"Working" Towards a Degree in Community College: How Work Intensity and Work Quality Relate to Student Engagement

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BOSTON COLLEGE
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Counseling Psychology

"WORKING" TOWARDS A DEGREE IN COMMUNITY COLLEGE:
HOW WORK INTENSITY AND WORK QUALITY RELATE TO
STUDENT ENGAGEMENT

Dissertation by

KERRI ANNE MURPHY

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of the requirements for the degree of
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Abstract

This study explored the relationship between community college students' working lives and student engagement. Student engagement has been used as a proxy for student persistence based on its strong association with student persistence and its powerful negative association with school drop-out. Work has been studied extensively as related to student engagement. The existing literature on student engagement and work is contradictory and focuses almost exclusively on adolescent students (i.e., Greenberger & Steinberg, 1986; Mortimer et al., 2002) or four-year college students (i.e., Pascarella & Terenzini, 1991; 2005), leaving a notable gap in the community college student literature. Most community college students work full time while attending school, yet little is known about how students' work lives relate to their student engagement. Utilizing Bronfenbrenner's Ecological Framework (1979), which emphasizes the potential for positive and reciprocal relationships between contexts such as work and school, the present study sought to redress the gap in the literature through exploring how Work Intensity, Gender and Work Quality relate to Student Engagement. Students filled out the Community College Survey of Student Engagement (CCSSE) and a Work Quality survey.

Using a sample of (277) students, the results of the data analyses revealed the following findings: (1) students who worked more intense hours did not differ significantly in their student engagement than their peers who worked less intense hours; (2) students who worked in intrinsically rewarding jobs were more engaged in school; (3) contrary to predicted, students who worked in higher stress jobs were more engaged in school and (4) work intensity moderated the relationship between extrinsic rewards at work and student effort. These findings add to the literature on community college student engagement as they are somewhat surprising and differ from what we know about student engagement among adolescent and traditional four-year college populations. Namely, community college students may demonstrate a unique ability to balance their school and work lives despite long hours and at times stressful working conditions.

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CHAPTER 1

*"There are no better institutions than our nation's community colleges to help the U.S.
rebound and emerge from the recession smarter, stronger, and more competitive. Now
more than ever, our nation's community colleges are at the epicenter of our economy"*
(Snyder, 2009).

Community colleges enroll over 6 million students each year in the United States,

which is nearly 40% of all students engaged in higher education (NCES, 2008; Pascarella

& Terenzini, 1998). One of the major problems facing community college students is

their inability to persist in school. Eighty percent of students entering community college

have a goal of earning a Bachelor's degree when they matriculate; however, just 18% of

these students are able to achieve this goal within eight years of enrollment (Bailey &

Morest, 2006). Moreover, there has been a significant increase in male disengagement

from school in both two year and four year colleges. In fact, well over half of all

Bachelor degrees in this country are awarded to women across racial and ethnic lines

(Buchman & DiPrete, 2006; U.S. Department of Education, 2004). Individuals with a

college degree earn a significant amount more than individuals with a high school

diploma ($53,000 vs. $32,000) (Bureau of Labor Statistics, 2009) while those with

advanced degrees in the US earn four times more than those individuals with less than a

high school degree (69,000 vs. $19,000 respectively) (US Department of Labor Bureau of

Labor Statistics, 2009). Additionally, jobs requiring at least an associate's degree are

forecasted to increase at two times the rate of jobs requiring a high school education

(Executive Office of President Office of Economic Advisers, 2009). As the quote at the beginning of this chapter demonstrates, the need for community colleges to spark and maintain both male and female student engagement in community college is critical for the livelihood of individuals and the United States as a whole (Sum, Fogg, Khatiwada, McLauglin, Palma, Motroni, et al., 2008).

Student engagement and persistence towards degree completion are intertwined phenomena (Astin, 1984; Silverman, Aliabadi, & Stiles, 2009). Given the challenges of academic persistence, considerable research has been conducted on student engagement (e.g. CCSSE; 2007; Kuh, 2001; NSSE; 2008; Pascarella, 1991; Tinto, 1993). One prominent barrier to emerge in the literature related to student persistence (CCSSE, 2006; 2007; 2008) is the significant number of hours students work while attending school. The number of hours students work per week is of central interest in the present study based on the statistic that 57% of community college students work more than 20 hours per week (CCSSE, 2008; Jacobs & Vorhees, 2006) coupled with research that working more than 30 hours per week is a risk factor for drop-out among this population (CCSSE, 2007). An additional risk factor observed among community college students is lack of preparation. More than 50% of students who enroll in community college are unprepared for college level work and need to take at least one remedial level course when they begin their studies (Bailey & Morest, 2006). Many of these students are characterized as "high risk" given the various financial, academic, personal and work-related challenges that may stand in their way of completing school. These students typically include 1st generation college students, students who take time off between high school and college,

students who are not academically ready for college-level work, students who are low-income, students of color, non-traditional age students, and students who may work more than 30 hours a week (CCSSE, 2007; 2008).

Work has been extensively studied in the literature based on the powerful associations work or lack thereof has with mental, physical and economic outcomes (e.g. Herr, 1989; Osipow & Fitzgerald, 1993; Wilson, 1996). More specifically, stressful working conditions have been associated with decreased levels of psychological well-being (Herr, 1989) and physical well-being (Spector & Jex, 1998). As such, it is reasonable to hypothesize that the working lives of community college students have the potential to detrimentally impact student well-being and engagement in school; increasing hours of employment may detract from hours in the day that are available for school work while stressful work conditions may also decrease students' levels of well-being (Astin, 1984).

Research exploring student engagement among high school students and college students abounds; however, only recently has attention been paid to community college student engagement (Pascarella & Terenzini, 1998). Furthermore, few studies have explored in-depth how the nature of community college students' working lives relates to their engagement in school. The present study explores how the number of hours students work per week in addition to the quality of students' work relates to their student engagement.

Student Engagement

The present study defines student engagement in a manner that is consistent with the community college survey of student engagement's definition of this construct: as the degree to which students are involved with college faculty and staff, with other students and with the subject matter being learned (CCSSE, 2007). Until recently, little attention has been paid to community college student engagement. In fact, less than 10% of higher education research has included community college students in their samples (CCSSE, 2006). Less than 5% of studies reviewed in Pascarella and Terenzini's (1991) frequently cited 20-year review of *How College Affects Students*, concentrated on community college students. The Community College Survey of Student Engagement (CCSSE) is one notable exception to emerge in the literature. The CCSSE began surveying community college students in 2001 as an extension of the National Student Engagement Survey (NSSE) for four-year colleges to redress the lack of research on community college student engagement. To date, the CCSSE has surveyed over 700,000 students in hundreds of community colleges across the country. Each year, the CCSSE publishes benchmarks related to institutional practices and student behaviors that promote student engagement (CCSSE, 2006; 2007; 2008).

Student engagement is a construct which has received significant attention in the literature over the years as it relates to a wide range of academic, behavioral, and socio-emotional outcomes among high school and college students respectively (e.g. Blustein, Juntunen, & Worthington, 2000; Kenny & Bledsoe, 2004; Kuh, 2001; Tinto, 1993). Most relevant to the present study is the link between student engagement and persistence

towards obtaining educational goals. The promise that higher education will provide economic gains and enhanced career opportunities proves to be a strong motivator for many individuals to enroll in community college. The aforementioned obstacles that emerge in the pathways of men and women seeking higher education, however, prevent many of these students from obtaining their degrees. Community college students are often challenged by the economic dilemma of wanting to persist towards a degree that may bring them more financial stability in the future while needing to make money necessary to support themselves and their families in the present (Astin, 1998; Pascarella & Terenzini, 1998; Tinto, 1993). The majority of community college students faced with this dilemma attempt to work and attend school simultaneously (CCSSE, 2006, 2007, 2008; Silverman, et al., 2009). In fact, well over half of community college students work more than 20 hours per week (CCSSE, 2007; 2008; Silverman et al., 2009) which may have deleterious effects on their student engagement and well-being. More specifically, research (e.g. Greenberger & Steinberg, 1986; Newman, 1999; Pascarella & Terenzini, 1991) has shown that students at both the secondary and post-secondary level of schooling who work more than 20 hours per week are often less engaged in school, have lower grades and are at a higher risk for dropping out than those who work less than 20 hours per week. Further, the CCSSE consistently reports that the most engaged community college students work less than 30 hours per week (CCSSE, 2006; 2007; 2008).

Work Intensity

The number of hours students work per week in gainful employment, is commonly referred to in the psychological and organizational literature as Work Intensity (Bachman & Schulenberg, 1993; Mortimer, Harley & Staff, 2002). Based on the statistic that the majority of high school (Wegman & Davis, 1999; Zierold, Garman, & Anderson, 2005) and college students (CCSSE, 2007; Pascarella & Terenzini, 1998) work at some point during their studies, the construct of Work Intensity has received significant attention as it relates to student engagement and overall well-being. Research related to employment patterns of students has proved contradictory, however; some scholars have argued that work has deleterious effects on development, well-being, and academic achievement (Greenberger & Steinberg, 1986; Newman, 1999), while others propose that work can serve as a growth fostering experience and a protective factor against future challenges (Mortimer, Finch, Shanahan & Ryu, 1996; Rutter, 1985). For example, Pascarella and Terenzini (2005) argue that employment among college students adversely impacts college degree completion. The authors argue that greater hours of work are associated with increased part-time status and higher degree incompletion rates resulting from the decreased amounts of time and energy for academic work.

Another prominent perspective argues that part-time work places adolescents at risk because it limits participation in more developmentally beneficial activities (e.g. Steinberg & Dornbusch, 1991). Further, it is argued that work can become a significant stressor in the lives of students who maintain long hours in non-ideal settings with few intrinsic or extrinsic rewards to justify these sacrifices. This research suggests that work

stress can deleteriously impact students' sense of well-being and psychological health

(Deci & Ryan, 2000; Edwards, Cockerton, & Guppy; 2007; Steinberg & Dornbusch,

1991) and points to a threshold of work intensity that is approximately 20 hours of work

per week or less, beyond which students are thought to suffer negative consequences (i.e.

decreased engagement in school and decreased levels of well-being). This research

focuses primarily on adolescent and traditional-aged college student work-patterns and

additionally views work from a "zero-sum perspective" (Warren, 2002), arguing that the

more hours students spend in gainful employment, the less energy they have to be

engaged in school. Little is known about the relationships between work intensity and

student engagement among community college students or how the *quality* of students

work lives relates to their engagement in school. The CCSSE (2008) reveals that the most

engaged students work less than 30 hours per week while the reality is that over half of

all students report working more than 20 hours per week and over one third work more

than 30 hours per week. While the CCSSE inquires about employment status, number of

hours worked and how likely working full-time would cause students to drop a class or

withdraw from the college, the CCSSE does not inquire about the specific *nature* or

quality of students' working lives.

Work Quality

One prominent viewpoint held by some researchers (e.g. Edwards et al., 2007;

Mortimer et al., 2002) argues that work can promote student engagement. Specifically,

Mortimer et al. (2002) argue that it is the *quality* of the work experience that influences

student engagement. According to Mortimer, quality of work is defined by the relevance

and compatibility between work and school, the intrinsic and extrinsic rewards derived from work in addition to the degree to which work stressors are present. Contrary to the argument above, that greater hours of work detract from school engagement, research has shown that dual employment and enrollment in school can actually lead to greater engagement in school (Mihalic & Ellit, 1997; Shananhan & Flaherty, 2001). More specifically, Mortimer and colleagues (2002) have found support for the notion that work intensity can be a moderator for the relationship between work quality and student engagement and between work quality and well-being. That is, the positive associations between high work quality and student engagement are amplified for those who work longer hours in higher quality jobs. As such, I am hypothesizing that for community college students, work intensity will moderate the relationship between work quality dimensions and student engagement.

Work quality: Compatibility between Work and School

The work quality dimension of compatibility between work and school assesses the extent to which students' jobs help them to contribute to class discussions, to realize the importance of education, to realize the subjects they enjoy, and to help students consider if what they learn in school helps them to perform better at work. Research (Lubbers, Loughlin, & Zweig, 2005; Mortimer et al., 2002) supports the notion that work quality when characterized as compatibility between work and school such as those work experiences offered through co-op programs, is positively associated with student engagement. Therefore, I am hypothesizing that students who experience higher levels of

work quality on the dimension of compatibility between work and school will also experience higher levels of student engagement.

Work Quality: Intrinsic Rewards

The work quality dimension of intrinsic rewards is defined by learning opportunities at work, the use of skills and abilities at work, the extent to which new things are learned at work, the perceived usefulness of what is learned for the future, and the mental and physical challenges of work (Mortimer, et al., 2002). The intrinsic aspects of work have been associated with numerous outcomes for young workers including job satisfaction and commitment, increased job self-efficacy and increased levels of well-being (Ashforth, Saks & Lee, 1998; Call & Mortimer, 2001; Saks, 1995; Weiss & Cropanzano, 1996). As such, I am hypothesizing that in the present study, students who experience higher levels of work quality on the dimension of intrinsic rewards at work will experience higher levels of student engagement.

Work Quality: Extrinsic Rewards

The work quality dimension of extrinsic rewards is defined by wage rate, wage satisfaction/positive perceptions of good pay, and having money to go out with friends. Wage rate has been positively correlated with job satisfaction (Huang & Van de Vliert, 2003) and overall well-being, therefore I am hypothesizing that students who experience higher levels of extrinsic rewards at work will also experience lower levels of student engagement. This hypothesis finds support through the rationale that persisting in school costs money while offering delayed and uncertain financial incentives. Working also

becomes more challenging for students caring for dependents and who have multiple competing demands on their time.

Moderation Effects of Gender on Work Quality: Intrinsic and Extrinsic Rewards and Student Engagement

Additionally, research has demonstrated that intrinsic and extrinsic rewards impact male and female students differently; that is males tend to be more oriented towards extrinsic rewards of work (i.e. higher pay, greater job security and status) whereas females tend to be socialized to value the more intrinsically rewarding aspects of work (i.e. utilizing one's skills and abilities, learning opportunities, and perceived usefulness of one's work)(Mortimer et al., 2002; Vansteenkite, Neyrinck, Niemic, Soenens, DeWitte, & Broeck, 2007). Based on this research, it seems reasonable to hypothesize that male community college students who experience extrinsic rewards at work may be more inclined to disengage from school in order to obtain the immediate financial gains and job security that working provides. Alternatively, females who are more oriented towards the intrinsic aspects of their work may have a greater orientation towards learning for the sake of learning. Females may also perceive their work to be related to their school work and future work lives, subsequently leading to higher levels of engagement in school. Therefore, I am hypothesizing that gender will moderate the relationships between work quality dimensions of intrinsic and extrinsic rewards at work and student engagement.

Work Quality: Work Stressors

The work quality dimension of work stressors is defined as time pressure, exposure to noxious conditions at work, work overload, lack of clarity regarding job responsibilities, feeling responsible for things beyond one's control and having to upset others at work to satisfy some people at work (Mortimer et al., 2002). Research has demonstrated that higher work quality in the form of low work stressors can be associated with higher levels of well-being. Researchers have found that higher work quality (lower levels of work stressors) has been a significant predictor of goal mastery orientation and decreased levels of depression among adolescents who work (Mortimer, Finch, Shanahan, & Ryu, 1996; Mortimer et al., 2002). Additional research has suggested that interpersonal conflict experienced at work can be psychologically damaging for younger workers who are beginning to navigate the social culture and tasks associated with the working domain (Lubber et al., 2005; Weiss & Cropanzano, 1996). Research has not explicitly looked at how work quality: work stressors relates to student engagement. Based on research that argues that success or difficulty in one domain can impact subsequent success or difficulty in another domain (e.g. Bronfenbrenner, 1979; Lent, Singley, Sheu, & Gainor, 2005), I am hypothesizing that individuals who experience lower work quality on the dimension of work stressors (i.e. higher levels of work stressors) will also experience lower levels of student engagement.

Summary and Hypotheses

The aforementioned literature focuses primarily on four-year college students (i.e. Pascarella & Terenzi, 2005) or high school youth (Mortimer et al., 1996; Mortimer et al.,

2002, Newman, 1999), leaving a notable gap in the literature on community college student engagement. Based on the research that the majority of community college students are working a substantial number of hours per week (CCSSE, 2007; Jacobs & Vorhhees, 2006), coupled with the disagreement regarding dual enrollment in school and engagement in employment, more research is needed to elucidate how students' working lives are contributing to or detracting from their ability to persist in school. The present study seeks to redress this gap in the literature and to contribute to the debate regarding the potential of work to promote or inhibit student engagement. More specifically, the present quantitative study seeks to identify how the number of hours worked in addition to the quality of students' work lives relates to student engagement.

