the somatic complaints of participants. Participants were asked to indicate if they had experienced any of the eighteen physical symptoms over the past 6 months on a 5-point response scale (1=several times per day, 5=less than once per month or never). A coefficient alpha of .73 was reported for this scale.

**Psychological well-being.** Participants' psychological well-being was measured using a six-item scale on dysphoria taken from the MIDUS survey where respondents indicated on a 5-point scale (1=none of the time, 5=all of the time) the extent to which

they had felt a certain way in the past 30 days. Grzywacz and Marks (2000) reported a coefficient alpha of .86 for this scale.

**School satisfaction.** A three-item measure was developed to assess the participants' satisfaction with their school using a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Also, three-items from the school satisfaction scale used by Butler (2007) were added. A sample item is "I am satisfied with my education at this school."

**School performance.** School performance was measured through participants' GPA from the semester in which the data is collected. Participants were asked to provide their GPA in the survey, and also email an unofficial transcript from university records indicating their GPA.

**Adjustment to school.** A five-item measure was developed for this study to assess the extent to which participants feel that they had a healthy social life as a student. Responses were collected on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). A sample item is "I am comfortable with my social life as a student."

**Demographic information.** Participants were also asked to respond to items regarding their demographic characteristics, including their age (in years), gender, ethnicity, year of education, area of major, GPA, relationship status, and if they had any dependents that they supported financially. Additionally, participants were asked to respond to a "Yes/No" question asking if they were a full-time student and worked part time. Those that responded with "Yes", provided additional demographic information



about number of credits for which they were enrolled, work hours per week, type of organization, type of work, extent of job overlap with area of major and vice-versa, and reason for employment.

## **Chapter Three**

### **Results**

Means, standard deviations, coefficient alphas, and intercorrelations among study variables were calculated. All of the coefficient alphas were greater than .70 with some values of more than .90, indicating an acceptable level of internal consistency reliability. Table 1 presents the descriptive statistics for the study variables, and Table 2 presents the intercorrelations among the study variables. Table 3 presents the intercorrelations among study variables that were common across the test and comparison sample, i.e., the outcome variables. As the correlation between all three indicators of GPA was extremely high ( $p < .001$ ), the decision was made to use the first self-reported GPA only as sample size would have decreased considerably if any of the other indicators were used, especially where participants were asked to send their GPA via email along with a copy of their transcript.

### **Hypothesis Testing**

Structural Equation Modeling (SEM) analyses with maximum likelihood estimation was used to test the relationships between proposed antecedents and consequences of work-school conflict and work-school facilitation as moderated by self-efficacy and support from family and friends. Post hoc power analyses were conducted using the approach described by MacCallum, Browne, and Sugawara (1996). Results of these power analyses revealed adequate power for tests of model fit (power = 1.00). For

the proposed model (see Figure 1), the total of the survey items served as indicators of the exogenous variables that were allowed to covary. The mediating (work-school conflict and work-school facilitation) and moderating variables (self-efficacy, emotional support from friends, and family) were included as measured variables. The total of survey items for adjustment to school, school satisfaction, and the single-item measure of GPA were used as indicators of one of the latent variables namely, school-related outcomes. The indicators for the health-related outcome latent variable included the total of the survey items for physical and psychological well-being. An alternative model (Model 2) was also analyzed where the survey items for physical well-being were parceled into three variables (physical health, stomach health, and exhaustion) to serve as indicators of health-related outcomes.

Prior to using SEM to test the proposed model, the data were screened for independence, linearity, and multivariate normality. First, the univariate normality was assessed by examining the stem-and-leaf displays, box-plots, and skewness and kurtosis indices of each measured variable. The skewness and kurtosis indices show that most of the variables fall within acceptable ranges, and those that do not show only slight deviations. Measures of multivariate skewness and kurtosis were computed based on the variables included in Figure 1 ( $b1, p = 486.72$ ;  $b2, p = 1537.38$ ), and revealed a lack of multivariate normality. The data were then screened for multivariate outliers by calculating Mahalanobis distances. Some of the  $D^2$  values seemed higher than the other values showing that there may be some multivariate outliers present in our data. As a result, 18 records were deleted and the multivariate skewness and kurtosis were computed again. Even after deleting the multivariate outliers, the results did indicate a

lack of multivariate normality ( $b1, p = 267.14$ ;  $b2, p = 1194.88$ ); however, the degree of non-normality did not appear substantial, so the decision was made to proceed with the analysis. Overall, our assessment of multivariate normality revealed slight deviations from normality, which may affect the fit indices and the standard errors of the parameters. However, the decision was made to proceed with the analysis, keeping these consequences in mind.

A variety of fit indices were chosen to assess model fit, including the Chi-square significance test, the root mean square error of approximation (RMSEA), and Bentler's comparative fit index. While the Chi-square significance test indicated poor model fit [ $\chi^2(170) = 266.35, p < .0001$ ], the RMSEA estimate (.06) and Bentler's comparative fit index (.99) indicated good fit. Model fit was also assessed for the alternative model where items from the physical well-being scale were parceled into three separate indicators of health-related outcomes. Using an alpha level of .001, the chi-square difference test between the two models was significant,  $\chi^2$  difference (52) = 119.93. This finding indicates that there is a significant difference in the fit of the two models, and the more parsimonious model should be selected. Comparing the other fit indices for the two models revealed little difference in the fit of the two models (see Table 5). Therefore, the more parsimonious model depicted in Figure 1 is the preferred model.

The standardized path coefficients, correlations, and  $R^2$  values are reported in Figure 2 and the unstandardized parameter estimates and their standard errors are reported in Table 4. Hypotheses 1, 2, 3, 4a, and 4b predicted the relationship between the antecedents and work-school conflict and work-school facilitation. Hypotheses 1 and 2 predicted that work cost and work overload would be positively associated with work-

school conflict. These hypotheses were not supported as the paths from work cost and work overload to work-school conflict were not significant ( $\gamma = .13$  and  $.69$ , respectively). However, the zero-order correlations between work-school conflict and these two variables were significant ( $r = .56$  for work cost and  $r = .40$  for work overload; see Table 2). Hypothesis 3 predicted that work reward would be positively associated with work-school facilitation. This hypothesis was not supported as the path from work reward to work-school facilitation was not significant ( $\gamma = .04$ ), but the zero-order correlation was significant ( $r = .43$ ; see Table 2). Hypothesis 4a predicted a positive relationship between role involvement and work-school conflict, and hypothesis 4b predicted a positive relationship between role involvement and work-school facilitation. Both hypotheses were not supported as the paths from role involvement to work-school conflict and facilitation were not significant ( $\gamma = -.00$  and  $.22$ , respectively). Like the path coefficient and contrary to the hypothesis, there was a negative correlation between role involvement and work-school conflict ( $r = -.14$ , see Table 2). Even though the path coefficient from role involvement to work-school facilitation was not significant, the zero-order correlation was significant and in the expected direction ( $r = .49$ , see Table 2). Additionally, the proportion of variance in work-school conflict accounted for by the three antecedents was  $.40$ , and the proportion of variance in work-school facilitation accounted for by role involvement and work reward was  $.33$ .

Hypotheses 5a and 7a predicted that academic self-efficacy and support from friends would moderate the relationship between the proposed antecedents and work-school conflict such that self-efficacy and support from friends would have a negative impact on the relationship between the antecedents and work-school conflict. These

hypotheses were not supported as the interaction paths were not significant. Hypothesis 6a predicted that support from family would moderate the relationship between the antecedents and work-school conflict. There was partial support for this hypothesis as only the interaction term for the antecedent of role involvement and support from family was significant. However, the path estimate was in the opposite direction such that higher levels of support from family would strengthen the positive relationship between role involvement and work-school conflict. Hypothesis 5b predicted that academic self-efficacy would moderate the relationship between the proposed antecedents and work-school facilitation such that self-efficacy would have a positive impact on the relationship between the antecedents and work-school facilitation. This hypothesis was not supported as the interaction path was not significant. Hypotheses 6b and 7b predicted that support from family and friends, respectively would moderate the relationship between the antecedents and work-school facilitation. These hypotheses were also not supported as the interaction paths were not significant. Direct paths were added from the three moderator variables to the (health- and school-related) outcome variables of the study. The paths from self-efficacy and support from friends to both outcome variables were significant ( $\gamma = .19$  for self-efficacy to health-related outcomes, and  $.42$  to school-related outcomes;  $\gamma = .20$  for support from friends to health-related outcomes, and  $.29$  to school-related outcomes). However, the paths from support from family to the outcome variables were not significant.

Hypotheses 8a predicted that work-school conflict would mediate the relationship between the antecedents and health-and school-related outcomes, and hypothesis 8b predicted that work-school facilitation would mediate the relationship between the

antecedents and health-and school-related outcomes. However, given that none of the paths between the antecedents and the mediating variables were significant, the conditions for mediation were not met and these hypotheses were not supported.

Hypothesis 9a predicted that work-school conflict would be negatively associated with health-related outcomes. This hypothesis was supported as the path from work-school conflict was significant ( $\beta = -.29, p < .01$ ). Hypothesis 10a predicted that work-school conflict would be negatively associated with the school-related outcomes. This hypothesis was not supported as the path from work-school conflict to school-related outcomes was not significant ( $\beta = -.13$ ). Further, the zero-order correlations between the work-school conflict and the indicators of school-related outcomes were not significant except for adjustment to school ( $r = -.25$ , see Table 2). Hypothesis 9b and 10b predicted that work school facilitation would be positively associated with health- and school-related outcomes. Both hypotheses were not supported as the paths from work-school facilitation to the outcome variables were not significant. However, the zero-order correlations between work-school facilitation and both indicators of health-related outcomes were significant ( $r = .15$  for physical well-being, and  $r = .11$  for psychological well-being, see Table 2). And similar to work-school conflict, the only indicator of school-related outcomes with a significant positive correlation with work-school facilitation was adjustment to school ( $r = .27$ , see Table 2). In addition, 38% of the variance in the school-related outcome latent variable was explained, whereas 24% of the variance in the health-related outcome latent variable was explained. Overall, the structural model received poor support, in that only one of the hypothesized paths was significant and one of the moderator hypotheses was partially supported.

Regarding the measurement part of the model, Figure 2 shows that the standardized path coefficients relating each latent variable to its indicator ranged in size from .19 (GPA) to .91 (work overload). Additionally, the proportion of variance accounted for in the indicators ranged from .04 (GPA indicator) to .83 (work overload indicator). The small  $R^2$  values associated with the GPA and adjustment to school indicators suggest that participant responses on these indicators were influenced by factors other than the underlying latent variables, such as measurement error and results should be interpreted with caution.

To further investigate the effect of dual roles on an individual's health, and school-related outcomes, the mean sub-group differences between the common variables across the test and comparison samples were analyzed. An examination of the mean differences between the common variables across the test sample and comparison sample was conducted using an independent samples t-test and the results are presented in Table 6. There was a significant difference in the scores for physical well-being between the test sample that was comprised of participants that were in school and employed ( $M = 53.73$ ,  $SD = 8.71$ ) compared to those in the comparison sample ( $M = 56.41$ ,  $SD = 7.27$ );  $t(642) = -4.19$ ,  $p < .01$ . Similar results were found for psychological well-being, adjustment to school, and GPA (see Table 6). However, for school satisfaction, the difference between test sample ( $M = 23.24$ ,  $SD = 4.86$ ) and comparison sample ( $M = 23.43$ ,  $SD = 4.79$ );  $t(642) = -0.52$ ,  $p > .05$  was not significant.



Table 1

*Means, Standard Deviations, and Scale Reliabilities for Study Variables*

Variable	Number of items	Coefficient alpha	Mean	SD
1. Work Cost	5	.71	18.39	3.57
2. Work Reward	4	.79	14.05	3.20
3. Work Overload	5	.84	12.80	4.04
4. Role Involvement	4	.76	9.76	3.13
5. Self-Efficacy	8	.81	24.19	3.82
6. Support from Family	10	.94	36.17	8.07
7. Support from Friends	10	.94	36.72	7.18
8. Work School Conflict	6	.93	18.85	5.59
9. Work School Facilitation	10	.90	28.88	7.70
10. Physical Well-Being	13	.87	53.73 (54.97)	8.71 (8.18)
11. Psychological Well-Being	6	.89	22.05 (22.47)	5.45 (5.20)
12. School Satisfaction	6	.93	23.24 (23.33)	4.86 (4.82)
13. Adjustment to School	5	.71	14.22 (14.66)	3.97 (4.04)
14. Self-Report GPA 1	1	-	3.19 (3.26)	0.53 (0.56)
15. Self-Report GPA 2	1	-	3.16 (3.23)	0.56 (0.59)
16. GPA via Email	1	-	3.16 (3.23)	0.67 (0.70)

*Note.*  $n = 347$  (test sample). Values in parentheses are for the test and comparison sample combined ( $N = 644$ ). Item responses were made on a 5-point scale except for self-efficacy, which used a 4-point scale.