The specific aims of the present study include identifying work patterns that relate to greater levels of student engagement and exploring how work intensity and gender may moderate the relationships between work quality and student engagement among community college students. Because community colleges historically and presently serve a more diverse student body than traditional four-year colleges with regards to age, socio-economic status, enrollment status (i.e., part or full time status), academic preparedness (i.e., need to take remedial level courses), race and ethnicity, and end goals (i.e., certificate completion, attainment of an associate's degree, transfer to a four-year college), the need for these institutions to establish effective interventions, programming and practices that promote student engagement for the entirety of their student body is critical. As such, I chose not to control for these variables as prior research has demonstrated that there is measurement invariance across part and full-time status and

year of administration across all dimensions of student engagement and across race and ethnicity on one dimension of student engagement (i.e. *Active and Collaborative Learning)* of the CCSSE which is utilized in the present study (McLenney & Marti, 2006; Marti, 2009). To be sure, however, I will assess the between and within group differences in student engagement scores across demographic variables for which I have data including Race/Ethnicity, Age, Enrollment Status, Credit Hours, GPA, Educational Level of mother and father, Learning Community Status, ESL status, and International Student status, prior to conducting my main analyses.

I posit the following hypotheses based on the aforementioned literature related to these constructs:

Hypothesis 1: Students who work more than 30 hours per week while attending school will have lower levels of student engagement.

Hypothesis 2: Students who experience higher levels of work quality on the dimension of compatibility between work and school will have higher levels of student engagement.

Hypothesis 3: Students who experience higher levels of work quality on the dimension of intrinsic rewards at work will have higher levels of student engagement.

Hypothesis 4: Students who experience lower levels of work quality on the dimension of work stressors (higher levels of work stressors) will have lower levels of student engagement.

Hypothesis 5: Students who experience higher levels of work quality on the dimension of extrinsic rewards at work will have lower levels of student engagement.

Hypothesis 6: The relationship between the four work quality dimensions and the four student engagement dimensions will be moderated by work intensity; that is the greater number of hours students work, the stronger the relationships between work quality dimensions and student engagement dimensions will be.

Hypothesis 7: The relationship between the work quality dimension of intrinsic rewards at work and student engagement will be moderated by gender; that is the positive relationship between intrinsic rewards and student engagement will be magnified for female students.

Hypothesis 8: The relationship between the work quality dimension of extrinsic rewards and student engagement will be moderated by gender; that is the negative relationship between extrinsic rewards and student engagement will be magnified for male students.

Hypothesis 9: The relationship between the work quality dimension of work stressors and student engagement will be moderated by gender.

CHAPTER 2

The Landscape of Community College in the United States

"Community colleges are at the crossroads of a number of larger social, political and cultural tensions affecting the United States society today" (Levinson, 2005, preface xv). As this quote demonstrates, community colleges have historically been nested and consequently influenced by the specific resources and barriers of the communities in which they are geographically located. According to the National Center for Educational Statistics (2008), in 2006-2007 there were approximately 1,045 community colleges enrolling 6.2 million students, which is roughly 40% of all post-secondary students enrolled that year. Presently, increasing numbers of students are enrolling in community colleges due to their affordability, open-admissions policies and most recently, a slumping economy (Bailey & Morest, 2006; CCSSE, 2007; *The Engaged Campus*, 2006). To be sure, the current economic recession has led to growth in the number of students applying to and enrolling in state schools and community colleges, (Santora, 2009) as the cost of tuition and fees for community college students is less than half that of public four year institutions (NCES, 2008). Simultaneously and perhaps ironically, fewer students are persisting in community college and are in fact departing in greater numbers prior to achieving their diverse goals of completing an Associate's degree, earning an advanced or technical certificate or transferring to a four-year institution as planned (CCSSE, 2007; *The Engaged Campus*, 2006). In fact, just 50% of students who matriculate to community colleges earn associates degrees or certificates within six to eight years of enrolling (Harper & Quaye, 2009; Hoachlander, Sikora, & Horn, 2003). Based on the fact that 80%

of American adults will need some type of post-secondary education to be economically independent, the need for community colleges to spark and maintain student engagement is critical for individual and national sustainability (CCSSE, 2007).

Community colleges have consistently served a diverse population with regards to academic ability, languages spoken, financial circumstances, life circumstances, and educational and career aspirations. That diversity is often accompanied by challenges and tensions however, as the community college system has continuously been conflicted by a mission to remain inclusive and accessible while also striving to maintain a standard of excellence (Levinson, 2005; Gleazer, 1994). Community colleges began in the early part of the 20th century as a way to offer a greater number of individuals access to higher education. Individuals who had previously been excluded from college based on financial circumstances and/or lack of academic preparation were welcomed into community colleges and for the first time granted an opportunity to prepare themselves for a greater number of employment opportunities (Levinson, 2005, Ratcliff, 1994). One notable theme in the development and evolution of the community college educational system is its malleability based upon the needs of the labor market, the community, and students' educational goals (Levinson, 2005; Ratcliff, 1994).

Throughout the 1900's, the number of community colleges continued to increase while the nature of community college offerings continued to evolve. After World War II, in particular, there was a sharp increase in the number of individuals attending college (Buchman & DiPrete 2006). This increase was in part due to legislation such as the GI bill, which provided tuition assistance to returning GI's and the opportunity for

increasing numbers of individuals to earn a college degree. In fact, over two million

individuals enrolled in higher education at that time and five million individuals are

reported to have enrolled in non-degree programs as well (Forest & Kinser, 2002;

Levinson, 2005). Additional forces that drove the development of the community college

system included globalization of the US economy, an increasing immigrant population,

restructuring of the labor market, and an increasing stratification of the "haves and have

nots" (Levinson, 2005; Ratcliff, 1994). In fact, the number of community colleges in this

country tripled between the end of World War II and the 1970's (Cohen & Brawer,

2003). In the present day, there are approximately 2,100 two-year institutions in the

United States comprised of community development and career institutions, community

connector institutions, and community mega-connector institutions (Levinson, 2005;

NCES, 2001).

The Higher Education Act also contributed to the rise in individuals able and

willing to enroll in college through the creation of financial assistance programming such

as equal opportunity grants, student loans, and work-study programs (Dubrow, 2002),

which made college more accessible. Additional influences contributing to the increase in

number of community colleges and students enrolling in these institutions included the

forces of the information age and globalization, the desire of individuals for continuing

education, and the more general shift of our workforce from a skills-based workforce to

one that requires intellectual and cognitive acumen to survive and thrive (Blustein, 2006;

Levinson, 2005). Immigration also contributed to increased enrollment in community

colleges. In the early 1990's, immigration significantly increased in the United States as

over nine million immigrants entered the United States in search of education and work opportunities (Levinson, 2005). This rise in immigration correlated with the rise in individuals seeking education through their local community colleges (Levinson, 2005; Martin & Midgley, 2003). Some scholars have argued that minority education is associated with the quality of the labor force, economic sustenance and general international competitiveness of the United States (Day & Bauman, 2000; Miller, 1997). Based upon increases in immigration and the continuous diversification of the US population, the need for community colleges to effectively retain, educate, and graduate their students is critical at both the individual and societal level.

Theoretical Framework

Bronfenbrenner's (1979) Ecological Theory of Development will be used in the present study to frame a discussion of how the quality and intensity of community college students' working lives relate to their engagement in school. Bronfenbrenner's Ecological Model of Development posits that an individual's capacity for growth is shaped through the dynamic interplay of both individual and contextual factors. The ecological context is comprised of the environmental and cultural influences that shape an individual while individual factors are comprised of personality characteristics and other biological determinants that contribute to an individual's development. More specifically, individual characteristics which invite or inhibit differential responses from the environment are referred to as *Developmentally Instigative Characteristics* (Bronfenbrenner, 1979; 2005, Renn & Arnold) and are comprised of four main characteristics: active orientation, structural proclivities, directive beliefs and selective responsibility. Stated simply, these

characteristics may influence how students persist and engage in increasingly complex activities. When applied to the present study, these characteristics may relate to how certain individuals select and are selected for more intrinsically rewarding work experiences based on their goals, their locus of control, their interests, their ambition, and motivation among other characteristics.

According to this theory, an individual is situated in the middle of multiple, overlapping and interactive systems that are continuously influencing one another. These multiple levels include the *microsystem*, *mesosystem, exosystem,* and the *macrosystem*. The *microsystem* consists of one's immediate context and can include one's home, workplace, school, peer and family contexts. Examples of relevant microsystems of community college students include individuals' classes at school and their workplace in addition to their cognitive abilities, personality, motivation and preparedness for school. The *mesosystem* refers to the interactions and connections between the immediate environments comprising the microsystems that affect an individual. Examples of relevant mesosystems to the present discussion include the interconnections between students' peer circles, their family lives, their work lives and the interactions between these contexts as related to their school lives.

The *exosystem* constitutes the next level of interactions for individuals and includes larger systems which may not directly impact students but have a secondary indirect and sometimes powerful impact on an individual's development and functioning within their other contexts. Examples of relevant exosystems surrounding community college students might include a parent's nursing home as related to a student's

experience at home, at school and at work. For example, increased expenses resulting

from having to place a parent in a nursing home would impact the level of stress a

community college student might feel at work and at school because of increased

expenses and/or a negative experience their parent may have had at the nursing home.

The last and perhaps broadest level defined by this model of development is the

macrosystem which comprises societal and institutional norms, policies, cultural values,

beliefs and ideologies, all of which influence the subsequent levels in this model of

development. A macrosystem relevant to the present study includes the national economy

which in the midst of a recession may impact a student's ability to pay for school and

persist in obtaining a college degree (Bronfenbrenner, 1977; Eamon, 2001).

Research (e.g. Duncan & Raudenbush, 1999; Kenny et al., 2007; Stewart, 2007)

has demonstrated that the social context is important in explaining individual differences

in academic achievement, educational attainment and career development; outcomes in

domains that are of interest in the present study. More specifically, in the domain of

academic achievement and persistence in school, social science research has consistently

studied how one's environment can significantly influence positive outcomes (Blustein,

Juntunen, & Worthington, 2000; Kenny & Bledsoe, 2004; Steinberg, Dornbusch, &

Brown, 1992) in the school domain. Factors such as the climate of the school, students'

feelings of connection and belongingness to school (Goodenow & Grady, 1993), quality

of relationships among peers, teachers and students and the school's relationship with the

greater school district have all been shown to influence individual academic outcomes

(Stewart, 2007). One of the most powerful tenets of Bronfenbrenner's model of

development is that a change on one level can spark change on multiple levels. A relevant example is the President's recent decision to provide community colleges with more funding (at the exosystem level) which impacts the cities and towns of community colleges that receive additional funding. These financial resources could then create additional faculty and administrative positions (at the mesosystem level), which would enhance the individual's experience in the classroom as faculty-student ratios are reduced (at the mircosystem level) in addition to stimulating the economy (at the exosystem Level). These changes might then promote more positive interactions between students and their schools while secondarily enhancing their peer and familial relationships at home (also at the exosystem level); this is in essence the dynamic interplay of systems that Bronfenbrenner's model describes (McKown, 2005; Stewart, 2007).

A recent study by Stewart (2007), which explored the individual and school structural effects on African American high school students' academic achievement, illustrates how Bronfenbrenner's model operates. The findings highlight how home-based experiences and school-based activities are reciprocally reinforcing. Academic achievement is fostered through building mutual positive phenomena including trust, similar goals and personal autonomy (Bronfenbrenner, 1979; Stewart, 2007). The greater societal context (i.e. the macrosystem) is particularly relevant to community college student engagement and academic achievement based upon the fact that many schools are supported fiscally by their local governments. In times of economic hardship, such as the present time, community colleges experience both an increase in enrollment due to their relative affordability and ironically, cuts in their overall budgets to serve an increasing

mass of students (Santora, 2009; *The Engaged Campus*, 2006). The socioeconomic status of the school, the neighborhood in which a school is situated and the financial resources of students, all impact the quality of education. The quality of education then subsequently impacts students' engagement and ability to persist in school.

Additionally, Bronfenbrenner's model has the potential to help explain how community college students' working lives relate to their engagement and persistence in school. More specifically, research (Stewart, 2007) has demonstrated that the interplay between micro and mesosystems within the ecological system of development has the potential to change student outcomes such as academic achievement. When this finding is applied to the present study, the mesosystem that comprises the dynamic interplay between a students' school domain and their place of employment is of central importance. Work has been studied extensively as it relates to individuals' health and well-being (e.g. Herr, 1989; Osipow & Fitzgerald, 1993; Wilson, 1996) and also how work experiences relate to individuals' family lives. For example, a recent study on Work-Family facilitation (Wayne, Grzywacz, Carlson, & Kacmar, 2007), which utilized Bronfenbrenner's Ecological Model of Development, purports that involvement in one domain can positively influence functioning in another domain. "For example, working in an enriching job and having a supportive work environment promote personal, emotional, and intellectual development that can facilitate functioning in another domain (p. 67)." These spill-over effects have been studied as they relate to an individual's health, performance at work, affective states and family lives and have also been shown to work in both directions; that is, negative experiences in one domain breed negative

outcomes in other domains whereas positive experiences contribute to positive outcomes in other domains (Westman, 2006). A more in-depth discussion of how Bronfennbrenner's Ecological Theory of development highlights the intersections between community college students' working lives and their engagement in school will be weaved throughout this review of relevant literature.

Student Engagement and Persistence: Defining the Problem

Student engagement is a construct that researchers have studied across multiple developmental levels based upon the strong relationships observed between student engagement and positive personal, academic and career-based outcomes. Most relevant to the present study is the argument that student engagement is one of the most potent predictors of student persistence (Astin, 1975; 1993; Pascarella & Terenzini; 2005; Tinto, 1993; 2000). While a significant amount of research has been initiated on child and adolescent student engagement (e.g. Blustein et al., 2000; Kenny, Gualdron, Scanlon, Sparks, Blustein, & Jernigan, 2007; Voekl, 1996) in addition to traditional four year college student engagement (e.g. Kuh, 2001; NSSE, 2008; Pascarella, 1991; 2005; Tinto, 1993), it is only recently that attention has been paid to community college student engagement (e.g. CCSSE, 2005; 2006; 2007; 2008). The present study defines student engagement in a manner that is consistent with the community college survey of student engagement's definition of this construct: as the degree to which students are involved with college faculty and staff, with other students and with the subject matter being learned (CCSSE, 2006; 2007; 2008).

Defining Student Engagement

It is important to note that researchers have consistently been faced with a choice regarding how to define student engagement (Fredricks, Blumenfeld, & Paris, 2004; Handlesman, Briggs, Sullivan, & Tower, 2005) based on the multiple dimensions that comprise student engagement. Research has focused on cognitive, behavioral, and interpersonal aspects of student engagement, in addition to the emotional, attitudinal and motivational dimensions of student engagement (e.g. Connell & Wellborn, 1991; Deci, Connell, & Ryan, 1985; Deci & Ryan, 1985; Fredricks, et al., 2004; Pintrich & Schunk, 1996; Zimmerman, 1990). Most researchers define student engagement as a multi-dimensional construct that typically includes affective and behavioral dimensions (Handlesman et al., 2005). In fact, researchers recommend that scholars who explore student engagement should study it in a multifaceted manner based on its multidimensional nature, taking into account the behavioral aspects of engagement (i.e. a student's involvement and participation in academic and social activities), emotional aspects of engagement (i.e. a student's positive and negative reaction to teachers, classmates, academics and school more generally), and the cognitive aspects of engagement (i.e. the degree to which students are willing to put energy into comprehending and uncovering complex ideas) (Fredricks et al., 2004).

As such, the present study has sought to incorporate four benchmarks established by the CCSSE which correlate with student engagement: *Active and Collaborative Learning* and *Student Effort*, which are most closely aligned with students' behavioral engagement; *Student-Faculty Interaction,* which reflects students' emotional and

behavioral engagement, and *Academic Challenge,* which accesses students' cognitive engagement. Further, "engagement is presumed to be malleable, responsive to contextual features and amenable to environmental change (Fredricks et al., p. 59, 2004), which is one of the primary rationales for choosing it as the outcome variable in the present study. The present study argues that student engagement, which is closely associated with student persistence, can be fostered through the identification of positive correlates such as high quality employment. Through identification of such factors, researchers and practitioners may have more tools to address the growing and urgent problem of low retention rates among community college students; a problem with detrimental effects on both individual and societal sustainability. A more extensive review of the student engagement literature is presented below.