Table 2

*Intercorrelations Among Study Variables – Test Sample*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Work Cost	-														
2. Work Reward	.11	-													
3. Work Overload	.25	-.09	-												
4. Role Involvement	-.16	.37	.15	-											
5. Self-Efficacy	-.00	.15	-.25	-.07	-										
6. Support from Family	.09	.15	-.22	.01	.28	-									
7. Support from Friends	.15	.21	-.16	-.02	.26	.40	-								
8. Work School Conflict	.56	-.08	.40	-.14	-.17	-.04	.06	-							
9. Work School Facilitation	-.17	.43	-.09	.49	.16	.19	.10	-.27	-						
10. Physical Well-Being	-.12	.22	-.20	.02	.26	.15	.25	-.22	.15	-					
11. Psychological Well-Being	-.21	.18	-.22	.01	.32	.10	.19	-.29	.11	.44	-				
12. School Satisfaction	.05	.20	-.19	-.13	.40	.25	.30	-.01	.03	.30	.21	-			
13. Adjustment to School	-.19	.23	-.08	.12	.14	.04	.14	-.25	.27	.15	.24	.27	-		
14. Self-Report GPA 1	-.06	.02	-.06	-.03	.22	.03	-.06	-.09	.05	.03	.03	.11	.03	-	
15. Self-Report GPA 2	-.09	-.01	-.03	-.03	.28	.00	-.08	-.10	.07	.02	.03	.08	.01	.89	-
16. GPA via Email	.06	.06	-.08	-.08	.37	.19	.16	-.01	.16	.22	.13	.26	.10	.51	.64

*Note.*  $n = 347$ . Values greater than .10 were significant at  $p < .05$ . Values greater than .13 were significant at  $p < .01$ .

Table 3

*Intercorrelations Among Common Study Variables – Test and Comparison Sample*

Variables	1	2	3	4	5	6
1. Physical Well-Being	-					
2. Psychological Well-Being	.43	-				
3. School Satisfaction	.20	.24	-			
4. Adjustment to School	.15	.25	.30	-		
5. Self-Report GPA 1	.11	.11	.09	.07	-	
6. Self-Report GPA 2	.09	.10	.09	.09	.91	-
7. GPA via Email <sup>^</sup>	.19	.08	.11	.07	.63	.73

*Note.*  $N = 644$ . <sup>^</sup>  $N = 178$ . Values greater than .08 (.18) were significant at  $p < .05$ . Values greater than .11 (.63) were significant at  $p < .01$ .

Table 4

*Unstandardized Parameter Estimates and Standard Errors*

Variable 1	Variable 2	Unstandardized Parameter Estimate	SE
Measurement Component			
Work Cost	Work Cost	1	-
Work Overload	Work Overload	1	-
Role Involvement	Role Involvement	1	-
Work Reward	Work Reward	1	-
Physical Well-Being	Health-Related Outcomes	1	-
Psychological Well-Being	Health-Related Outcomes	0.69	.10
GPA	School-Related Outcomes	1	-
School Satisfaction	School-Related Outcomes	30.31	11.85
Adjustment to School	School-Related Outcomes	14.43	5.86
Structural Component			
Work School Conflict	Work Cost	.20	.43
Work School Conflict	Work Overload	.96	.60
Work School Conflict	Role Involvement	-.00	.57
Work School Conflict	Work Cost and Self-Efficacy	.00	.02
Work School Conflict	Work Cost and Support from Family	-.00	.01
Work School Conflict	Work Cost and Support from Friends	.01	.01
Work School Conflict	Work Overload and Self-Efficacy	.00	.02
Work School Conflict	Work Overload and Support from Family	-.01	.01
Work School Conflict	Work Overload and Support from Friends	-.00	.01
Work School Conflict	Role Involvement and Self-Efficacy	-.02	.02
Work School Conflict	Role Involvement and Support from Family	.02	.01
Work School Conflict	Role Involvement and Support from Friends	-.01	.01
Work School Facilitation	Role Involvement	.56	.94
Work School Facilitation	Work Reward	.09	.67
Work School Facilitation	Role Involvement and Self-Efficacy	-.01	.03
Work School Facilitation	Role Involvement and Support from Family	-.02	.02
Work School Facilitation	Role Involvement and Support from Friends	.04	.02
Work School Facilitation	Work Reward and Self-Efficacy	.03	.02
Work School Facilitation	Work Reward and Support from Family	.02	.01
Work School Facilitation	Work Reward and Support from Friends	-.02	.02
Health-Related Outcomes	Work School Conflict	-.34	.07
Health-Related Outcomes	Work School Facilitation	.01	.05

Table 4 (continued)

Variable 1	Variable 2	Unstandardized Parameter Estimate	SE
Health-Related Outcomes	Self-Efficacy	.41	.11
Health-Related Outcomes	Support from Family	-.01	.05
Health-Related Outcomes	Support from Friends	.21	.06
School-Related Outcomes	Work School Conflict	-.00	.00
School-Related Outcomes	Work School Facilitation	.00	.00
School-Related Outcomes	Self-Efficacy	.01	.01
School-Related Outcomes	Support from Family	.00	.00
School-Related Outcomes	Support from Friends	.00	.00
Covariances			
Work Cost	Work Overload	3.33	.74
Work Cost	Role Involvement	-1.83	.57
Work Cost	Work Reward	.83	.56
Work Overload	Role Involvement	2.07	.65
Work Overload	Work Reward	-1.16	.65
Role Involvement	Work Reward	3.13	.53

*Note.*  $n = 329$ . Dashes indicate the standard error was not estimated.

Table 5

*Fit Indices for Model 1 and Model 2*

Model	$\chi^2$	<i>df</i>	<i>p</i>	RMSEA	CFI
Model 1	266.35	119	.00	.061	.99
Model 2	386.28	170	.00	.062	.99
Chi-square difference test of Model 1 and 2	119.93	51	.00		

*Note.*  $n = 329$ . RMSEA = root mean square error of approximation; CFI = comparative fit index.

Table 6

*Comparisons (t-test) for Outcome Variables by Test and Comparison Sample*

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Physical Well-Being					
Test Sample	347	53.73	8.71	-4.19	<.01
Comparison Sample	297	56.41	7.27		
Psychological Well-Being					
Test Sample	347	22.05	5.45	-2.23	<.05
Comparison Sample	297	22.97	4.86		
School Satisfaction					
Test Sample	347	23.24	4.86	-0.52	>.05
Comparison Sample	297	23.43	4.79		
GPA					
Test Sample	347	3.19	.53	-3.43	<.01
Comparison Sample	289	3.34	.59		
Adjustment to School					
Test Sample	347	14.22	3.97	-3.01	<.01
Comparison Sample	297	15.18	4.06		

*Note.* *M* = Mean; *SD* = Standard Deviation. Test Sample included students that were also employed for 20 or more hours per week whereas the comparison sample comprised of students only.

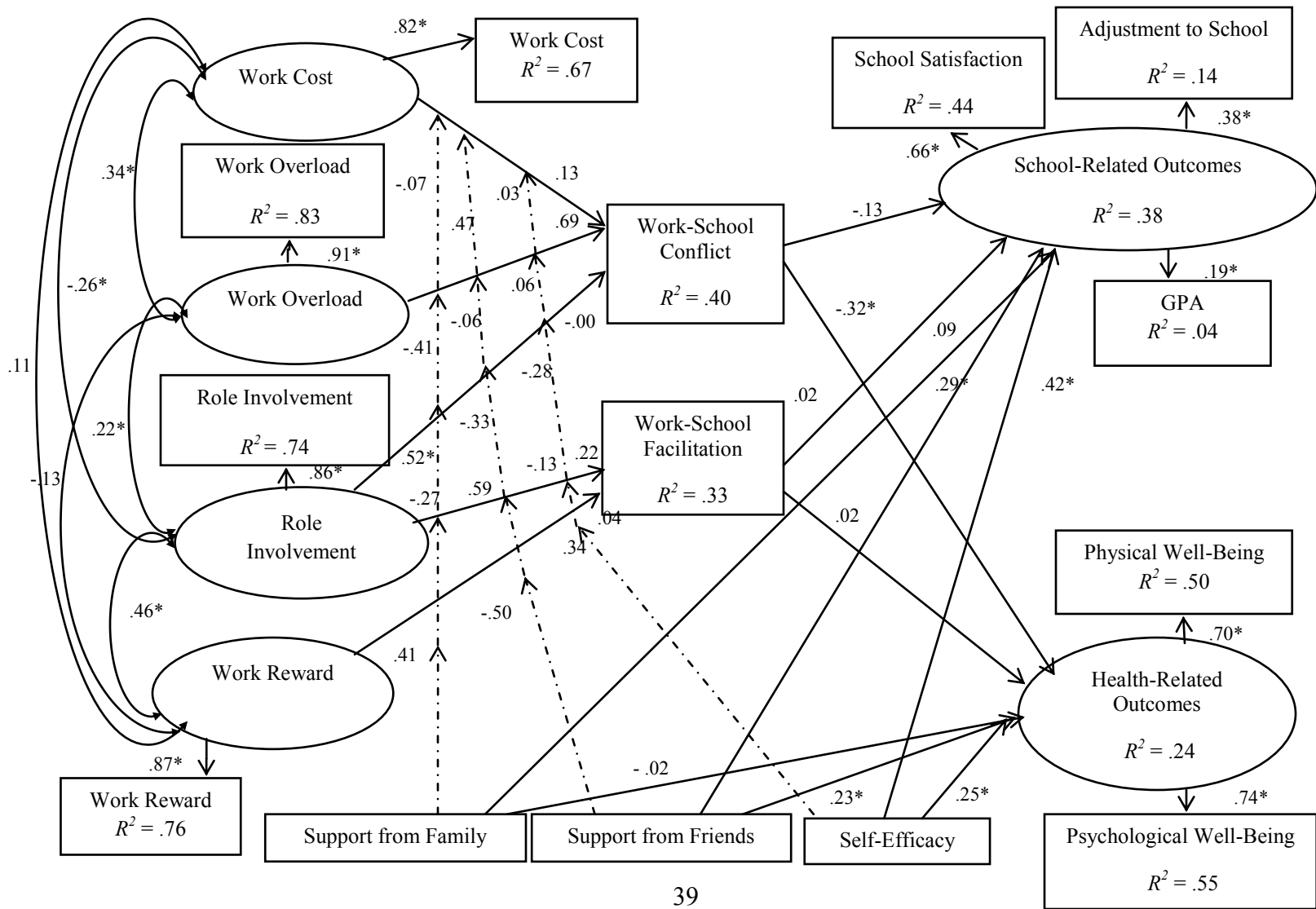


Figure 2. Standardized path coefficients, correlations, and  $R^2$  values ( $n = 329$ ). Estimates denoted with \* are significant at  $p < .05$ .



## **Chapter Four**

### **Discussion**

The purpose of the current study was to extend the work-family research into an under-explored area of dual-role research, namely work and school, by examining potential antecedents and outcomes of work-school conflict, and work-school facilitation. This was accomplished by building upon the studies conducted by Butler (2007) and Markel and Frone (1998) and examining the role of several moderating variables and adding outcomes related to personal health. The correlations between the antecedents and work-school conflict were significant and in the hypothesized direction, except for role involvement. Correlations between work reward, role involvement, and work-school facilitation were positively significant. Adjustment to school was significantly associated with work-school conflict, and work-school facilitation in the hypothesized direction. The path coefficient from work-school conflict to the health-related outcomes was significant. Also, the correlation between work-school facilitation and physical and psychological well-being was significantly positive. These results suggest that conflict due to employment during full term-time may negatively impact students' adjustment to school and their physical and psychological health. On the contrary, resources acquired from work can help students better adjust to school, and improve their well-being. Results are discussed in more detail in the sections that follow.