Student Engagement among Adolescents

The impact of school on adolescent development has been targeted as an important area of research over the last several years due to the lasting effects school has on young people's behaviors, attitudes, motivations and access to future educational and work opportunities (Blum, McNeely, & Rinehart, 2002). Given that one of the most pressing problems facing educational institutions and society today is student disengagement both in the form of emotional withdrawal and school drop-out of at-risk youth (Blustein, Juntunen, & Worthington, 2000; Kenny & Bledsoe, 2004), student engagement has been a construct in which researchers have developed a vested interest. Recent research has shown that nearly one third of high school students do not graduate on time and among African Americans, Hispanics and Native Americans that number is

closer to one half (Bhanpuri & Reynolds, 2003; Fox, Connolly, & Snyder, 2005). Recent statistics demonstrated that in 2004, 6.7% of white, non-Hispanic individuals between the ages of 25-29 had not completed high school, whereas 11.3 % of African Americans between the ages of 25-29 and 36% of Hispanic individuals between the ages of 25-29 had not completed high school (Fox et al., 2005). In fact, student emotional disengagement from school is one of the most pressing problems facing educational institutions and greater society today as the current job market offers little opportunity for individuals who are uneducated (Blustein, 2006; Loveless, 2003; Voelkl, 1996; Wilson, 1996).

The ninth grade has been targeted as a particularly vulnerable time for America's youth as many students make their first major educational transition (Blustein et al., 2000; Kenny & Bledsoe, 2004). The middle school to high school transition poses an especially substantial risk for negative student outcomes as students are approaching the legal age of dropout, which in most states is 16 years old (Blustein et al., 2000; Fox et al., 2005; Kenny & Bledsoe, 2004). To address the issue of high school dropout and disengagement, researchers have employed multiple approaches to determine what factors foster well-adjusted and motivated adolescents who are engaged in school and who later become productive and active members of society. Research has shown that "personalization" of high school, which entails helping students feel engaged and part of their school, can be a significant predictor of increased school engagement and decreased school drop-out rates (Voelkl, 1996; & Wehlage & Rutter, 1986).

Connection with school has been associated with greater student academic, social, and emotional adjustment in addition to career attainment (Kenny, Gualdron, Scanlon, Sparks, Blustein & Jernigan, 2007; Voelkl, 1996). Alternatively, disidentification with school has been linked to lower levels of academic motivation, lack of participation, substance abuse, poor social and emotional adjustment to school, and ultimately school drop-out (Finn, 1989; Goodenow, 1993; Hirschi, 1969). Additional research (e.g. Kenny et al., 2007) on at-risk youth has pointed towards the importance of relational supports within school, one's family constellation and peer friendships in serving as resources for students' academic achievement and future career attainment. Utilizing Bronfenbrenner's Ecological Model (1979), the interplay of these multiple levels of context have great potential to influence students' ability to succeed and persist in school. This research demonstrates that academic achievement and engagement can be fostered through the micro, meso and exosystems operating around students in the form of their family relationships, their peer relationships at school, and the intersections of their home and school contexts. An important observation has been made, however, that among low-income and ethnic minority youth, family may provide kinship, strength and trust (Fine et al., 2004) but their families may not have previous academic or career experience to provide more instrumental and practical guidance related to helping students succeed in college and beyond.

This research is applicable to the community college population as many students who enter community college are often the first in their families to attend college. These students do not have the same advantages of non-first generation college students who

have a network of family and friends to help them navigate the higher education system.

Additional research (i.e. Brofennbrenner, 1979; Vondracek, Lerner, & Schulenberg,

1986) focusing upon the multiple contexts in which students are situated, and the

interplay between these contexts (i.e. the community, school, family, peer and work-

related contexts) sheds light on how interventions should be constructed to offer the

greatest chance of helping students persist in school. More specifically, in order to

influence a students' engagement in school, students' worlds outside of school also need

to be considered in addition to how the interplay of their multiple contexts offers either

competing or complimentary forces on their engagement in school (Kenny et al., 2007,

Vondracek et al., 1986). The aforementioned research on adolescent student engagement

has the potential to inform our growing understanding of factors associated with

community college student engagement. A review of the literature related to four-year

college student engagement is presented next to illustrate additional theoretical and

empirical findings that are applicable to community college student engagement.

Student Engagement among Four-Year College Students: Recent Findings

Student engagement in the four-year college student literature is defined as

"represent(ing) what students and what institutions do to prompt their use of effective

educational practices" (Kuh, 2001. Pg. 8; NSSE, 2001). While students who make it to

four-year colleges have certainly demonstrated a degree of persistence and engagement in

school thus far, retention rates and student disengagement among this population have

been significant topics of inquiry among social scientists for decades (Kuh, 2001;

Pascarella & Terenzini, 1991; 2005; Tinto, 1993). According to Tinto (1993), students

leaving college or university prior to completing a degree outnumber the students who persist. To be sure, just 35% of undergraduates at 4-year institutions attain their Bachelor's degree within four years of matriculation with just 56% graduating within six years of beginning their studies (Harper & Quaye, 2009; Knapp, Kelly-Reid, & Whitmore, 2006). This is a problem that has been located on multiple levels: first, individuals with less education in this country have far less earning potential and occupational choice than their degree-earning counterparts (US Department of Labor Bureau of Labor Statistics, 2006); second, institutions rely upon student enrollment and persistence to survive (Tinto, 1993); and, on an even broader scale, the United States relies upon an increasingly educated workforce to remain globally competitive and sustain economic health (Blustein, 2006; Sum et al., 2007).

In response to the growing concern over student retention and persistence, the National Survey of Student Engagement (NSSE) was initiated over eight years ago to explore national levels of student engagement and to identify best practices for institutions enrolling these students. Since 2000, the NSSE has been surveying students within four-year colleges and universities with more than 1,300 colleges and universities represented to date. The NSSE has identified high aspirations among four-year college students and various degrees of preparation for college-level work; eighty-five percent of entering first-year students intend to graduate and 40% of all undergraduates complete at least one developmental education course as part of their undergraduate courseload (Attewell, Lavin, Domina, & Levery, 2006).

Underprepared students as defined by the NSSE (2008) include those students who did not pass any high level courses while attending high school and who needed to take at least on developmental course in college. Alternatively, *highly prepared students* include students who passed at least one high level or honor's course in high school and who did not need to take any developmental courses in college. The NSSE (2008) found that underprepared students are less engaged but are more likely to take advantage of resources at their college. Previous research (e.g. Kuh, 2008) has demonstrated that the utilization of small learning communities significantly aids underprepared students in persisting and succeeding in college. This research is of paramount importance when applied to community college students, the majority of whom are underprepared for college, who need to take at least one remedial level course (CCSSE, 2008), who are working more than 20 hours per week and who have less of a connection to their campus nor time to participate in extra-curricular activities. These problems are confounded by the fact that most community college students commute to campus and often have competing demands on their time. The finding by the NSSE that underprepared students are less engaged but are more likely to take advantage of helpful resources at their college breeds hope that engagement is a malleable construct community colleges have the potential to shape over time through offering the right resources and programming.

Another important observation made by the NSSE (2008) relates to students' expectations of college and the diverse contexts from which they matriculate. More specifically, students' life experiences are argued to shape their expectations about college and their subsequent levels of engagement both academically and socially on

campus. Notions of college are undoubtedly shaped by important people in students'

lives, including their high school teachers, their families of origin and their peer

networks. In keeping with Bronfenbrenner's (1979) Ecological Model of Development,

the interaction of students' micro (individual factors), meso (intersection of family, peer

and individual factors), exso (interaction of community and school systems) and

macrosystems (greater societal, economic and cultural forces) have the potential to

influence student engagement. Surprisingly, the survey (NSSE, 2008) found that

students' expectations of their engagement prior to their matriculation did not necessarily

predict their subsequent levels of student engagement. In fact, students who expected to

be less engaged in school were often times more engaged and vice versa. This finding

highlights the potency of the institutional environment (i.e., the mesosystem), to

influence engagement outcomes over and above previously held expectations which

comprise the microsystem of individuals' attitudes and expectations about their success

as students.

Student Engagement among Four-Year College Students: A Review of Historical

Higher Education Theories

The aforementioned findings of NSSE find support through more historical

research on student engagement in higher education institutions. To be sure, several

researchers within the field of higher education have identified factors associated with

promoting college student engagement over the last several decades (e.g. Astin, 1993;

Bridges, Cambridge, Kuh, & Leegwater, 2005; Chickering & Gamson, 1987; Pascarella

& Terenzini, 1991). Chickering and Gamson (1987) argue that there are seven principles

necessary for good practice in undergraduate education which include student-faculty contact, cooperation among students, active learning, prompt feedback, time on task, high expectations and respect for diverse students and ways of learning. Additionally, institutions that are inclusive and affirming and which offer clear and reasonable expectations have been found to promote positive learning results (Kuh, 2001).

Astin (1984), one of the most well-known researchers within the field of higher education, studied student involvement extensively through his longitudinal research on college students. He defined involvement as the "quantity and quality of physical and psychological energy that students invest in the college experience" (p. 307), and created five tenets associated with his construct of involvement that still inform student engagement research today. Astin (1984) argued that involvement includes the investment of psychological and physical energy in different objects that range in degree of their specificity; that involvement occurs along a continuum with different students investing varying degrees of energy in various objects at different times; that involvement includes qualitative and quantitative components; that the amount of student learning and development is directly tied to quality and quantity of involvement and finally that the effectiveness of any institutional/educational policy is closely related to the capacity of that policy to increase student involvement.

Perhaps the most well-known body of literature relating to student engagement and subsequently student retention is that of Tinto (1993). Tinto developed a theory of individual departure from institutions of higher education that focuses primarily on the interaction and integration of a student's academic and social life at school as related to

his or her likelihood of persisting in school. Tinto (1993) argued that, "persistence entails the incorporation, that is integration of the individual as a competent member in the social and intellectual communities of that college" (p. 136). Tinto introduced his theory as a way to bridge the gap between the more individually focused theories (e.g. Waterman & Waterman, 1992), which hypothesized that personality and cognitive attributes predicted persistence, and the environmentally focused theories of retention that emphasized the potency of the social, economic and organizational forces of a school on a student's ability to persist. Additionally, Tinto highlights that there are societal theories of departure that focus upon how individual factors such as a person's social status and race combine with institutional factors such as an institution's prestige to enforce the hierarchies inherent in society: For example, Conflict Theory argues that "high rates of departure among two-year college students, especially those that serve persons of lower class origins, reflect the intentional desire of educational organizations to restrict educational and social opportunity in society" (Clark, 1960; Pincus, 1980 as cited in Tinto, 1993, p. 87). Alternatively, the Structural-Functional view of student departure argues that whether or not a student persists in school relates to the competitive, merit-based contest between students who are vying for social and educational attainment in society and who fair better or worse depending upon their individual skills and abilities (Duncan, Featherman, & Duncan, 1972). Tinto (1993) further argued that student isolation and incongruence between student and institution were more powerful predictors of student departure than lack of academic competence.

Tinto's most significant contribution to student retention theory was his proposition that both the social and intellectual worlds of students are equally important to their engagement in school and that there is an interactional or "spill-over" effect between these domains. Tinto's theory is consistent with the theoretical model of this study; the spillover effect is akin to Bronfenbrenner's multiple levels of context, which interact to impact an individual's development over time. Students who have more relational ties at school and at work, are likely to succeed in the more intellectually-based tasks of school and work, respectively. Success in one domain likely leads to success in another domain and vice versa. If students are overworked, unhappy at work and cannot see the relationship between their work and school, the emotional and cognitive resources left over for school-work will most likely be diminished.

Higher education research over the last decade has reached a point where there is substantial theoretical and empirical insight regarding factors associated with the promotion of student engagement (e.g. Astin, 1984; Pascarella & Terenzini, 1998; Tinto, 1998). Some of the collective findings include the importance of small institutional size, that involvement (both academically and socially) matters the most during the first year of matriculation as half of all students who drop-out do so before the start of their second year; the importance of strong faculty emphasis on teaching and student development, the benefits of a full-time student body that resides on campus, and the importance of frequent interaction between students and students and between students and faculty within and outside of the classroom.

Student Engagement among Community College Students

Until recently, little attention has been paid to community college student engagement despite the fact that four out of every 10 college students are enrolled in community colleges in this country. In fact, less than 10% of higher education research has included community college students in their samples (CCSSE, 2006; Pascarella & Terenzini, 1998). As enrollment numbers in community colleges have continued to increase, while persistence towards degree or certificate completion and/or transfer to four-year institutions has remained flat or decreased, fostering community college student engagement has become a significant priority located on multiple levels (CCSSE, 2007; *The Engaged Campus*, 2006; Santora, 2009). More specifically, there are currently efforts at the institutional level, the community level, and the state and federal level to increase student engagement based on the high attrition rate of community college students coupled with the requirement of increasing levels of education needed to survive and thrive in the United States (e.g., *The Engaged Campus, 2006*). Community colleges are challenged to serve students who are most at-risk for not succeeding due to their academic under-preparedness, the competing demands on their time, and their status as often being the first in their families to attend college (Silverman et al., 2009; Tinto, 1993; 1998; 2000). These students are therefore often depleted of the instrumental and/or emotional supports that might help them persist in school. While these institutions are faced with the challenge of educating a significantly diverse student body, they are also strapped financially, especially during times of economic duress as in the present time (CCSSE, 2007, Santora, 2009).

Measures of college student engagement have been historically limited, until the recent inception of the NSSE and the CCSSE, which were initiated based upon the aforementioned growing problem of student disengagement. The NSSE and CCSSE offer examples of instruments which measure overall *institutional* student engagement (Handelsman, Briggs, Sullivan, & Tower, 2005). Through the lens of Bronfenbrenner's Ecological Model, this would be an example of how a mesosystem is examined to determine whether or not practices at the institutional level are working to promote or inhibit a desired outcome such as student engagement. The CCSSE is presently entering its seventh year of inception and, as such, recently published a self-review of the first five years. This review outlines lessons learned and several effective strategies for promoting student engagement based upon the attributes of community colleges that are performing well in this area (CCSSE, 2007). The lessons learned include being intentional about engagement efforts; engagement matters for all students but it matters more for some (i.e. high risk students vs. low risk students); and that part-time status of students and faculty are a reality of community colleges that is often inadequately addressed in improvement efforts (CCSSE, 2007). With regards to the lesson of being intentional, researchers point to the diverse population that the community colleges serve, namely students who have competing demands on their time through caring for dependents, working in paid, outside employment and attempting to balance school among these other priorities (Harper & Quaye, 2009; Silverman et al., 2009). Based on the complex nature of students' lives, community colleges need to be intentional about their programming based on the limited amounts of time students are actually on campus. Secondly, researchers of the CCSSE,

point out that high risk students who comprise a population of under-prepared students, students of color, 1st generation college students and non-traditional learners are actually more engaged than their lower risk counterparts, however these students tend to have lower aspirations for themselves and are less successful. In other words, high risk students often work harder but experience lower success rates in their academic pursuits. Based on the finding that students surveyed over the years who are under-prepared, name being under-prepared as being a likely or very likely reason why they will not complete their studies, community colleges are making concerted efforts to offer more developmental courses (CCSSE, 2007). An additional intervention to this end includes involving families and peer networks of students in their educational pursuits through inviting family members and peers to orientations and other school-based activities. This strategy fits well with the tenets of Bronfenbrenner's Ecological Model, namely that the more systems that are involved in promoting a certain outcome or segment of development, the more likely that development will be fostered.

The third lesson relates to the part-time status of both faculty and students. More specifically, national statistics find that close to 67% of all community college students attend part-time with an almost identical percentage of faculty maintaining part-time teaching status as well (NCES, 2004; U.S. DOE, 2004). Additionally, only 15% of part-time students complete their degree or certificate six years after enrolling while 73% leave college without earning a degree or certificate after six years of enrolling. The National Center for Education Statistics (2004) demonstrates that part-time students are less likely to persist in school then their full-time counterparts even after taking into

account gender, family income and effects of educational expectations. Students' outside commitments give them limited time on-campus when compared to part-time students at four-year colleges. Additionally, community college students work longer hours and spend more hours caring for dependents when compared to four-year college students. To be sure, 57% of community college students work more than 20 hours per week, whereas just 15% of students at four-year colleges work this much. Additionally, 33% of community college students spend 11 or more hours caring for dependents compared to their four-year counterparts of whom, just 10% spend the same number of hours caring for dependents (CCSSE, 2007). The main implication for community colleges derived from this data is that institutions need to incorporate activities that promote student engagement during the academic day, which all students (part and full-time) will have access to. Some suggestions of CCSSE to this end include hosting mandatory advising sessions and mandatory study groups. Perhaps most significantly, the fostering of relationships among students, faculty and staff has been shown to make a significant contribution to students' success.

The five strategies that CCSSE has created based upon these lessons learned include the following: (a) set high expectations, (b) focus on the front door, (c) elevate developmental engagement, (d) use engaging institutional approaches, and (e) make engagement inescapable. The first strategy outlined by CCSSE, *set high expectations*, follows logically from Tinto's (1993) work on student engagement which highlights the connection between setting high goals and also receiving support to reach these goals as promoting students' confidence and momentum for succeeding academically. The

strategy of *focusing on the front door* addresses the problem of high attrition rates after

the first semester. In fact community colleges often lose approximately 50% of their

students before the 2nd year of schooling (CCSSE, 2007; Tinto, 1993). Additionally, a

significant portion of 1st generation college students (34%) are entering community

college for the first time. These students who are in need of timely and effective advising

often report not receiving as much advising as they would like or need. The strategy of

elevating developmental engagement addresses the finding that 61% of all first time

community college students are considered under-prepared for college level course work

(Adelman, 2004 as cited in CCSSE, 2007). Additionally, CCSSE research shows that

students who complete one remedial level course during their first semester of school

persist at higher rates than their counterparts who do not need remedial level course-

work. CCSSE's proposed strategy of *using engaging instructional approaches* seeks to

address the nature of community college students' lives and the competing demands on

their time. To this end, the CCSSE has found that the most successful engagement

interventions take place during the school day and within the classroom when and where

the most students are likely to be present. Relatedly, the last strategy developed by the

CCSSE argues that community colleges need to *make engagement inescapable.* Based on

the finding that community college students are spending limited time on campus and are

rarely interacting with faculty or peers outside of the classroom context, the classroom

should be the focus of engagement-based interventions. Learning communities, where

small groups of students are brought together to take classes often team-taught by faculty

around core courses and topics related to persisting in school, have evolved as an example of an "in-class" intervention focused upon fostering student engagement.

An illustrative example of incorporating interventions based on the data provided by CCSSE is found at Bunker Hill Community College, the location of data collection in the present study. Bunker Hill Community College has recently been approved for a development grant under the Strengthening Institutions Program (SIP) authorized by Title III, Part A of the Higher Education Act of 1965 by the Department of Education. The title of this grant is "Building the Engaged Campus: Increasing student persistence, retention and achievement," and is funded from 2006-2011. One of the major initiatives of this grant is to build multi-tiered learning communities, which aim to increase the persistence of first-time, full-time students. Collectively, the research findings of the CCSSE and interventions such as "Building the Engaged Campus," are consistent with decades of higher education research on four-year college student engagement and are also unique with regards to uncovering the specific needs and characteristics of community college students.

Student Engagement: Gender Effects

Also of relevance to the present study is the widening gap between genders with regards to student engagement. Over the past 25 years, there has been a significant and alarming increase in male disengagement from school in both two and four year colleges (Buchman & DiPrete, 2006). This trend is somewhat surprising to some who are accustomed to seeing research to date exploring how *women* are often disenfranchised from certain majors and career fields (Rypisi, Malcom, & Kim, 2009; Steele, James, &

Barnett, 2002). In the fall of 2006, the US Bureau of Labor Statistics (2006) reported that

approximately 65.8% of high school graduates enroll in college and since 2001, college

enrollment for recent high school graduates has been climbing steadily. College

enrollment including community college enrollment, has been roughly the same among

men and women; that is 65.5% and 66% of male and female graduates enroll in college,

respectively. A disproportionate number of females, however, are graduating from

college each year in the United States (Buchman & DiPrete, 2006). In fact, well over half

of all Bachelors degrees in this country are awarded to women across racial and ethnic

lines. In this context, 67% of degrees awarded to Black students are women, 61% of

degrees awarded to Latino/a students are women, 57% of degrees awarded to White

students are women and 54% of degrees awarded to Asian students are women (Buchman

& DiPrete, 2006; U.S. Department of Education, 2004). The disengagement of males

from higher education represents a striking trend reversal in educational attainment. In

the 1960's, approximately 65% of all Bachelor's degrees were earned by men, in 1982,

women earned an equitable proportion of Bachelor's degrees and in 2004, women

outpaced men by earning 58% of all Bachelor's degrees in the U.S. (U.S. Department of

Education, 2004). This gap is predicted to widen over time due to several hypothesized

factors proposed by Buchman and DiPrete (2006) who analyzed General Social Survey

data in addition to the National Educational Longitudinal Survey (NELS) in order to

explore causes and factors associated with the growing female advantage in higher

education. Some of the correlates that the authors uncovered through their research

include the importance of family background, parental education, other family based-

resources, the increased equitable distribution of family resources across males and

females (Blau & Duncan, 1967; Behrman, Pollack, Taubman, 1986; Jacobs, 1996) and

the decrease in gender discrimination in the labor market. Additionally, theorists have

proposed that women's higher prevalence of "non-cognitive skills" (i.e. attentiveness and

organizational skills) (Jacob, 2002) promote higher academic achievement among

women.

One explanation of the growing gender gap in educational attainment between

males and females argued by Buchman and DiPrete (2006) is particularly relevant to the

present study. That is, the role of community colleges in this gap:

> A final explanation for the growing female advantage in college completion is the
> pathways into or through higher education that have changed in a gender-specific
> or gender-by-class-specific-way. The second half of the 20th century witnessed
> dramatic expansion of both the community college system and the 4-year college
> system. Statistics from October 2002 Current Population Survey show that the 2-
> year college enrollment advantage of females is larger than their 4-year college
> enrollment advantage. If community colleges serve as a springboard to enrollment
> and graduation from a 4-year college, the expansion of the community college
> system could generate a female-favorable trend in college completion" (p. 521).

The female advantage appears to be prominent among most European nations,

Canada and New Zealand (Eurostat, 2002; OECD, 2004). Just four nations (Switzerland,

Turkey, Japan and Korea) observe a male advantage among 25-34 year olds in

educational attainment (OECD, 2004). After reviewing the literature, Buchman and

DiPrete (2006) conclude that the widening gap between males and females with regard to

educational attainment is influenced by several interactional factors; these include

decreases in gender discrimination and womens' growing interest in possessing

autonomous resources so that they can both protect themselves and pursue opportunities

in labor and marriage markets. The implications of this student engagement research seem clear; if student disengagement among community college students is fast becoming a prominent issue with regard to individual and national sustenance and our global competitiveness (e.g. Friedman, 2005), then *male* community college student disengagement is even more critical.

Correlates of Student Engagement and Persistence: Employment Patterns

Of paramount interest in the present study is the relationship between employment patterns and retention rates. There has been contradictory evidence regarding how work impacts student wellness, student engagement, and ultimately completion of school in adolescent and four-year college student populations (e.g. Greenberger & Steinberg; 1986; Mortimer & Staff, 2004; Pascarella & Terenzini, 1995). From a developmental perspective, work has been considered both helpful and inhibiting: one prominent perspective argues that part-time work places adolescents at risk because it limits participation in more developmentally beneficial activities and confronts students with stressors for which they are unprepared (Steinberg, Greenberger, Garduque, Ruggiero, & Vaux 1982; Steinberg & Dornbusch, 1991). A more optimistic viewpoint held by some social scientists (Mortimer, Harley & Staff, 2002) highlights that work can actually promote psychological well-being and positive student outcomes. For example, some bodies of research argue that the nature of work can help provide structure within individuals' lives, which can have a number of positive results (i.e. Jahoda, 1982; Shanahan & Flaherty, 2001).

Furthermore, Mortimer and colleagues (2002) argue that it is the *quality* of the work experience that influences psychological functioning. From this perspective, employment for young people is viewed as a positive step toward adulthood, promoting adaptiveness to work environments and resilience in the face of stressors (Staff, Messersmith, & Schulenberg, 2009). Still another perspective argues that individuals' pre-existing characteristics (such as interest in school, motivation, SES status, and gender) predispose them to selecting certain types of work in addition to a certain intensity of hours (e.g. Bachman & Schulenberg, 1993). That is, when students are less interested in school, they may opt to work longer hours, which in turn appears as an inverse relationship between hours worked and student engagement and performance. This research is consistent with the notion of *Developmentally Instigative Characteristics* as described earlier in Bronfrenbrenner's Ecological Model of Development (2005), which purports that individuals select and attend to certain environmental characteristics (i.e. more intense work contexts) and the environment in turn (i.e. employers, peers, faculty members), responds differentially to these individuals. This characterizes the ongoing and interactional dynamic between individuals and their contexts over time, which fosters student development.

The aforementioned research focuses primarily upon adolescent and traditional four-year college students, leaving a dearth of literature on community college students' working lives. A review of the relevant research related to work intensity and work quality is provided below which will inform the hypotheses of the present study.

Correlates of Student Engagement: Work Intensity

Work intensity, defined as the number of hours students engage in paid employment (Mortimer, Finch, Ryu, Shanahan, & Call, 1996), is a significant topic of interest among social scientists who are invested in assessing the relationship between students' employment and positive and negative student outcomes (e.g. Barling, Rogers, & Kelloway, 1995; D'Amico, 1984; Greenberger & Steinberg, 1986; Mortimer et al., 2002; Mortimer et al., 1996; Steinberg & Dornbusch, 1991). Research pertaining to adolescent work patterns was initiated primarily based upon the finding that 80% of graduating high school students will have spent some time in paid part-time employment during their high school years (Manning, 1990; Steinberg, Fegley & Dornbusch, 1993) while there is significant debate in the literature with regard to the potential for work to promote or inhibit positive student outcomes. To be sure, the majority of high school students are employed at some point during their schooling, while roughly half of all full-time post-secondary students and almost all part-time post-secondary students work for pay as well (U.S. Department of Labor, 2006). Financial concerns have been cited as a reason that students drop-out before attaining their degrees, while employment has the potential to alleviate these financial concerns (Sax, Astin, Korn, & Mahoney, 1996; Silverman et al., 2009). Within the community college domain, this is a primary reason that the majority of students work at least 20 hours per week (CCSSE, 2008; Jacobs & Vorhees, 2006).

Work Intensity as a Negative Correlate of Adolescent Student Engagement

As mentioned earlier, one prominent view in the literature is that work has the potential to decrease student engagement and persistence as working may consume too much student time, detracting from academic and other school-based activities (Astin, 1984; Tinto, 1993). A significant amount of research has been conducted on teenage employment in the United States as it relates to academic achievement, student engagement, delinquency, family relationships, attitudes towards work, and substance-abuse (e.g. Greenberger & Steinberg, 1986; Mortimer et al., 1996; Steinberg et al., 1993). A historical view in the literature regarding adolescent part-time employment relates to the assumption that students' typical first jobs are entry-level, low-skill level and unrelated to their future occupations (Staff et al., 2009). Research by Greenberger and Steinberg (1986) on adolescent employment supports this view as the authors argue that most jobs held by teenagers do not provide skills nor workplace knowledge as preparation for adult work; wages made are typically for personal and social expenditures (as opposed to contributing to family financial needs or personal future educational expenses); and lastly most teenagers work in age-segregated jobs with few opportunities for meaningful interaction with adults, creating working contexts that are not necessarily enriching nor growth-fostering. Additionally, Staff and colleagues (2009) conducted a review of the adolescent world of work utilizing data from the Monitoring the Future Project which surveys approximately 17,0000 students per grade in middle school and high school in the United States, annually (Johnston, O'Malley, Bachman, & Schulenberg, 2007). The findings summarized by Staff and colleagues (2009) include

significant evidence that intensive involvement (defined as 20+ hours of work per week) in paid employment during adolescence is related to poor school performance, limited involvement in extracurricular activities, increased use of alcohol and drugs, delinquency, and decreased educational attainment in young adulthood. The authors also suggest an ecological perspective when viewing students' engagement in work, which is consistent with the theoretical framework of the present study. More specifically, the work domain is thought of as a microsystem for students, in which novel experiences and relationships are encountered, potentially setting the stage for the development of their future working lives.

In general, there seems to be a consensus in the literature that for adolescents, working in excess of 20 hours per week can contribute to deleterious student outcomes. These include increased stress levels due to lack of coping skills for adult working responsibilities (Greenberger & Steinberg, 1986), increased use of substance abuse and alcohol, low academic achievement (Steinberg & Dornbusch, 1991; Steinberg et al., 1993), increases in school tardiness, cigarette and marijuana use (Greenberger, 1984), decreased contact with family and cynical attitudes toward work (Greenberger & Steinberg, 1986).

Work Intensity as a Negative Correlate of Four-Year College Student Engagement

Similarly, for college students, working has the potential to detract from the psychological and literal energy that individuals have for their role as students. Work is often associated with lower academic and social integration in addition to increased time needed for degree completion, particularly if students are employed off-campus (Astin,

1984; 1998; Fur & Elling, 2000; Pascarella & Terenzini, 1991). Pascarella and Terenzini

(2005) argue that employment adversely impacts college degree completion with greater

hours of work associated with increased part-time status and a greater likelihood of

degree incompletion. Astin (1984), one of the most well-known scholars in the field of

student development, conducted research that showed a negative relationship between

increased hours of employment off-campus and student engagement. Astin hypothesized

that students who worked more than 15 hours of week, off-campus had less time for

homework and were less productive with their use of time than their peers who were

employed less hours. Additionally, Fur and Elling (2000) found that students who worked

30 or more hours per week were less involved with their campus activities than their

counterparts who were either unemployed or who worked fewer hours. Additionally,

students reported that their work schedules negatively impacted their academic work.

Work Intensity as a Positive Correlate of Adolescent and Four-Year College

Student Engagement

An alternative perspective held by some researchers argues that work (in

moderation) can actually help students persist in school through providing structure in

students' lives, through helping them develop skills that will generalize to future careers

and through providing financial support for their studies (e.g. Astin, 1998; Kuh, 1995;

Pascarella & Terenzini, 1991). This second perspective suggests that limited employment

has the potential to promote positive student outcomes and has been associated with

reduced high school drop-out rates (D'Amico, 1984), increased involvement in school

activities (Mihalic & Eliott, 1997), and higher GPA's among students (Mortimer &

Johnson, 1998). Related to these research findings, Mortimer and colleagues (1996) utilized a longitudinal design to survey 1,000 students beginning in the 9th grade and followed these students for twelve years in order to ascertain how work intensity related to students' mental health, achievement and behavioral adjustment. School achievement was defined as the amount of time/hours per week students spent doing homework and self-reported GPA. As a criterion for inclusion in the study, students needed to be engaged in paid employment at least one time per week, outside of their homes. Additionally, lower intensity work was defined as between 1-20 hours of work per week while higher intensity work was defined as more than 20 hours of work per week, in keeping with related research, which defined work intensity in a similar manner (Steinberg & Dornbsuch, 1991). Mortimer and colleagues argue that adolescents who are employed have the potential to experience an increase in self-efficacy based upon new work-based responsibilities which add another role (i.e. worker) to their evolving identity; the successful juggling of which can contribute to a positive sense of self.

Similarly, Greenberger and Steinberg's (1986) well-known study of employed high school students in four California schools provides support for this finding; namely that students who worked reported feeling as though they grew in terms of their capacities to be on time, to be dependable and to be responsible. Additionally, Staff and Mortimer (2007) purport that employment patterns during adolescence have the potential to prepare disadvantaged youth for future work and educational attainment by providing them with generalizable skills such as time management that will help them in the future. In the results of Mortimer and colleagues' longitudinal study, high school seniors who

were employed 20 or less hours had higher GPA's than their unemployed counterparts. Individuals who worked 21 or more hours per week reported a greater amount of conflict between their work and school domains and also reported drinking more then their counterparts who worked a lower intensity of hours or who were unemployed. An interesting finding that the authors point out is that although 12th graders who worked at higher intensity did less homework, they did not have lower GPA's or lower intrinsic motivation with regards to their school-work than non-workers. Mortimer and colleagues (2002) suggest that these students could be selecting classes in school that demand less work so that they can maintain good grades while maintaining their work hours. Unsurprisingly, students who worked at lower intensity in the 12th grade had higher GPA's than higher intensity workers and non-workers. These findings highlight the utility of Bronfennbrenner's (1979) Model of Ecological Development when applied to the mesosytems that comprise the intersections of students' working lives and their academic lives; the selection of courses was directly impacted by the cognitive and physical energy required at work which led students to choose courses that would allow them to prosper in both their educational and employment contexts. These findings are also consistent with research suggesting the power of *Developmentally Instigative Characteristics* (Bronfenbrenner, 2005; Renn & Arnold, 2003) to shape students' interactions with the environment and their likelihood or reluctance to seek out increasingly complex and challenging tasks at work and/or school.

Within the higher education literature, researchers have also pointed towards a cut-off of intensity of work, beyond which deleterious effects are observed on student

engagement. More specifically, Astin (1984) demonstrated a positive relationship between moderate hours of employment (less than 15 hours of week) of on-campus work and student persistence. Astin argued that students who work on campus a moderate number of hours are more integrated into the school culture through greater amounts of contact with peers and faculty, which in turn helps students remain connected to and invested in their schools. Tinney and Pierson (2006) found concurring evidence in their research on first year, first time students who where employed. More specifically, Tinney and Pierson (2006), using Tinto's interactionist theory, explored how first-year, first-time students experienced the effects of employment on their student engagement and found that students who were employed on campus were much more likely to engage with faculty and be more academically and socially integrated than their counterparts engaged in off-campus employment. Additionally, working off-campus for more than 15 hours per week was negatively correlated with two-year retention rates, which is consistent with the aforementioned research.

Additionally, Mortimer and colleagues (2002) propose that cumulative hours of work over time might matter more in promoting or inhibiting positive student outcomes when compared to present work intensity. This finding when applied to the community college population may have significant implications for the threshold of hours that students can work to support their school-work, before their working lives detract from their student engagement.