## **Antecedents of Work-School Conflict and Work-School Facilitation**

The first set of variables proposed as antecedents of work-school conflict include work cost, work overload, and role involvement, and previous research studies, including several meta-analyses, have provided strong support for these propositions (Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011; Byron, 2005). Matsui, et.al (1999) found that when one had to invest more at work, it took away from their other responsibilities. While the path from work cost to work-school conflict was not significant, it was in the expected direction and there was a significant positive correlation between the two variables. Work overload is the physical and/or mental preoccupation with work which prevents one from spending enough time in other roles. The results of the current study are in line with the findings of Frone, et.al (1997) and Parasuraman, et.al (1996) who found a positive relationship between work overload and work-family conflict. However, the path coefficient from work overload to work-school conflict was not significant. The next set of hypotheses predicted the relationship between role involvement and the work-school variables. It was hypothesized that role involvement would have a positive relationship with work-school conflict. The path coefficient was not significant, and although the correlation between the variables was significant, contrary to prediction, there was a negative relationship between role involvement and work-school conflict. Even though this finding defied the resource drain theory, it may fall in line with the results of Wittmer and Martin's (2011) study. In a comparison study between part-time and full-time employees, Wittmer and Martin found part-time employees had less work role involvement, less positive work attitudes, and higher turnover intentions; and the contributing factors to this difference were number and nature of outside attachments

(school, family, etc.), and also time and flexibility of those attachments. In other words, those with more non-work attachments experience less role involvement and experience their work as less positive with higher intentions to quit. Role involvement was also included as an antecedent to work-school facilitation. Although role involvement has been conceived as psychological preoccupation, another school of thought is that role involvement provides the opportunity and intrinsic motivation to learn new skills from another role, and acquire resources from one role to use in other roles (Greenhaus & Parasuraman, 1991; Rothbard, 2001); hence, a positive relationship between role involvement and work-school facilitation was hypothesized. There was a significant positive correlation between the involvement variable and work-school facilitation; however, like with the other antecedents, the path from role involvement to work-school facilitation was not significant. The second antecedent to work-school facilitation was work reward which is defined as the positive aspect of work and can be interpreted as salary, respect, and job security (Kinam & Jones, 2008). Based on previous findings, it was hypothesized that there would be a positive relationship between work reward and work-school facilitation. Although the correlation results support this hypothesis, the path from work reward to work-school facilitation was not significant.

To summarize, none of the directional relationships between the antecedents and work-school variables was significant; however, the correlations were significant and in the expected direction, except for role involvement and work-school conflict. A key explanation for the lack of support for directional path predictions could be the minimal overlap between the participants' area of employment and study. Only 5% of the participants in the current study indicated a complete overlap between the kind of work

they were doing and their area of major. This would indicate that there were limited or no resources in the workplace that would help the participants to draw on to help them in their school life. Also, with seemingly differing roles, participants may find it easy to create a disconnect between their work and school lives and thereby not allow work to interfere with their school life. Following the boundary theory perspective and person-environment fit approach, Chen, Powell, and Greenhaus (2009) examined the role of congruence in employees' desire to maintain segmentation between work and family lives, and what was offered at their work, and found congruence to be negatively associated with conflict, and positively related to positive spillover. However, in the current study, because there was almost no overlap between the work and school domains, none of the relationships to conflict and facilitation were significant. Additionally, the antecedents accounted for only limited variance in the conflict and facilitation variables suggesting there are other factors that cause work to school conflict and facilitation, beyond the four variables selected in the current study.

### **Moderating Effects**

Three moderator variables were introduced and hypothesized to buffer the relationship between the antecedents and work-school conflict and work-school facilitation. Allen, et.al (2012) in their meta-analysis found that those who had more belief in their capabilities, experienced less work-school conflict as they were able to better handle the demands from both roles. In the current study, it was predicted that academic self-efficacy, i.e., perceived capability to manage one's own learning behavior, master and fulfill one's academic subjects and expectations (Muris, 2001), would

moderate the relationship between work-school conflict and its antecedents such that the higher the level of academic self-efficacy, weaker will be the relationship between the antecedents and work-school conflict. The opposite effect of academic self-efficacy was proposed for the relationship between work-school facilitation and its antecedents. Results of the current study did not support the moderating effects of academic self-efficacy on any of the paths from the antecedents to work-school conflict and facilitation.

Based on findings from previous studies, the next set of hypotheses were proposed where the moderator variables of emotional support from family and friends were hypothesized to serve as buffers to reduce the positive relationship between the antecedents and work-school conflict and facilitation. Only support from family moderated the relationship between role involvement and work-school conflict but the relationship was in the opposite direction than the hypothesis. One explanation for this finding could be the twofold interpretation of the role involvement variable. Although the resource drain theory suggests that involvement in one role takes away from the second role, other perspectives (Greenhaus & Parasuraman, 1999; Rothbard, 2001) explain role involvement as an opportunity and motivation to acquire resources from one domain for use in the other domain. Further, support from family may have introduced a third domain (i.e., family) which may have convoluted the findings between the work and school domain, as opposed to support from either the work or school domain. Results did not support the moderating effects of the support variables on any of the other paths from the antecedents to the work-school variables (i.e., conflict and facilitation). These findings are surprising, given the results of previous research (e.g., ten Brummelhuis, Oosterwaal, & Bakker, 2012; King, et.al, 1995; Greenhaus & Beutell, 1985). However, it

may be that these three variables were in fact antecedents as opposed to moderators. Carlson and Perrewé (1999) conducted a study to investigate the role of social support as an antecedent, an intervening, a moderating, and an independent variable in the stressors to work-family conflict relationship. Four different models were compared with varying roles of work and nonwork social support and the results of this study found support for the model where social support was an antecedent to the perceived stressors. Michel, et.al (2011) in their meta-analysis compared several models to further the understanding of the social support variable and found similar results where the best fitting model was the one in which social support from work was an antecedent (not mediator or moderator) that had the greatest effect on the job stressors, which then had an effect on family-work conflict. Even though these studies focused primarily on family support and did not include support from friends and self-efficacy, the findings can be extended to these two variables.

Furthermore, the direct paths from self-efficacy and support from friends to the school- and health-related outcome variables were significant, confirming the lack of evidence for these variables as moderators. The paths from support from family to the outcome variables were not significant which suggests that as the study's primary focus was on work and school roles, the role of family does not have a significant impact. Support from friends accounts for some help from the school domain and plays a role similar to that of spousal support in the family domain. Halbesleben, Zellars, Carlson, Perrewé, and Rotondo (2010) found instrumental spousal support to be negatively associated with emotional exhaustion, and this finding is consistent with the results of the current study where support from friends has a negative relationship with the health-

related outcome variables. Additionally, the role of organizational and/or supervisor social support should have been investigated in the current study as a support factor from the work domain. Another explanation for not finding a direct effect of support from family to any of the outcome variables could be that the current study focused only on emotional support, and not instrumental support from family. As colleges students are usually living on campus and away from their families, they are more likely to receive assistance from their families in terms of money, or other goods rather than emotional support.