Work Intensity: An Interactional Model of Individual and Contextual Correlates of Student Engagement

These observations are consistent with the third major perspective mentioned earlier regarding the relationship between individuals' working lives and their student engagement and persistence: that is the notion that the intensity of hours worked has different outcomes for different students, based upon predisposing characteristics or *Developmentally Instigative Characteristics* (Bronfenbrenner's, 2005). While there is some agreement in the adolescent literature that intense working hours (work that exceeds 20 hours per week) has mostly negative effects on student engagement and persistence, as highlighted above, conflicting evidence remains regarding the intersection between student characteristics, the nature of students' employment, and high work intensity in producing negative outcomes (Bachman & Schulenberg, 1993; Staff et al., 2009). To be sure Bachman and Schulenberg (1993) found that poor school performance, low educational aspirations and prior delinquency increased the likelihood of intensive work hours during high school. Relatedly, SES status may be associated with particular work patterns among youth. That is, students from families of lower SES backgrounds are likely to enter the labor force at a younger age, work more hours and have less of a connection to their schools than their more socially-economically advantaged peers (Kerckshoff, 2002). Stated more simply, longer hours of work may be more detrimental to some students than others, based upon particular student demographics. This finding has particular relevance to the present study as many community college students are

often struggling financially and have an uncompromising need to work while they attend school to support themselves and their families (CCSSE, 2007; Silverman et al., 2009).

Stated more simply, for some students in higher quality jobs who have a predisposition towards working longer hours, the effects on their schooling may in fact be positive. This viewpoint is consistent with Bronfenbrenner's (1979) proposition of how multiple layers of context have the potential to interact to influence one's development. In the present example, students' motivation, interest in school and propensity for work comprise individual characteristics which dynamically interact with the microsystem of a student's work domain which in turn creates a mesosystem between one's work, school and personal characteristics. In sum, the research on work intensity inclusive of adolescent and traditional four-year college populations, points toward moderate amounts of employment as being the most beneficial for student engagement. It would seem that the working domains of adolescent and college students impact individuals' engagement and persistence differently, depending on student characteristics, intensity of work and of most interest in the present study, the *quality* of students' work. The present study purports that work quality has the potential to enhance our understanding of how community college students' working lives relate to their engagement and persistence.

Correlates of Student Engagement: Work Quality

Mortimer and Colleagues (2002) define work quality as comprising the following dimensions: compatibility between work and school, intrinsic and extrinsic rewards at work, and work stressors based upon their seminal longitudinal youth development study.

A selective review of these work quality dimensions as related to student engagement follows.

Work Quality: Compatibility between work and school

The work quality dimension of compatibility between work and school addresses if students' jobs help students to contribute to class discussions, to realize the importance of education, to realize the subjects they enjoy, and to help students consider if what they learn in school helps them to perform better at work. Research (Lubbers, et al., 2005; Mortimer et al., 2002) supports the notion that work quality when characterized as compatibility between work and school such as those work experiences offered through co-op programs, is positively associated with student engagement. For example, Kuh (1995) initiated a qualitative study, which involved several hundred students from 12 different institutions and which explored how students' out of class experiences were associated with learning and personal development. The results of Kuh's study demonstrated that students perceived benefits from work (both on or off-campus) when they felt that work helped them to develop their relational and interpersonal competence in addition to their practical competence (i.e. decision-making and time-management skills). To be sure, Kuh summarized his findings related to the impact of outside experiences on student outcomes, emphasizing the role of employment:

> More than other activities, leadership roles, internships and work experiences encouraged students to develop skills needed to be competent in the work place (that is decision making, group process and team work, understanding fundamental structures and processes of organizations in addition to critical thinking and written and oral communication) (p. 197).

In addition to students' perceptions of the qualitative compatibility between their work and school, there is also the issue of literal compatibility between work and school; that is the notion that longer hours of work have been associated with deleterious school-based outcomes including more frequent absences and higher probability of dropping out based on the competing demands of being both a worker and student that can prove overwhelming for many students (D'Amico, 1984; Greenberger & Steinberg, 1986; Lee & Staff; 2007). Likewise, moderate hours of work have been found to be compatible with the student role as low intensity employment has been associated with lower drop-out rates, increased involvement in school related activities and higher GPA's (Staff et al., 2009). Additionally, Kane, Healy and Henson (1992) found that employment among college students that was congruent with their career aspirations and skills was more likely to lead to satisfaction with their work. Utilizing Bronfenbrenner's (1979) Ecological Model of Development, a positive experience in one microsystem has the potential to promote positive experiences in another microsystem (in this case the school context), which creates a mutually reinforcing mesosystem comprised of the work and school contexts. As such, it would seem that the more community college students perceive compatibility between their work and school, the more engaged they will be in their educational experiences.

Work Quality: Intrinsic rewards at work

The work quality dimension of intrinsic rewards is defined by learning opportunities at work, the use of skills and abilities at work, the extent to which new things are learned at work, the perceived usefulness of what is learned for the future, and

the mental and physical challenges of work (Mortimer et al., 2002). The intrinsic aspects

of work have been associated with numerous outcomes for young workers including job

satisfaction and commitment, increased job self-efficacy and increased levels of well-

being (Ashforth, Saks & Lee, 1998; Call & Mortimer, 2001; Saks, 1995; Weiss &

Cropanzano, 1996). The benefits associated with intrinsic aspects of work are influenced

by research that describes intrinsic and extrinsic motivation in the working context (i.e.

Amabile et al., 1994; Vansteenkiste, Neyrinck, Niemiec, Soenens, De Witte, & Broeck,

2007). More specifically, intrinsic motivation refers to the motivation to engage in work

primarily for its own sake because the work is interesting, engaging or in some way

satisfying. Further, intrinsic motivation involves self-determination and a preference for

choice and autonomy, competence (defined as mastery orientation and preference for a

challenge), task involvement (the extent to which a person is absorbed in the task), and

level of interest in that task (Amabile et al., 1994; Loo, 2001). Research has shown that

enhanced autonomy, clearly defined roles, skill variety, and increased control in the

workplace are associated with increased occupational mental health and productivity

(Barling et al., 1995; Wall et al., 1998). Other research (i.e., Conti, 2001;

Csikszentmihalyi, 1990) has suggested that individuals who experience intrinsic rewards

at work pay less attention to the passage of time and as a result enjoy positive subjective

experiences at work, which can influence other domains in a positive way. More

specifically, students who are found to be more intrinsically motivated are more

persistent when faced with challenging tasks, attain higher grades in school, and have the

ability to retain content learned in school over a longer period of time (Conti, Amabile, &

Pollack, 1995; Gottfried, 1990). This research again speaks to the interactive nature of an individual's contexts (Bronfenbrenner, 1979); when students have work that is intrinsically motivating, those students may be more likely to carry this intrinsic motivation orientation into their school context, which would result in better academic outcomes. As such, I am hypothesizing that individuals who experience more intrinsic rewards at work will also experience higher levels of student engagement.

Work Quality: Extrinsic rewards at work

The work quality dimension of extrinsic rewards is defined by wage rate, wage satisfaction/positive perceptions of good pay, and having money to go out with friends (Mortimer et al., 2002). Wage rate has been positively associated with job satisfaction (Huang & Van de Vliert, 2003) and overall well-being. Also informed by motivation theory, the construct of extrinsic rewards at work in the working domain is comprised of motivation to work as a result of something separate from work itself that proves rewarding. Factors might include recognition from others, financial incentives or status (Amabile et al., 1994; Loo, 2001). Research (Maslach & Jackson, 2001; Vansteenkiste et al., 2007) has shown a relationship between extrinsic work value orientation and negative outcomes, including lower psychological well-being, increased emotional exhaustion, less job satisfaction and a greater likelihood of leaving that job. Additional research (e.g. Spector, 1997; Vansteenkiste, et al., 2007; Wayne et al., 2007) supports the notion that negative work experiences can impact an individual's non-work domains including family and school-based contexts. This finding is particularly relevant to the present study. Based upon the ecological framework proposed, it is hypothesized that students'

negative work experiences will influence students' relative ability to be engaged and persist in school. Additionally, research has been mixed with regards to the hypothesis that higher incomes can buffer the relationship between extrinsic orientations towards work and negative outcomes (Diener, Emmons, Larsen & Griffin, 1985; Malka & Chatman, 2003). Some research demonstrates that individuals who earn higher incomes have higher well-being (Chatman, 2003), whereas other research (Kasser & Ryan, 1996) does not support this notion. Most individuals and their respective work contexts do not fit neatly into one category; often times intrinsic and extrinsic rewards at work simultaneously exist as do individuals' motivational orientation towards work (Amabile et al., 1994; Conti, 2001; Loo, 2001).

Relatedly, an important distinction should be made with regard to what the present study purports to measure: students will be filling out surveys that speak to the *nature* of their working lives, not their overall motivational orientation towards work or school. As such, the present study hypothesizes that the majority of community college students are working for the financial support that work provides (CCSSE, 2007; Jacobs & Vorhees, 2006; Silverman et al., 2009). It is further hypothesized that a job, which provides higher extrinsic rewards (such as wage satisfaction), could reduce students' engagement in school, as financial security is a need that must be satisfied before other higher-ordered needs (such as self-actualization which is more characteristic of intrinsically-oriented work) can be met (Maslow, 1954). As such, those students who have intrinsically-rewarding jobs are also more likely to be engaged in school as their more basic needs for survival and psychological safety have presumably been met. A

discussion of how work intensity and gender may moderate the relationships between work quality and student engagement will follow shortly, unpacking these associations further.

Work Quality: Work stressors

The work quality dimension of work stressors is defined as time pressure, exposure to noxious conditions at work, work overload, lack of clarity regarding job responsibilities, feeling responsible for things beyond one's control and having to upset others at work to satisfy some people at work (Mortimer et al., 2002). Research has demonstrated that higher work quality in the form of low work stressors can be associated with higher levels of well-being. For example, researchers have found that higher work quality (lower levels of work stressors) has been a significant predictor of goal mastery orientation and decreased levels of depression among adolescents who work (Mortimer, Finch, Shanahan, & Ryu, 1996; Mortimer et al., 2002). Additional research has suggested that interpersonal conflict at work can be psychologically damaging for younger workers who are just beginning to navigate the social culture and tasks associated with the working domain (Lubber et al., 2005; Weiss & Cropanzano, 1996). For adolescents who are employed in stressful working conditions, they are susceptible to experiencing decreased levels of self-esteem, decreased levels of self-efficacy and increased depressive affect (Mortimer & Staff, 2004). Additionally, researchers (Greenberger, 1988; Mortimer & Staff, 2004) argue that work can prematurely expose adolescents to situations for which they are unprepared, making them more vulnerable as they are not yet ready to cope with these more adult challenges. An alternative viewpoint proposed by Shanahan

and Mortimer (1996) suggests that stress can actually promote adaptability and resilience through fostering coping skills that will be called upon in students' future working lives. Shanahan and Mortimer (1996) utilize the developmental psychopathology literature in characterizing this phenomenon as "steeling," (Rutter, 1985); that is students are thought to be readied for future challenges through the development of adaptive coping responses gained through the challenges they have encountered at work.

In essence, research demonstrates that for adolescents and young adults, work quality is directly related to mental health outcomes. For example, even four to nine years after high school, the work stressors experienced in adolescence are still purportedly associated with diminished feelings of efficacy among those young adults (Staff et al., 2009). Further, the coping mechanisms to meet stressful working conditions that were developed at that time are also employed in young adults' future working lives (Mortimer & Staff, 2004). This continuity across developmental levels with regards to work is another example of how Bronfenbrenner's (1979) Model of Ecological Development operates with regard to work stressors and student outcomes. Students' early work experiences shape their coping skills, mental health and approach to future working contexts, which undoubtedly have implications for their student engagement. Research has not explicitly looked at how work quality: work stressors relates to student engagement. Based on research that argues that success or difficulty in one domain can impact subsequent success or difficulty in another domain (e.g. Bronfenbrenner, 1979; Lent et al., 2005) however, it seems reasonable to propose that the more stressful students' working lives are, the less resources they will have to devote to their school

work. As such, I am hypothesizing that individuals who experience low work quality on the dimension of work stressors will also experience lower levels of student engagement.

Correlates of Student Engagement: Interaction of Work Intensity and Work Quality

As reviewed above, in addition to intensity of work, scholars have studied how the *quality* of students' employment relates to their engagement in school. For example, Barling and colleagues (1995) hypothesize that negative associations with work intensity will develop for individuals who work in low quality but not high quality jobs. Their hypothesis is supported through research that has demonstrated that school drop-outs who had high-quality jobs showed less depressive affect, endorsed greater life-satisfaction and higher levels of self-control than their counterparts who dropped-out of school and obtained lower quality jobs. Significant interactions found between work intensity and quality support Barling et al's (1995) argument the interaction of quality and intensity of part-time work is more important then intensity alone in predicting school performance and personal functioning.

Similarly, Mortimer and colleagues (2002) have found support for the notion that work intensity can be a moderator for the relationship between work quality and student engagement. That is, the positive associations between high work quality and student engagement are amplified for those who work longer hours in higher quality jobs while those who work in lower quality jobs experience lower levels of student engagement. The authors suggest that students with excess role demands should have access to more constructive coping strategies such as time management and study skills programs.

Multiple role demand is a construct that has significant relevance for community college students (Bundy, 2004; Silverman et al., 2009) as these students are consistently challenged to balance their roles of student, worker, and caregiver. Contrary to the aforementioned research (e.g. Mortimer et al., 1996) that suggests having multiple roles can promote self-efficacy and positive student outcomes, some research (Greenberger & Steinberg, 1986) argues that work adds a competing and complicating role to students' lives, which are already burdened by the multiple roles involved in being a family member, friend, student and participator in extracurricular activities.

Additionally, students who work upwards of 20 hours or more per week will have less time to participate in other extra-curricular activities that have been shown to be developmentally appropriate and beneficial to adolescents. This argument is consistent with Astin's (1984) theory of student involvement which argues that students' only have so many physical and psychological resources available and that roles and demands outside of the school context (such as being a worker, a caregiver for dependents, and being involved in outside activities) can and will detract from one's ability to persist in school. Among college students, it has been found that on-campus work can actually help students experience higher levels of engagement and persistence given that their roles of student and worker are less competing and rather complimentary (Astin, 1998; Pascarella & Terenzini, 1991).

Additionally, the issue of self-selection is possible in these findings; that is, students with higher grades might self-select or more naturally obtain higher quality jobs (Steinberg et al., 1993). This view is consistent with the perspective mentioned earlier

pertaining to the potential impact of *Developmentally Instigative Characteristics* (Bronfenbrenner, 2005) such as low interest in school or attainment of work (of a certain quantity and quality). Students with higher quality jobs, evaluated on the dimensions of compatibility between work and school, intrinsic and extrinsic rewards at work and work stressors, would then also experience higher levels of student engagement. In the present study, it is hypothesized that the relationships between work quality dimensions (low or high) and student engagement will be influenced by students' intensity of work based on the aforementioned research that supports the notion of work intensity as a moderator variable.

Correlates of Student Engagement: Interaction of Gender and Work Quality

Given the growing disparities in educational attainment between male and female students, the present study will explore gender effects of work quality and work intensity on student engagement. Gender differences have been uncovered with regard to the impact of working on developmental and student outcomes such as student engagement (Mortimer et al., 2002; Mortimer & Staff, 2004; Shananhan, 1992; Vansteenkite et al., 2007; Wayne et al., 2007). Research (Freidman & Greenhaus, 2001; Wayne et al., 2007) has demonstrated that men tend to perceive work as a way to achieve success, money, status and power while women tend to place more value on growth, challenge and fostering relationships in the work context. Similarly, women have been found to endorse the view that work helps them to make gains interpersonally when compared to their male counterparts (Kuh, 1995). Based on this research, it is hypothesized that females will experience greater levels of student engagement when their work is intrinsically

rewarding and that males will experience lower levels of student engagement when their work offers extrinsic rewards; that is males may be socialized to provide for their families and may find it difficult to justify being in school when they could be obtaining more immediate financial gains through employment.

Similarly, the Longitudinal Youth Development Study (LYDS; Mortimer et al., 2002) found gender differences in how work and school were experienced by participants, findings that have immediate relevance to the present study. The LYDS demonstrated that for adolescent males, work stressors and early-decision making capacity on the job heightened male distress, while the acquisition of useful skills on the job diminished these feelings of depressive affect. For female adolescents, work stress and being held responsible for things beyond their control were related to an increase in depressed mood and a decrease in efficacy (Zimmer-Gembeck & Mortimer, 2006). It is unknown how the differential experiences of males and females with regard to work stressors is related to student engagement, as the aforementioned research focuses primarily upon well-being. It seems reasonable, however, to hypothesize that work stressors will influence males and females differently based upon Bronfennbrenner's Ecological Model of Development. More specifically, this model suggests the interplay of multiple contexts and the potential for individuals' characteristics or experiences to influence multiple domains (in the present case, how depressed affect among males and females as a result of work stressors might influence student engagement). The hypothesis that gender will moderate the relationship between work stressors and student

engagement is more exploratory in nature due to the lack of theoretical or empirical rationale observed in the literature thus far.

Conclusion

The purpose of this study is to examine the unique and interactive contributions of work quality, work intensity, and gender to student engagement variance. Results from this study will help address the lack of research on a potentially powerful correlate of community college student persistence in school and will contribute to the growing literature on the intersections of work and education across the lifespan. Additionally, the findings may inform educational policy related to creating instrumental support and tailored work-school programming for community college students.

Student engagement has significant ties to students' ability to persist in school and to obtain the skills necessary to survive in an increasingly global society. As Bronfenbrenner's (1979) Ecological Model of Development suggests, the ability of the United States to educate a growing and diverse population of citizens through investing in community colleges has far reaching effects. If greater numbers of males and females are able to persist in our community colleges and beyond, their success in school has the potential to help rebuild the United States' economy and to increase innovation and self-sustainability, creating a society in which each individual has a greater chance for equal access to higher education and work opportunities. If the exosystem of the United States supports the microsystems of community colleges and the respective work places of students, connections between school and work, and school, work, home, family, and community life will undoubtedly be strengthened leading to greater societal and

individual health. The following chapter will outline how the hypotheses related to the relationships and interactions between work quality, work intensity and gender contribute to student engagement among community college students.

CHAPTER 3: METHODS

This chapter describes the research design and analytic strategy of the present study including a description of research measures, participants, procedures, and recruitment strategies.

Research Design and Analytic Strategy

The present study utilized a quantitative correlational research design to assess how community college students' working lives relate to their engagement in school. More specifically, hierarchical multiple regression was utilized to test six main effects and eight interaction effects which tested the moderation of certain predictor variables with other predictor variables. The main effects tested included the relationships between work intensity, gender, and the four dimensions of work quality, including compatibility between work and school, intrinsic rewards at work, extrinsic rewards at work, and work stressors as related to student engagement. The eight interaction effects assessing moderation for student engagement that were also tested included work intensity X work quality: compatibility between work and school; work intensity X work quality: intrinsic rewards; work intensity X work quality: extrinsic rewards; work intensity X work quality: work stressors; gender X work quality: intrinsic rewards; gender X work quality: extrinsic rewards; gender X work stressors; and work intensity X gender.

Hierarchical multiple regression is the preferred methodology in social science when the research questions are primarily concerned with uncovering the relationships between certain constructs, the strength of those relationships and what, if any, interactions are present between the constructs of interest (Frazier, Tix, & Barron, 2004;

Heppner, Kivlighan, & Wampold, 1999). As such, hierarchical multiple regression was chosen as the method to explore the main effects and interactions of the present study. Four regression analyses were utilized based upon the multidimensional nature of the outcome variable student engagement, comprised of four dimensions.

In order to determine the sample size needed to explore the research questions of interest, a power analysis was conducted, taking into account the number of predictor variables, main effects and interactions involved in my study. Additionally, the effect size of similar research studies using my predictor variables of interest and similar interactions was considered when conducting a power analysis. Based upon the six predictor variables (work intensity, gender and four dimensions of work quality) and the main effects that were run for the four different outcome variables (four dimensions of student engagement) in addition to the eight two-way interaction terms, I estimated having relatively small effect sizes at $R^2 = .10$. My rationale for this effect size estimate was based on similar studies (i.e. Mortimer et al., 2002) that have examined the same work quality dimensions, in addition to the work intensity construct as related to positive student outcomes. I set my alpha level at .013 to be conservative in my estimates of detecting significant main effects and interactions based on running four hierarchical multiple regressions, which could increase my type I error rate of falsely rejecting the null hypothesis when it is true (Swerdick & Cohen, 1992). Based on these parameters, power analysis yielded a recommended sample size of 248 for an 80% chance of detecting a significant effect at $\alpha = .013$ (i.e. correctly rejecting the null hypothesis when it is false).

Participants

In total, 422 BHCC students completed surveys. Out of the total sample collected, 65.6% of students reported that they worked in addition to going to school (n = 277) while 34.4% reported not working at the time of data collection (n = 145). Based on the inclusion criterion of the present study that students work at least one hour per week while attending school, the participants for this study comprised 277 BHCC students. The gender distribution of my sample was 63.1% female (n = 173) and 35.8% male (n = 98). Additionally, 41.2% of students identified as part-time workers (n = 113), which was defined as working 20 hours or less per week, while 58.8% of students reported working more than 20 hours per week and were subsequently classified as full-time workers. With regard to enrollment status, 59.2% of students (n = 164) were considered full-time students, 35% of students identified themselves as less than full-time students (n = 97), and 5.8% did not report their enrollment status (n = 16). The criterion for being a full-time student at BHCC is enrollment in at least 12 credit hours. Additionally, 20.4% of students in my sample were part of a learning community cluster, which were developed to foster greater student engagement and persistence among first year students. These clustered courses ensure that students have the opportunity to take two or more classes with the same group of students, including courses that are planned around a theme that a faculty member chooses.

For example, a recent course offering entitled: *Flesh & Blood, Metaphor & Magic: Human Biology and College Writing I for Health Profession Students,* invites students to "learn the structure and function of the human body as (they) consider in

reading and writing how the human body is used as a metaphor for emotions and

behaviors." Students are also required to co-enroll in College Writing I and Biology Lab

(BHCC, 2010).

With regard to the age distribution, 20.7% of my sample were between 20-21

years of age (n = 55); 19.5% were between 25-29 years of age (n = 52); 18% were

between 18-19 years of age (n = 48); 16.2% were between 22-24 years of age (n = 43);

12.8% were between 30-39 years of age (n = 34); 7.1% were between 40-49 years of age

(n = 19); 4.1% of the sample were under 18 (n = 11); 1.1% were between 50-64 years of

age (n = 3); 0.4% were older than 65 years of age (n = 1), and 2.9% of the sample was

missing data for this question (n = 8). With regard to the racial and ethnic distribution of

the present sample, 27.7% of participants identified as White (n = 76); 24.1% identified

as Black or African American, non-Hispanic (n = 66); 20.8% identified as Hispanic,

Latino, or Spanish (n = 57); 15.3% identified as Asian, Asian American or Pacific

Islander (n = 42); 9.9% identified as "other" (n = 27), and 2.2% of the sample was

missing data for this question (n = 6). Additionally, 78% of the sample was comprised of

non-international students (n = 214); 18.2% identified as international students or foreign

nationals (n = 50), and 3.6% of the sample was missing data for this question (n = 10).

With regard to students' primary language, 51.5% reported English as their native

language (n = 141), 46.4% reported that English is not their native language (n = 127),

and 2.2% of the sample was missing data for this question (n = 6). With regard to

educational level of students' mothers and fathers as inquired by the CCSSE, 61% of

students' mothers do not have a two-year or four-year degree and 58.8% of students'

fathers do not have a two-year or four -year degree.

The demographics of my sample are consistent with the general BHCC

population, which enrolls more than 9,000 students in day, evening, weekend, web-based

and distance learning courses and programs. BHCC is one of the largest community

colleges within the state enrolling students from 90 countries, with 60% of the student

body consisting of students of color. Additionally, two-thirds of BHCC students are

women; the majority of all students work while attending school and the average age of

students is 28.

Measures

Participants were administered the following paper and pencil measures: (a) the

Community College Survey of Student Engagement (CCSSE, 2008), comprised of 125

items; (b) a one-item Work Intensity measure based upon Mortimer and colleagues'

(2002) Longitudinal Youth Development Study (LYDS) that assesses number of hours

students work per week, and (c) four Work Quality measures: Compatibility between

Work and School, Intrinsic Rewards, Extrinsic Rewards, and Work Stressors. The four

Work Quality dimensions were based upon Mortimer and Colleagues' LYDS.

Additionally, a second measure was used to assess the construct of work quality: Intrinsic

Rewards at Work and Extrinsic Rewards at Work, (WPI; Amabile, Hill, Hennessey, &

Tighe, 1994). This measure was utilized to ensure construct validity for these work

quality dimensions based on the relative brevity of the Extrinsic Rewards measure

adopted from the LYDS (Mortimer et al., 2002).

Reliability of the Community College Survey of Student Engagement

Student Engagement was assessed via the *Community College Survey of Student Engagement (CCSSE)*. The CCSSE is a self-report measure that has been used nationally as an instrument that assesses the performance of a particular community college on five benchmarks that are associated with student engagement including: Active and Collaborative Learning, Student Effort, Academic Challenge, Support for Learners, and Student-Faculty Interactions. The 125 items that comprise the CCSSE assess institutional practices and student behaviors that are highly correlated with student learning and student retention (Kuh, 2001; McClenney & Marti, 2006; Tinto, 1993). The CCSSE also includes descriptive and demographic questions. For the purposes of the present study, four of the five benchmarks were utilized: a) *Active and Collaborative Learning*, b) *Academic Challenge*, c) *Student-Faculty Interaction*, and d) *Student Effort*, totaling 31 items.

The three phases of model development which included establishing Confirmatory Factor Analysis (CFA) models, demonstrating reliability and demonstrating validity with GPA, indicated that the instrument and constructs derived from the instrument are reliable and valid measures of student engagement (Marti, 2009). More specifically, reliability relates to the consistency in measurement. In examining a psychological survey's reliability, researchers typically look for consistency in a survey's measurement over time and across subjects (Swerdick & Cohen, 1992). Reliability of the CCSSE benchmarks has been supported through CFA, which has shown measurement invariance across sex, part and full-time status, and year of administration. Additionally,

with regard to construct reliability, strong consistency in the underlying constructs being measured was found, despite the fact that some alphas did not exceed .70, but ranged from .56-.80 for the five benchmarks (Marti, 2009). There was also strong test-retest reliability which refers to the estimate of reliability found through correlating scores from the same people on two different administrations of the same test (Swerdick & Cohen, 1992). Based on 582 respondents, there was a high degree of consistency between first and second survey administrations.

The benchmarks established by CCSSE, which maintain strong associations with student persistence, GPA, and attainment of important academic milestones, include Active and Collaborative Learning, Student effort, Academic Challenge, Student-Faculty Interactions, and Support for Learners. Active and Collaborative Learning, Student Faculty-Interaction, and Academic Challenge had positive net effects when predicting graduation and cumulative GPA. Active and Collaborative Learning is the most powerful and versatile of the five CCSSE benchmarks (McClenny & Marti, 2006). Academic Challenge, Student-Faculty Interaction and Student Effort are the second, third and fourth dimensions, respectively, of student engagement that were used in this study, based on their strong associations with graduation rates and GPA. Descriptions of these benchmarks are provided below.

Active and Collaborative Learning is composed of seven items, which ask participants to respond on a scale of one to four choices (*never, sometimes, often, very often*) how often they engage in activities that have been associated with desirable educational outcomes. Items in this benchmark pertain to the frequency with which

students participate in class discussions, ask questions in class, work with other students both in and outside of class, make class presentations, tutor other students or participate in community service projects as a part of regular coursework (CCSSE, 2008). A sample item includes the following: *In your experiences at this college during the current school year, about how often have you asked questions in class or contributed to a class discussion?* Cronbach's alpha for this scale is .66 and test-retest reliability based on two measurements over the course of one academic year, is .73. Cronbach's Alpha for Active and Collaborative Learning was .63 in the present study.

The Academic Challenge benchmark is comprised of 10 items that assess students' perceptions of the amount of emphasis their college places on a number of activities including synthesis of ideas, application of ideas or theories to new situations, making judgments about the soundness of information or arguments, spending significant amounts of time studying, and analysis of ideas, theories and experiences. Students are also asked how frequently they have worked harder than they thought they could to meet an instructor's standards and how many books they have been required to read. Additionally, students are asked how many papers they have written and whether or not their exams have challenged them to do their best work. A sample item includes the following: *During the current school year, how much has your coursework at this college emphasized the following mental activities? 1) Synthesizing and organizing ideas, information, or experiences in new ways.* Most items, including the item described here, use a four-point Likert Scale of options for students to choose from (*very little, some, quite a bit, very much)* or (i.e. *never, sometimes, often, very often*), while other items have

a five-point Likert Scale or a seven-point Likert Scale of options. Based on the varying degrees of responses for this subscale, I adopted CCSSE's strategy of creating a composite score by standardizing the responses so that .5 was the middle value of each scale, 0 was the lowest value of each scale and 1.0 was the highest value of each scale. Cronbach's alpha for this scale is .80 and test-retest reliability, which was based on two measurements over the course of one academic year, is .77. Cronbach's Alpha was .77 for Academic Challenge in the present study.

The Student-Faculty Interaction benchmark is comprised of six items that ask students about their relationships with faculty including type and frequency of interaction both inside and outside of class, discussion of career goals, promptness of feedback and quality of student-faculty interactions. The Student-Faculty Interaction benchmark also asks students to evaluate on a four-point Likert scale (*never, sometimes, often, very often)* how often they have engaged in a particular activity. A sample item includes: *How often have you talked about career plans with an instructor or advisor?* Cronbach's alpha for this scale is .67 and test-retest reliability which was based on two measurements over the course of one academic year, is .73. Cronbach's alpha was .74 for Student-Faculty Interaction in the present study.

The Student Effort benchmark is comprised of eight items that ask students about the time spent preparing two or more drafts of a paper, how often they have worked on a paper or project that required integrating ideas or information from various sources, how often they have come to class unprepared (this item is reverse-scored), the number of books read on one's own, the number of hours spent preparing for class and the

frequency with which students used peer tutoring, skills lab and computer lab. The Student Effort benchmark also utilizes varying Likert Scales for different items: three items use a four-point scale; one item uses a five-point scale; one item uses a six-point scale and three items use a different four-point scale then the one previously mentioned. Consequently, the same procedure that was described for standardizing the Academic Challenge benchmark was utilized for the Student Effort benchmark in order to create a composite sum for this variable. Cronbach's alpha for this scale is .56 and test-retest reliability which was based on two measurements over the course of one academic year, is .74. Cronbach's Alpha for Student Effort was .59 in the present study.

Validity of the CCSSE

Validity in the context of psychological assessment refers to the extent to which a scale actually measures what it purports to measure (Swerdick & Cohen, 1992). The validity of the CCSSE is supported by confirmatory factor analyses (CFA), which demonstrated that the analytic models adequately represent the underlying constructs of interest (Marti, 2009). More specifically, GPA was regressed on latent engagement constructs to support inferences regarding the measure's validity. McLenney and Marti (2006) found that the net effects for engagement were positive when predicting degree certificate attainment within three years. Overall, the CCSSE has demonstrated strong validity as a measure of institutional processes and student behaviors that are related to positive student outcomes (Marti, 2009; McClenny & Marti, 2006).

Work Intensity

In keeping with the methodology used by Mortimer et al. (2002) for obtaining information regarding students' work schedules and hourly commitments of work per week, Work Intensity was measured along a continuum of hours worked per job, per week (1 – 100), which demonstrates strong Face Validity. Face validity refers to the degree to which something at "face value" appears to measure what it purports to measure (Fink, 1995). The face validity of Work Intensity as at least one hour spent in paid employment per week is supported through similar studies, which have quantified students' Work Intensity in this way (e.g. Barling et al., 1995; Mortimer and Colleagues 1996; Steinberg & Dornbsuch, 1991). Previous research (Barling et al., 1995; Mortimer et al., 2002) has also supported this strategy of evaluating Work Intensity in a continuous manner as opposed to categorically as a continuous measure of Work Intensity offers more reliable estimates of variance contributed by Work Intensity to outcome variables of interest.

In the present study, students were asked to consider the job that takes up the most significant proportion of their time when answering subsequent questions regarding their work quality. Participants were asked when they work (i.e. which months of the year, which days of the week, and how many days of the week students were presently working) (Please see Appendix B to view this measure).

Work Quality

Work quality, as a measurable construct, reflects four dimensions that consist of the Compatibility between Work and School, Intrinsic and Extrinsic Rewards derived

from work, and Work Stressors. The work quality dimensions are based upon measures

that Mortimer and colleagues (2002) established through their Longitudinal Youth

Development Study (LYDS). The LYDS followed the work lives of adolescents through

young adulthood and explored how students' Work Intensity and Work Quality related to

positive and negative outcomes such as academic achievement, well-being and

depressive affect.