### **Mediating Effects of Work-School Conflict and Work-School Facilitation**

The results could not establish the mediating role of work-school conflict and work-school facilitation, as none of the antecedent variables were related to these two variables. As mentioned earlier, the lack of overlap between the work domain and the school domain might account for not finding a relationship between work cost, work overload, role involvement, and work reward, and work to school conflict, and work to school facilitation. If the two roles are perceived as separate, it is unlikely that characteristics of one role (work) will either hinder or benefit the other distinct role (school) (Chen, et.al, 2009). Furthermore, a generic approach to conflict and facilitation was investigated in the current study as opposed to studying the different dimensions of those variables, namely time-, strain-, and behavior-based conflict and positive spillover (Grenhaus & Beutell, 1985). It is likely that the even though there was minimal overlap between the work and school domain; however, just the time investment needed in both

domains could have resulted in a relationship with the time-based dimension of the mediating variables.

### **Outcomes of Work-School Conflict and Work-School Facilitation**

In the current study, the association between work-school conflict and facilitation, and school-and health-related outcomes was examined. In terms of school-related outcomes, study hypotheses stated that work-school conflict is negatively associated with the levels of school satisfaction, adjustment to school, and GPA. It was also hypothesized that work-school facilitation is positively associated with the three school-related variables. Results do not support these predictions, such that none of the paths from work-school conflict or work-school facilitation to the school-related outcome variables was significant. Only adjustment to school was significantly associated with work-school conflict and facilitation. Even though Butler (2007) found that work-school facilitation has a positive relationship with school satisfaction and school performance, in his sample, he found high job congruence unlike the current study where there is little to no overlap between the participants' work and school roles. When the job characteristics do not have a relationship with school characteristics, the current findings should be expected. Furthermore, majority of the participants indicated that financial reasons were the primary motivator behind seeking employment and only 8% of the participants were employed to gain work experience. This implies that very few participants were employed in a setting where they could learn something beneficial to aid with their school performance.



For health-related outcomes, study hypotheses stated that work-school conflict is negatively associated with physical and psychological well-being, whereas work-school facilitation is positively associated with these two variables. With a significant negative path from conflict to health variables, the findings do support the resource drain theory such that the time and effort it takes to function effectively in two distinct roles, does take a toll on people's health. Specifically, physical and psychological well-being is poorer for those who experience more work-school conflict than for those who experience less conflict. Similarly for work-school facilitation, even though the path coefficient was not significant, I did find a significant positive correlation between work-school facilitation and the physical and psychological well-being variables. This is consistent with the meta-analysis conducted by McNall, Nicklin, and Masuda (2010) who found work-family enrichment to be positively associated with physical and mental health, and the findings of the current study imply that engagement in dual roles is related to one's health albeit positively (facilitation) and negatively (conflict).

Furthermore, I did find significant mean sub-group differences for all outcome variables, except school satisfaction between full-time students who were employed part-time and those that were only students. These findings provide support for the hypotheses that dual roles of work and school have a negative association with school performance, adjustment to school, physical health, and psychological well-being.

### **Limitations, Future Directions, and Implications**

There are some limitations to the current study that should be noted. First, the cross-sectional nature of the research design does not allow for testing the causal

direction of the associations under investigation. Thus, although certain constructs are proposed as antecedents of work-school conflict and facilitation, and others are proposed as outcomes, and although the model contains directional paths, the design of the study does not allow for testing the actual causal direction. Additional research is needed to address this limitation and provide greater confidence in the causal direction of the associations. Second, all of the data was based on self-reports that may have led to bias due to common method variance. An attempt was made in the current study to include an objective indicator of GPA by providing instructions for participants to download and email their transcripts; however, due to the small response rate, the decision was made to use the self-reported GPA as an indicator of school performance. Future studies should attempt to include academic records or advisor assessments on performance, and include objective indicators of health outcomes as well (e.g., blood pressure readings). Third, the sample was relatively homogenous, with little diversity in sex and area of study. Most of the sample was comprised of female students, and the primary area of major was psychology. Also, the main reason for employment in the current sample was money and not work experience. It is unknown whether similar results would be found for individuals having different characteristics. Additional research is needed to address this limitation and include students from diverse educational fields and also compare students who decide to seek employment to help their school activities (e.g., co-op programs, internships). It would also be interesting to conduct a similar study with full-time employees that make the decision to go back to school to aid with their work performance and explore the relationship between school to work conflict and facilitation. The likelihood of finding stronger support for the relationships proposed in

the current study should be higher with a sample where work is the primary role and school is secondary, as people who are working and make a decision to enroll in school are more likely to have a specific purpose for seeking education such as to learn particular skills (e.g., executive MBA programs in finance, HR), as opposed to the participants of the current sample who reported employment to be a source of financial support.

Although the current results did not support the study's hypotheses, the relationships were in the expected direction (except for role involvement) prompting further investigation of the work-school relationship. Specifically, in line with the findings by Carlson and Perrewé (1999), and the meta-analysis by Michel, et.al (2011), social support needs to be investigated as an antecedent to the domain stressors as opposed to a moderator. Also, instead of examining assistance from a third domain (i.e., family), support from the two primary domains (work and school) of the relationship should be explored. Support originating in the work domain for part-time employees could manifest in various forms such as schedule control flexibility, support from supervisor to collect data for class projects. Like friends in the school domain, co-workers can also be a tremendous source of support. Treiber and Davis (2012) in their study of the role of support, found a positive relationship between co-worker support and employee health. Finally, certain dispositional factors such as conscientiousness, neuroticism, openness to experience have been studied in the work-family domain (Allen, et.al. 2012) and the role of personality characteristics should be investigated in the work-school relationship as well.