Work Quality: Compatibility between work and school

The Compatibility between Work and School dimension of work quality evaluates

how students' work relates to their future goals. This self-report measure contains five

items, which assess the overall compatibility of work and school. Individuals who score

higher on this measure believe that their jobs help contribute to their educational pursuits

(i.e. contributing to discussions in class, learning the importance of education, and

identifying subjects they like). A sample item includes the following: *"How is your*

present job related to your long-term career goals?" Responses range *from "it is not*

linked to my long-term career objectives," "it provides skills or knowledge that will

prepare me for my future work," "it will probably continue as a long-term career" and

"I don't know." This work quality measure has sound reliability and validity as

evidenced by a Cronbach's alpha level of .76 based on a population of adolescents and

young adults that is similar demographically to that of the present study. Validity for this

dimension of work quality is supported through research (Marsh, 1991; Mortimer, et al.,

2002; Ruscoe, Morgan, & Pebbles, 1996) that has highlighted a link between positive

school outcomes such as achieving good grades when work is connected to school.

Cronbach's alpha for Compatibility between Work and School was .80 in the present

study.

Work Quality: Intrinsic rewards at work

Intrinsic aspects of work were assessed by two measures: Mortimer and

colleagues' five-item measure and Amabile and colleagues' 30-item Work Preference

Inventory (WPI). I summed these scales and performed a factor analysis and reliability

analysis to ensure that a composite measure of these two scales represented my construct

of Intrinsic Rewards at Work, which was confirmed. Cronbach's Alpha for this

composite measure was .74 in the present study. A description of the specifics of each

Intrinsic Rewards at Work measure is described next.

The first measure of Intrinsic Rewards was comprised of five items that address

learning opportunities on the job, perceived usefulness of what is learned at work in

addition to the challenges of employment. A sample item includes the following: *"My job*

gives me a chance to learn a lot of new things," and participants are asked to select the

degree to which they agree with each statement based on a 4-point Likert Scale that

ranges from (1 = *not at all true)* to (4 = *very true)*. Cronbach's alpha for the intrinsic

quality of work was .82 in a sample of older adolescents and young adults that is similar

demographically to that of the present study. Validity for this dimension of work quality

is supported through its association with related concepts such as flow (Csikszentmihalyi,

1990), the phenomenon of being so intensely engaged in a task that goal-directed

behavior, attentiveness, control and a sense of overall well-being are evoked. Additional

research (i.e. Moritmer & Shanahan, 1994) has highlighted the positive associations

between skill obtainment at work and well-being.

Work Quality: Intrinsic and extrinsic rewards at work:

The *Work Preference Inventory* (Amabile et al., 1994) was also used to measure

the work quality dimensions of Intrinsic and Extrinsic Rewards at Work. The WPI is

composed of 30 items that assess college students' and working adults' overall intrinsic

and extrinsic motivation toward their work. There are two versions available to

researchers based on their population and question(s) of interest. In the present study, I

utilized the adult work version of the scale based on my primary interest of assessing the

intrinsic and extrinsic quality of students' work experiences as opposed to their school-

work. Two sample items from the intrinsic and extrinsic subscales, respectively, are as

follows: "*Curiosity is the driving force behind much of what I do,*" and *"I'm less*

concerned with what work I do than what I get for it." Participants are asked to evaluate

how true each statement is of them based on a 4-point Likert scale ranging from (1 =

never or almost never true of me) to (4= *always or almost always true of me*). Students

were asked to respond to the 30 items included in this scale based upon their current work

experience as opposed to their general attitudes regarding what they consider rewarding

in future work experiences. Cronbach's alpha for the intrinsic subscale is .75 for an adult

sample and .70 for the extrinsic subscale for an adult sample. The WPI has demonstrated

strong test-retest reliability both in the short and long term with values ranging between

.70 - .80 (i.e., Loo, 2001). Additionally, the WPI has demonstrated sound evidence of

validity as reflected by its strong associations with measures of related constructs

including motivation, behavior and personality characteristics (Amabile et al., 1994).

Cronbach's alpha for Extrinsic Rewards was .54 in the present study.

Work Quality: Work stressors

Mortimer and colleagues' (2002) measure of Work Stressors was utilized to

assess the construct of Work Stressors. This measure is comprised of eight items, which

include questions regarding time spent on work, conditions of work, and clarity or lack

thereof for job responsibilities. Three items ask participants to evaluate how often they

find themselves in certain situations at work (i.e. "*How often is there a time pressure on*

your job?") with responses ranging from (1= *never*) to (5= *almost always*) on a 5-point

Likert scale. Five additional items ask participants to evaluate how true certain statements

are of them (i.e. "*I feel drained of my energy when I get off work."*) based upon a 5-point

Likert scale ranging from (1= *not at all true*) to (5 = *very true*). In Mortimer's study of

work quality, Work Stressors demonstrated adequate internal consistency with a

Cronbach's alpha of .72 in a sample of young adult students. Validity for this dimension

of work quality is supported through research (e.g. Mortimer et al., 2002; Steinberg,

Fegley & Dornbusch, 1993) that associates stressful working conditions with negative

student outcomes such as lower levels of mental health and well-being. Cronbach's alpha

for work stressors was .76 in the present study.

Procedure

Students were recruited through the learning communities at Bunker Hill

Community College in addition to several non-learning community classes. My data

collection dates were scheduled to coincide with the CCSSE survey dates coordinated

through Dr. Emily Dibble and Ms. Lori Catalozzi who helped recruit students through providing me with class time to explain my study and also collect data. During the months of April and May, I administered the CCSSE to over 60 classes and recruited students for my survey through these administrations where I explained my study and asked for volunteers. In the oral explanation of my study, I informed students I was a graduate student interested in the connections between students' work and school lives. I discussed how my research might help schools such as BHCC better understand the nature of students' work and school lives, which might ultimately help create programming that could help students balance their school and work lives better. I also informed students that the Work Quality Survey would take an additional 10-15 minutes after completing the CCSSE and that both surveys were voluntary for students. Those who volunteered to be participants in my study were handed a consent form, which detailed the purpose of the study, possible risks and possible benefits for participating (Please see Appendix A for the informed consent document). Students were handed a packet of the measures in pencil and paper format in addition to the full CCSSE that collectively took students between 60-75 minutes to complete. There was approximately a 78% response rate based on the number of students who actually attended class and volunteered to complete the Work Quality measure (not taking into account the number of students listed on the class roster). After students filled out both the CCSSE and Work Quality and Work Intensity measures, I transferred the 31 items of the CCSSE benchmarks of interest to the scantron sheets that students used for my measures. Data analysis took place over the summer and fall of 2009. The results of this study were made

available to all parties involved including the organization that administers the CCSSE, Bunker Hill Community College faculty, administration, staff and student participants in the spring semester of 2010.

Summary

In chapter three, the quantitative research design and analytic strategy of the present study were introduced. The development and description of research measures including validity and reliability were discussed in detail. Participant demographics and procedures for data collection and dissemination were also presented. Quantitative data analysis included descriptive statistics, correlations between all variables, T-Tests, ANOVAs and Hierarchical Multiple Regression, the results of which are presented next.

CHAPTER 4: RESULTS

This chapter details the preliminary and primary analyses that have been used to explore the research questions posed in this project. The preliminary analyses describe criteria for inclusion, how missing data were handled, how assumptions for normality were assessed and a description of relevant statistics. Following a discussion of preliminary analyses, the primary analyses are described, organized by hypothesis.

Preliminary Analyses

   Inclusion criteria and missing data. Following Mortimer and colleagues (2002) Work Intensity inclusion criterion, participants were included in the present study if they were employed at least one hour per week and were attending school either on a part-time or full-time basis. Before missing data were assessed, 277 cases met the criteria for inclusion in the study as these students were both enrolled in school and were also working at least one-hour per week. With regard to missing data, participants were included only if they completed both the CCSSE survey and Work Quality survey. In total, 151 cases had missing data (54.5%) with a range of between 1-56 missing items. Over 74% of cases missing data were missing between one to nine items only (between 0.5%-5% of overall data). Participants who completed only portions of the CCSSE and/or the Work Quality survey were included if their surveys were more than 50% complete. Using these criteria, three cases were deleted due to the fact that these cases were missing substantial portions of CCSSE survey data and/or Work Quality survey data. This left 274 cases for analysis.

Linear interpolation was chosen as the missing data strategy based upon its ability to provide meaningful data point substitutions that are based upon the trend of surrounding data points for a particular case. More specifically, "linear interpolation examines the values across a span, identifies any pattern in the values and creates a substitute value for the missing value that conforms to that pattern" (De Vaus, 2002, p. 69). Linear interpolation is only valid when there are enough data points surrounding a missing value to substitute a meaningful data point, which is why those cases that were missing substantial data within the CCSSE survey and/or Work Quality survey were eliminated from the sample. Each scale was summed and z scores were created for each scale score in preparation for the preliminary analyses.

Assumptions of normality. Once linear interpolation was utilized to replace missing values and the scales were summed and transformed into z scores, the data were examined further to ascertain whether or not the assumptions of normality were met. First, the data were checked for univariate outliers, which are defined as z scores greater than 3.29 (Tabachnick & Fidell, 2001). Three cases were found where one or more z scores exceeded the value of 3.29: case 239320 had a z score of 3.88 on Total Work Hours; case 091427 had two elevated z scores including 3.81 on the Student Effort dimension of Student Engagement and 4.09 on the Student-Faculty Interaction dimension of Student Engagement. Lastly, case 241066 had two elevated z scores including a z score of 3.64 on the Student Effort dimension of Student Engagement and 3.37 on the Academic Challenge dimension of Student Engagement. Each data point from the paper surveys was cross-checked against the scanned data in SPSS, therefore, it is unlikely that

these outliers are a result of data-entry error. A plausible explanation for these outliers is that they are part of the population surveyed; however, they are more extreme then expected. Based on the recommendation of Cohen, Cohen, West and Aiken (2003) that outliers constituting 1- 2% of one's sample should be left alone, these outliers were not eliminated from the sample.

An additional statistical check for univariate outliers was conducted through examining the skewness and kurtosis of my variables. Skewness refers to the symmetry of the distribution of variables while kurtosis refers to the peakedness of a distribution. Acceptable measures of skewness and kurtosis have traditionally been between -2 and +2 if the data are normally distributed (Lewis-Beck, Bryman & Liao, 2004). Please see Table 1.0 for a description of the raw frequencies for the sums of both the predictor and criterion variables, including range, minimum, maximum, mean, standard deviation, variance, skewness, kurtosis and the internal consistency, assessed by Cronbach's alpha.

Table 1.0 *Descriptive Statistics for Predictor and Criterion Variables*

	AC	ACL	SE	SFI	Gender	WSC	WS	IR	ER	WI
N Valid	272	274	273	274	271	274	273	274	273	274
Mean	6.44	2.74	4.63	2.39	.64	12.82	19.91	54.71	36.90	28.82
Std. Dev.	2.15	1.29	1.67	1.20	.48	3.44	4.94	7.75	5.02	12.71
Median	6.10	2.33	4.53	2.31	1.00	13.00	19.00	54.00	37.00	30
Mode	5.80	2.31	3.80	1.32	1.00	12.00	17.00	53.00	35.00	40
Range	13.17	7.16	11.07	8.00	1.00	15.00	26	41.00	29.00	81
Minimum	2.07	.66	1.11	.33	0.00	5.00	8.00	33.00	22.00	0
Maximum	15.24	7.82	12.18	8.33	1.00	20.00	34.00	74.00	51.00	81
Skewness	.85	1.17	1.29	.98	-.58	-.12	.13	.12	-.01	.40
Kurtosis	1.30	1.89	3.35	1.94	-1.68	-.18	-.36	-.16	-.30	.74

Cronbach's Alpha	.77	.63	.59	.74		.80	.76	.74	.54

Note. AC = Academic Challenge, ACL = Active and Collaborative Learning, SE = Student Effort, SFI = Student Faculty Interaction, WSC = Work/School Compatibility, WS = Work Stressors, IR = Intrinsic Rewards, ER = Extrinsic Rewards, WI = Work Intensity.

Based upon the aforementioned acceptable range for measures of skewness and kurtosis, just one value fell outside of the acceptable range of $+2$ or -2 for kurtosis or peakedness: Student Engagement: Student Effort was 3.35. Based on the histogram of the data distribution (see Graph 1.0), this variable seems to have a more exaggerated peak of values clustered around the mean and flatter tails, which would be characterized as a leptokurtic distribution due to the excess positive skew. Based on the aforementioned acceptable values of kurtosis, I elected to perform a square root transformation on Student Effort, which corrected kurtosis from 3.35 to 1.33. Hierarchical multiple regression analyses were repeated with the newly transformed variable for Student Effort which resulted in no differences in significant findings for Student Effort; the significant interaction which will be discussed in later pages, remained significant.

Graph 1.0: *Kurtosis: Leptokurtic distribution of Student Engagement: Student Effort*
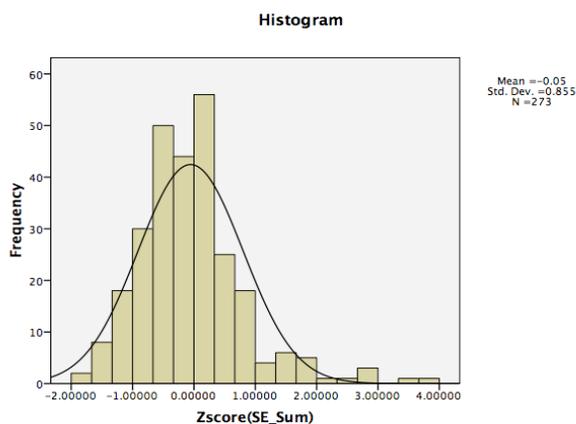
Assumptions of homoscedasticity. Homoscedasticity of variables was also assessed as an additional check that the assumptions of normalcy of data were met. Homoscedasticity refers to the degree to which the variance of errors of the predictor variables is consistent across variables and can be assessed by examining the studentized residual scatterplots, or the plots of the residuals, weighted by their standard deviations, (Osborne &Waters, 2002). If heteroscedasticity is detected in the scatterplots, the next step is to determine how significant it is. Minor levels of heteroscedasticity are expected; however, if heteroscedasticity is significant, then the risk for making a type 1 error, or rejecting the null hypothesis when it is true, increases. Upon examining the scatterplots associated with my predictor variables of Work Quality and Work Intensity, all scatterplots appeared homoscedastic and therefore no additional tests of homoscedasticity were run.

Multicollinearity. The data were also checked for the presence of multicollinearity. Multicollinearity refers to the degree to which the predictor variables are correlated. If the predictor variables are too highly correlated, the statistical conclusion validity of the model can be compromised, as there may be underlying factors that are similar within the predictor variables and which are accounting for variance within the dependent variable (Swerdick & Cohen, 1992). There are multiple ways to check for the presence of multicollinearity, among which evaluation of the variation inflation factor (VIF) and examination of the eigenvalues and the associated tolerance levels are the preferred methods (Callaghan & Chen, 2008). The VIF assesses the influence of collinearity on the variables within the regression model whereby values

exceeding 2.5 indicate that multicollinearity is a problem. An eigenvalue represents the

numerical relationships within a matrix in a singular value. Eigenvalues that are too close

to zero indicate the presence of multicollinearity. Tolerance levels are a measure of

collinearity calculated by SPSS. Values less than .1 should be investigated (Callaghan &

Chen, 2008). Using these parameters, multicollinearity was not an issue among my

variables as all VIF's were below 2.0, all eigenvalues were above .5 and all tolerance

levels were between .60 and .90. Intercorrelations of predictor and criterion variables are

presented below.

Table 2.0: *Correlational Matrix of Work Quality and Student Engagement Variables*

Variable	1	2	3	4	5	6	7	8	9	10
1. WSC	---									
2. WS	.14*	---								
3. IR	.44**	.19**	---							
4. ER	.13*	.23	.33*	---						
5. WI	.09	.31**	.11	.20**	---					
6. Gender	-.03	-.06	.07	.01	-.05	---				
7. ACL	.10	.20**	.19**	.08	.09	-.07	---			
8. AC	.07	.17**	.20**	.15*	.09	-.03	.33**	---		
9. SFI	.08	.20**	.19**	.11	.04	-.11	.55**	.34**	---	
10. SE	.03	.05	.11	.09	.01	-.03	.33**	.56**	.38**	---

Note. Correlations are based on transformed and standardized variables. WSC = Work/School Compatibility, WS = Work Stressors, IR = Intrinsic Rewards at Work, ER = Extrinsic Rewards at Work, WI = Work Intensity, ACL = Active and Collaborative Learning, AC = Academic Challenge, SFI = Student-Faculty Interaction, SE = Student Effort. * $p < .05$, ** $p < .001$.

The correlations were followed by independent t-tests for bi-level demographic

variables and ANOVA's for multi-level demographic variables to assess within and

between group differences on Student Engagement dimensions for these variables. There

were no significant differences found on Student Engagement dimensions as a result of

sex, age, or educational level of mother or father. Consistent with McLenney and Marti's

(2006) results in previous CCSSE research, no significant differences were found across

racial and ethnic groups for the Active and Collaborative Student Engagement dimension.