The practical implications of this study are straightforward. Unless all schools and colleges start funding each and every student's education, the trend of students seeking part-time employment to pay their school fees and other bills is not going away. In light of this fact, it is crucial to study the effects of multiple roles on the individual's domain-related outcomes and personal health outcomes. Similar to the findings in the work-family literature, work-school conflict has a negative relationship with physical and psychological well-being, and work-school facilitation is positively related to health. This finding necessitates the need for support from employers and school authorities to explore work opportunities for students that will help them with their school responsibilities, and ease the burden of dual roles, physically and psychologically. As college students are usually leading an independent life, counseling facilities should be offered at schools where students can share their struggles (e.g., financial, emotional) and seek guidance from professionals. Informal mentoring from senior students on how to cope with the struggles of work and school demands can also be helpful. It is also imperative for the employers to recognize that most of their part-time employees have other responsibilities (e.g., school) and managing both roles can have a negative effect on their employees' health. Consequently, the employees may need to take more sick days, or may show up to work when they are not feeling well, thereby performing below their potential. Employers can help by offering more schedule flexibility and providing more fulfilling jobs that reduce the conflict between both roles, and allow for employees to gain skills at work that can be used at school in order to strike a balance between the different roles.

In conclusion, the current study takes an important first step in examining non-domain related outcomes in work-nonwork relationships beyond the work-family realm of research, and the support for the association of work-school conflict with health-related outcomes provides further evidence for the similarity between the work-family research and other nonwork roles. This warrants the need to continue to investigate the relationship between work and other nonwork roles beyond family.

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## Appendices



## Appendix A: Demographic Characteristics Items

### *Gender:*

What is your gender?

- a. Male
- b. Female

### *Age:*

2. Please indicate your age in years \_\_\_\_\_

### *Ethnicity:*

3. What is your ethnicity?
- a. Caucasian
  - b. African/American
  - c. Asian
  - d. Hispanic
  - e. Two or more Races
  - f. Other (please specify) \_\_\_\_\_

### *Year of Education:*

4. What year of education are you in?
- a. Freshman
  - b. Sophomore
  - c. Junior
  - d. Senior

### *Area of Major:*

5. What is your area of major? \_\_\_\_\_

### *Self-Report GPA 1:*

6. What is your GPA? \_\_\_\_\_

### *Relationship Status:*

7. Are you currently –
- a. Single
  - b. Married
  - c. Cohabiting
  - d. In a Relationship
  - e. Other (please specify) \_\_\_\_\_

## **Appendix A (Continued)**

### *Dependents:*

8. Do you have any dependents that you financially support (i.e. children or others)?
  - a. Yes
  - b. No

### *Study Criteria:*

9. Are you currently enrolled in at least 9 credits AND working at least 20 hours per week?\*

  - a. Yes
  - b. No

*\*Participants that selected "Yes" were asked to respond to all items while those participants that selected "No" were asked to respond to items in Appendices H through K only.*

## Appendix B: Additional Demographic Characteristics Items

### *Number of Credits:*

1. How many credit hours are you registered for in this semester? \_\_\_\_\_

### *Work Hours:*

2. How many hours per week are you involved in paid work? \_\_\_\_\_

### *Organization Type:*

3. What type of organization are you working for?
  - a. Food and restaurant services
  - b. Grocery stores
  - c. Merchandise stores
  - d. Entertainment
  - e. Health care
  - f. Other (please specify) \_\_\_\_\_

### *Type of Work:*

4. What type of work are you doing?
  - a. Server
  - b. Cashier
  - c. Assistant
  - d. Receptionist
  - e. Tech Support
  - f. Nursing
  - g. Other (please specify) \_\_\_\_\_

### *Job to Area of Major Overlap:*

5. To what extent does your job overlap with your area of major?
  - a. No overlap
  - b. Some Overlap
  - c. Complete overlap

### *Area of Major to Job Overlap:*

6. To what extent does your area of major overlap with your job?
  - a. No overlap
  - b. Some Overlap
  - c. Complete overlap

**Appendix B (Continued)**

*Reason for Employment:*

7. What is your primary reason for employment?
  - a. Money for school fees
  - b. Money for other expenses
  - c. Money to support social life (e.g., shopping, parties, etc.)
  - d. Gain work experience
  - e. Other (please specify) \_\_\_\_\_

### **Appendix C: Work-Related Items**

Please indicate the extent to which you agree/disagree with the following statements about your work;

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>

**Work Cost**

1. A great part of my time is spent at work and I have less time for myself.
2. I have to do any work I am assigned to do, whether I like it or not.
3. I have to go to the same workplace on a routine basis.
4. I have to pay close attention to the feelings of my boss and colleagues.
5. I get tired from work and commuting.

#### **Work Reward**

1. I am able to obtain mental stimulation at work.
2. I am able to learn different things through work.
3. I am able to get acquainted with many people through work.
4. I am able to obtain a sense of fulfillment through work.

#### **Work Overload**

1. I am given enough time to do what is expected of me on my job. (R)
2. It often seems like I have too much work for one person to do.
3. I have too much work to do to do everything well.
4. The amount of work I am asked to do is fair. (R)
5. I never seem to have enough time to get everything done.

#### **Role Involvement**

1. The major satisfaction in my life comes from job.
2. The most important things that happen to me involve my work.
3. I am very much involved personally in my work.
4. Most things in life are more important than work. (R)

*Note: Items marked with (R) were reverse scored.*

## **Appendix D: Self-Efficacy Items**

Please indicate to what extent you can manage to do the following?

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Not at All</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Extremely Well</b>

1. How well can you get teachers to help you when you get stuck on schoolwork?
2. How well can you study when there are other interesting things to do?
3. How well can you study a chapter for a test?
4. How well do you succeed in finishing all your homework every day?
5. How well can you pay attention during every class?
6. How well do you succeed in passing all subjects?
7. How well do you succeed in satisfying your parents with your schoolwork?
8. How well do you succeed in passing a test?

### **Appendix E: Family Emotional Support Items**

Please indicate to what extent you agree/disagree that your family (parents and/or spouse/partner) does the following for you;

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>

1. When something at work is bothering me, members of my family show that they understand how I'm feeling.
2. I feel better after discussing job-related problems with a family member.
3. When I have a tough day at work, family members try to cheer me up.
4. When I 'm frustrated by my work, someone in my family tries to understand.
5. Members of my family always seem to make time for me if I need to discuss my work.
6. Members of my family often provide a different way of looking at my work-related problems.
7. Members of my family seem bored when I talk about my job (R).
8. Someone in my family helps me feel better when I'm upset about my job.
9. When I have a problem at work, members of my family express concern.
10. I feel comfortable asking members of my family for advice about a problem situation at work.

*Note: Items marked with (R) were reverse scored.*

## Appendix F: Emotional Support from Friends

Please indicate to what extent you agree/disagree that your friends do the following for you;

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1. When something at work is bothering me, my friends show that they understand how I'm feeling.
2. I feel better after discussing job-related problems with a friend.
3. When I have a tough day at work, friends try to cheer me up.
4. When I 'm frustrated by my work, someone amongst my friends tries to understand.
5. My friends always seem to make time for me if I need to discuss my work.
6. My friends often provide a different way of looking at my work-related problems.
7. My friends seem bored when I talk about my job (R).
8. Someone amongst my friends helps me feel better when I'm upset about my job.
9. When I have a problem at work, my friends express concern.
10. I feel comfortable asking my friends for advice about a problem situation at work.

*Note: Items marked with (R) were reverse scored.*



## **Appendix G: Work School Interaction Items**

Please indicate the frequency of occurrence of the following statements related to your work and school life;

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>

### **Work-School Conflict**

1. Because of my job, I go to school tired.
2. My job demands and responsibilities interfere with my schoolwork.
3. I spend less time studying and doing homework because of my job.
4. My job takes up time that I'd rather spend at school or on schoolwork.
5. My exam grades would have been better if I hadn't been working during the semester
6. My semester-time work adversely affects my concentration at school.

### **Work-School Facilitation**

1. The things I do at work help me deal with personal and practical issues at school.
2. Working during the semester enhances my social life.
3. The skills I use on my job are useful for things I have to do at school.
4. Having a good day at work makes me a better student.
5. Working during the semester has enriched my educational experience.
6. Talking to someone at work helps me deal with problems at school.
7. The money I earn from working during the semester helps me to enjoy my life at school.
8. Being employed during the semester helps me organize my academic work better.
9. My employment during the semester has been good for my all round development as a student.
10. Employment during the semester has a positive effect on my academic studies.

## Appendix H: Physical Well-Being Items

In the last 30 days, how often have you had any of the following symptoms?

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Several times per day</b>	<b>Once or twice per day</b>	<b>Several times per week</b>	<b>Once a week</b>	<b>Less than once a month or never</b>

1. An upset stomach or nausea (*Stomach Health*)
2. A backache (*Exhaustion*)
3. Trouble sleeping (*Exhaustion*)
4. Shortness of breath (*Physical Health*)
5. Chest pain (*Physical Health*)
6. Headache (*Exhaustion*)
7. Fever (*Physical Health*)
8. Eyestrain (*Exhaustion*)
9. Heart pounding when not exercising (*Physical Health*)
10. An infection (*Physical Health*)
11. Loss of appetite (*Stomach Health*)
12. Dizziness (*Physical Health*)
13. Tiredness or fatigue (*Exhaustion*)

## **Appendix I: Psychological Well-Being Items**

In the last 30 days, how often have you felt the following?

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Often</b>	<b>Always</b>

1. So sad that nothing could cheer you up
2. Nervous
3. Restless or fidgety
4. Hopeless
5. That everything was an effort
6. Worthless

*Note: All items were reverse-scored.*

## **Appendix J: School-Related Items**

To what extent you agree/disagree with the following statements about your school life;

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>

### **School Satisfaction**

1. I am glad that I go to this school.
2. This school is a good match for me.
3. I enjoy the different school activities.
4. I am satisfied with my education at this school.
5. I am pleased with the services I receive at this school.
6. Overall, I am satisfied with my experience at this school.

### **Adjustment to School**

1. I am comfortable with my social life as a student.
2. I actively participate in voluntary activities.
3. I feel I do not actively participate in sports. (R)
4. I feel that my participation in other extra-curricular activities is limited. (R)
5. I actively participate in clubs and societies at school.

*Note: Items marked with (R) were reverse scored.*

## Appendix K: Unique Identifier and GPA

### *Unique Identifier:*

1. The next question asks you to enter your full name and 4-digits from your birthday in MMDD format (for example, if your name is John Smith and your birthday is on January 5, 1990, please enter “John Smith 0105” in the box below).

### *Self-Report GPA 2:*

2. In this question, please provide your GPA for the most recent semester.

### *GPA via Email:*

3. We also need you to email a copy of your unofficial transcript and to get to your transcript, follow the steps listed below;
  - a. Open a web browser (e.g., Internet Explorer) and go to “facts.org”
  - b. Click on College Students > Get College Transcripts > Log in with a FACTS Login ID
  - c. Enter your FACTS Login ID and Password. If you do not already have a FACTS account, you may need to “Create Account”.
  - d. Once you’ve logged in, select “Continue”.
  - e. Now the page with your transcript should open up – select the information for the most recent semester that provides your GPA.
    - a. Copy/Paste this information into an email and send it to (*researcher’s email address*).
  - f. In the body of the email, please enter your full name and 4-digits from your birthday (exactly as you entered in the previous question) to enable the matching of your email with your survey responses.
  - g. So, now your email should be addressed to (*researcher’s email address*) and should contain the following;
    - i. Your full name and 4-digits from your birthday.
    - ii. Your GPA from the most recent semester.

## Appendix L: IRB Approval Letter



DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE  
Institutional Review Boards, FWA No. 00001669  
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799  
(813) 974-5638 • FAX (813) 974-5618

January 19, 2012

Neha Singla, M.A. Psychology  
4695 N Church Lane SE, Apt # 10102  
Smyrna, GA 30080

RE: **Expedited Approval** for Initial Review  
IRB#: Pro00006705  
Title: Blending Work and School: Positives and Negatives of the Interface

Dear Ms. Singla:

On 1/19/2012 the Institutional Review Board (IRB) reviewed and **APPROVED** the above referenced protocol. Please note that your approval for this study will expire on 1/19/2013.

Approved Items:

**Protocol Document(s):**

[Blending Work and School: Positives and Negatives of the Interface](#)

**Consent/Assent Document(s):**

Your study qualifies for a waiver of the requirements for the documentation of informed consent as outlined in the federal regulations at 45CFR46.117 (c) which states that an IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects if it finds either: (1) that the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject will be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern; or (2) that the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review category:

**Appendix L (Continued)**

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

A handwritten signature in black ink that reads "John A. Schinka, Ph.D." The signature is written in a cursive style.

John A. Schinka, Ph.D., Chairperson  
USF Institutional Review Board