There were also no differences found across race and ethnicity on the Student

Engagement dimensions of Academic Challenge and Student Faculty Interaction. There

were two significant differences found on the Student Engagement dimension of Student

Effort between Black and White students and Asian/Asian American and White students:

Black students and Asian/Asian American students were more engaged in Student Effort

when compared to White students. These findings are consistent with some prior CCSSE

research (e.g., Marti & McLenney, 2006) and will be discussed in further detail in

Chapter 5.

Additional significant findings to emerge from examining the relationships

between demographic grouping variables and student engagement dimensions included

the following: (a) Students whose native language is not English were more engaged

across three of the four Student Engagement dimensions: Academic Challenge, Active

and Collaborative Learning, and Student Effort, (b) Full-time students were more

engaged than part-time students across three of the four Student Engagement dimensions:

Active and Collaborative Learning, Academic Challenge and Student-Faculty Interaction,

(c) Students who were involved in a Learning Community were more engaged in

Student-Faculty Interaction, (d) International students were more engaged across three of

the four Student Engagement dimensions: Active and Collaborative Learning, Academic

Challenge and Student Effort, and (e) Students who had earned 45-60 credits were more

engaged on the Active and Collaborative Learning dimension than students who had

earned 1-14 credits at the time of the study.

Primary Analyses

Hypothesis 1: Students who work more than 30 hours per week while attending school will have lower levels of student engagement.

Hypothesis 1 of this study was explored through an Independent Samples t-test which divided the present sample into two groups: students who worked 30 or more hours per week (n = 140) and students who worked less than 30 hours per week (n = 134). The four student engagement dimensions of Active and Collaborative Learning, Academic Challenge, Student-Faculty Interaction and Student Effort were examined for significant differences between groups. No significant differences were found. The Student Engagement dimension of Active and Collaborative Learning was the only measure where the difference between groups approached but did not reach significance (see Table 3.0). This trend suggests that with a larger sample size, we may be able to conclude that students who work 30 or more hours per week are more engaged in Active and Collaborative Learning then their peers who work less than 30 hours per week. This trend is antithetical to the hypothesis proposed, which will be discussed in greater detail in the following chapter.

Table 3.0 *Independent Sample T-Test for Hypothesis 1: Higher intensity Workers will be Less Engaged in School (N = 274)*

	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Zscore(ACL_Sum)	1.72	272	.087	.18	.10	-.03	.39
Zscore(AC_Sum)	.30	270	.767	.03	.10	-.17	.23

Zscore(SFI_Sum)	.19	272	.853	.02	.10	-.18	.22
Zscore(SE_Sum)	-1.13	271	.266	-.08	-.05	-.13	.02

In order to test the remaining eight hypotheses, I ran four hierarchical multiple regressions corresponding with each of the student engagement dimensions. In the first step, the main effects of Work Intensity, Gender and Work Quality dimensions were entered followed by the eight interaction terms predicting Student Engagement. Results of these regressions are organized by hypothesis and represented in Tables 4.0-7.0 below.

Hypothesis 2: Students who experience higher levels of work quality on the dimension of compatibility between work and school will have higher levels of student engagement.

This hypothesis was not supported in the current analyses; higher levels of Work Quality on the dimensions of Compatibility between Work and School were not significantly related to higher levels of Student Engagement (see Tables 4.0 -7.0).

Hypothesis 3: Students who experience higher levels of work quality on the dimension of intrinsic rewards at work will have higher levels of student engagement.

Hypothesis 3 found support on two dimensions of Student Engagement. Those who experienced more Intrinsic Rewards at Work were more engaged in school on the dimensions of Active and Collaborative Learning and Student-Faculty Interaction. Additionally, the contribution of Intrinsic Rewards at Work approached but did not reach significance on the Academic Challenge dimension of Student Engagement (See tables 4.0-6.0).

Hypothesis 4: Students who experience lower levels of work quality on the dimension of work stressors (high work stressors) will have lower levels of student engagement.

Hypothesis 4 was not supported in the current analyses as *lower* levels of Work

Quality on the dimension of Work Stressors were not significantly related to *lower* levels

of Student Engagement. Surprisingly, *higher* levels of Work Stressors were significantly

related to *higher* levels of Student Engagement on the dimensions of Active and

Collaborative Learning and Student-Faculty Interaction. Additionally, there was a trend

for higher Work Stressors to predict higher levels of Academic Challenge. Notably, the

significant results highlighted above for Work Stressors are antithetical to the predicted

direction of the relationship. The multiple regression analyses involving Active and

Collaborative Learning, Student Faculty-Interaction and Academic Challenge will be

described next to highlight the significant findings for Hypotheses 3 and 4.

The multiple regression analysis that involved the Student Engagement dimension

of Active and Collaborative Learning indicated that the model for main effects was

significant, $F(6, 263) = 3.70$, p < .005, $R^2 = .08$, Adj. $R^2 = .06$. The beta coefficients

demonstrate that variability in Work Stressors contributed the most to Active and

Collaborative Learning scores ($\beta = .19$, $t = 2.92$, p < .013), followed by Intrinsic Rewards

at Work ($\beta = .18$, $t = 2.52$, p < .013). Those who experienced higher levels of Work

Stressors were more engaged in school on the dimension of Active and Collaborative

Learning; moreover, Work Stressors accounted for 2.9% of unique variance in Active and

Collaborative Learning scores. Similarly, those who experienced more Intrinsic Rewards

at Work were more engaged in school on the dimension of Active and Collaborative

Learning and Intrinsic Rewards at Work accounted for 2.5% of unique variance in Active

and Collaborative Learning scores. Therefore, Hypothesis 3 found support for the Active

and Collaborative Learning dimension of student engagement (see Table 4.0).

Table 4.0 *Summary of Hierarchical Regression Analysis for Work Quality and Work Intensity Predicting Student Engagement: Active and Collaborative Learning*

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.06	.05		-1.11	.269
Work/School Compatibility (WSC)	-.00	.06	-.00	-.08	.941
Work Stressors (WS)	.16	.05	.19**	2.92	.004
Intrinsic Rewards at Work (IR)	.15	.06	.18**	2.52	.012
Extrinsic Rewards at Work (ER)	-.02	.05	-.03	-.39	.699
Work Intensity (WI)	.00	.05	.00	.06	.953
Gender	-.06	.05	-.07	-1.22	.226
2 (Constant)	-.06	.05		-1.12	.264
Work/School Compatibility (WSC)	-.00	.06	-.00	-.12	.903
Work Stress (WS)	.15	.06	.18**	2.59	.010
Intrinsic Rewards at Work (IR)	.15	.06	.18**	2.51	.013
Extrinsic Rewards at Work (ER)	-.02	.06	-.02	-.34	.736
Work Intensity (WI)	.00	.06	.00	.06	.952
Gender	-.06	.05	-.07	-1.08	.281
WSC X WI	-.05	.06	-.05	-.76	.448
WS X WI	.02	.05	.03	.47	.641
IR X WI	.00	.06	.01	.12	.906
ER X WI	.00	.06	.00	.01	.991
IR X Gender	-.02	.06	-.02	-.30	.762
ER X Gender	.03	.06	.03	.50	.619
WS X Gender	-.00	.05	-.04	-.06	.953
WI X Gender	-.02	.05	-.02	-.32	.748

Dependent Variable: Active and Collaborative Learning
**p < .013.
*p < .05.

Similarly, the next regression analysis that involved the Student Engagement dimension of Student-Faculty Interaction revealed that the model for main effects was significant and accounted for 7.1% of total variance in Student-Faculty Interaction scores $F(6, 263) = 4.44$, p < .001, $R^2 = .09$, Adj. $R^2 = .07$. The individual beta coefficients demonstrated that variability in Work Stressors contributed the most to Student-Faculty Interaction scores ($\beta = .21$, $t = 3.25$, p < .013), followed by Intrinsic Rewards at Work ($\beta = .18$, $t = 2.55$, p < .013). In other words, students who experienced more stress at work also reported being more engaged in school on the dimension of Student-Faculty Interaction. Work Stressors accounted for 3.6% of unique variance in Student-Faculty Interaction scores. Additionally, students who reported greater Intrinsic Rewards at Work reported being more engaged in school. Intrinsic Rewards at Work accounted for 2.2% of unique variance in Student-Faculty Interaction scores. Lastly, Gender approached but did not reach significance as a predictor for student engagement ($\beta = -.12$, $t = -2.01$, p < .05) suggesting a trend that male students are more engaged in Student-Faculty Interaction then their female peers. Therefore, hypothesis 3 found support on the Student-Faculty Interaction dimension of Student Engagement and hypothesis 4 found significant results, antithetical to those proposed on the Student-Faculty Interaction dimension of Student Engagement (see Table 5.0).

Table 5.0 *Summary of Hierarchical Regression Analysis for Work Quality and Work Intensity Predicting Student Engagement: Student Faculty Interaction*

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.06	.05		-1.33	.183
Work/School Compatibility (WSC)	-.02	.05	-.03	-.42	.674
Work Stressors	.17	.05	.21**	3.25	.001
Intrinsic Rewards at Work	.14	.06	.18**	2.55	.011
Extrinsic Rewards at Work	.01	.05	.01	.21	.831
Work Intensity	-.05	.05	-.06	-.93	.355
Gender	-.10	.05	-.12*	-2.01	.046
2 (Constant)	-.09	.05		-1.84	.067
Work/School Compatibility (WSC)	-.01	.05	-.01	-.10	.918
Work Stressors (WS)	.17	.05	.21**	3.10	.002
Intrinsic Rewards at Work (IR)	.15	.06	.19**	2.71	.007
Extrinsic Rewards at Work (ER)	.02	.05	.02	.32	.751
Work Intensity (WI)	-.06	.05	-.07	-1.10	.273
Gender	-.09	.05	-.12	-1.91	.057
WSC X WI	.05	.06	.05	.80	.425
WS X WI	.09	.05	.13	1.94	.054
IR X WI	-.01	.06	-.01	-.13	.897
ER X WI	.02	.05	.03	.41	.682
IR X Gender	-.06	.06	-.07	-1.09	.275
ER X Gender	-.03	.05	-.04	-.61	.546
WS X Gender	-.03	.05	-.05	-.74	.459
WI X Gender	.03	.05	.04	.67	.502

Dependent Variable: Student Engagement: Student-Faculty Interaction
**p < .013.
* p < .05.

Results from the regression analysis involving the Student Engagement dimension of Academic Challenge indicated that the model for main effects was significant and

accounted for 4.6% of variance, F (6, 263) = 3.18, p < .013, R^2 =.07, Adj. R^2 = .05. There

were two predictors, Intrinsic Rewards at Work and Work Stressors, which approached

but did not reach significance at the .013 level, suggesting a trend that the more students

feel that their work offers intrinsic rewards, the more engaged they are in school, (β =

.17, t = 2.37, p < .05). Similarly, the more students feel that their work is stressful, the

more engaged they may be in school, (β = .13, t = 2.01, p < .05) on the dimension of

Academic Challenge. Hypotheses 3 and 4 approached but did not reach significant

support on the Academic Challenge dimension of Student Engagement (see Table 6.0).

Table 6.0 *Summary of Hierarchical Regression Analysis for Work Quality and Work*
Intensity Predicting Student Engagement: Academic Challenge

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
1 (Constant)	-.07	.05		-1.47	.143
Work/School Compatibility (WSC)	-.02	.05	-.04	-.38	.707
Work Stressors (WS)	.11	.05	.13*	2.01	.040
Intrinsic Rewards at Work (IR)	.14	.06	.17*	2.37	.018
Extrinsic Rewards at Work (ER)	.04	.05	.05	.79	.430
Work Intensity (WI)	.03	.05	.04	.55	.580
Gender (G)	-.03	.05	-.03	-.55	.580
2 (Constant)	-.10	.05		-1.98	.048
Work/School Compatibility (WSC)	.01	.06	.01	.09	.930
Work Stressors (WS)	.13	.06	.16*	2.42	.016
Intrinsic Rewards at Work (IR)	.14	.06	.18*	2.47	.014
Extrinsic Rewards at Work (ER)	.03	.05	.04	.60	.548
Work Intensity (WI)	.00	.06	.00	.06	.949
Gender	-.03	.05	-.04	-.66	.513
WSC X WI	.12	.06	.14*	2.02	.044

WS X WI	.04	.05	.05	.73	.469
IR X WI	-.02	.06	-.02	-.30	.762
ER X WI	.06	.06	.08	1.14	.256
IRX Gender	-.02	.06	-.02	-.33	.739
ER X Gender	-.00	.05	-.01	-.08	.939
WS X Gender	-.01	.05	-.02	-.23	.820
WI X Gender	-.02	.05	-.02	-.32	.752

a. Dependent Variable: Student Engagement: Academic Challenge
**$p < .013$.
*$p < .05$.

Hypothesis 5: Students who experience higher levels of work quality on the dimension of extrinsic rewards at work will have lower levels of student engagement.

This hypothesis was not supported in the current analyses, as higher levels of work quality on the dimension of Extrinsic Rewards at Work were not significantly correlated with lower levels of Student Engagement (see tables 4.0-7.0).

Hypothesis 6: The relationships between the four work quality dimensions and the four student engagement dimensions will be moderated by work intensity; that is the greater number of hours students work, the stronger the relationships between work quality dimensions and student engagement dimensions will be.

The regression analysis that involved the Student Engagement dimension of Student Effort indicated no significant main effects findings in the first step; however, the results demonstrated that entering the interaction terms yielded one significant interaction in the second step accounting for 2.9% of unique variance in Student Effort Scores: Extrinsic Rewards at Work X Work Intensity *($\beta = .19$, $t = 2.77$, p < .013)*. Frazier and colleagues (2004) advise that interactions are best understood and reported through

utilizing the unstandardized predictor values and plotting them one standard deviation above and below the mean of the criterion variable. In this case, the regression slope was steeper for individuals who experienced less Extrinsic Rewards at Work; the negative relationship between Student Effort and Extrinsic Rewards at Work was stronger for individuals who worked more intense hours (see Figure 1). Stated simply, students who experienced lower levels of Extrinsic Rewards at Work were less engaged in school the more hours they worked when compared to students who experienced higher levels of Extrinsic Rewards at Work while working equally intense hours.

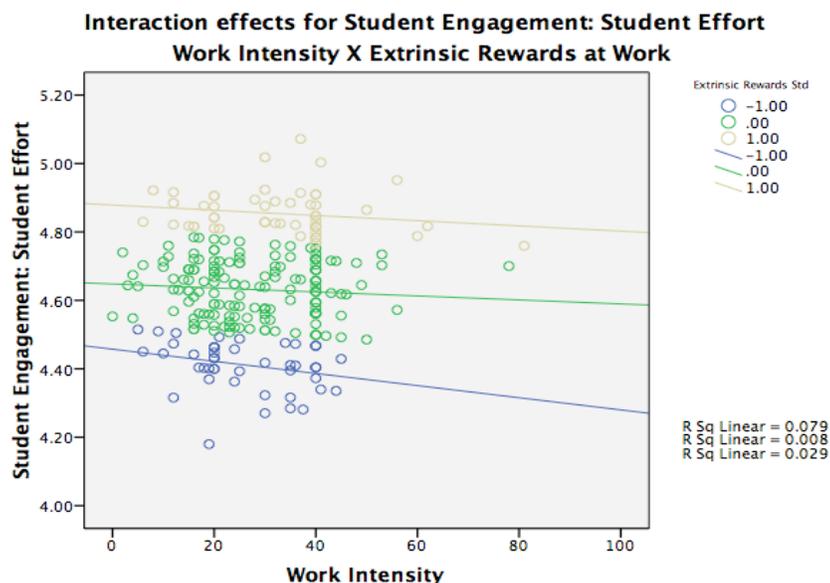*Figure 1*. Interaction of Extrinsic Rewards at Work and Work Intensity

Additionally, one interaction term for the Academic Challenge dimension of Student engagement approached, but did not reach significance: Work/School Compatibility X Work Intensity *(β = .14, t = 2.02, p <.05)* (see Table 6.0), suggesting that there may be a trend for Work Intensity to moderate the relationship between

students' endorsement of the Compatibility between Work and School and their student engagement. In other words, there was a trend for students who experienced lower levels of Compatibility between Work and School to be less engaged in school the more hours they worked while students who experienced higher levels of Compatibility between Work and School experienced higher levels of student engagement while working equally intense hours. Therefore, hypothesis 6 found support with regards to one Work Quality dimension: Extrinsic Rewards at Work and one Student Engagement dimension: Student Effort while the interaction between Work/School Compatibility approached but did not reach significance (see Tables 6.0 - 7.0).

Table 7.0 *Summary of Hierarchical Regression Analysis for Work Quality and Work Intensity Predicting Student Engagement: Student Effort*

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.08	.05		-1.64	.102
Work/School Compatibility (WSC)	-.02	.05	-.03	-.42	.678
Work Stressors (WS)	.04	.05	.05	.75	.457
Intrinsic Rewards at Work (IR)	.08	.06	.10	1.32	.187
Extrinsic Rewards at Work (ER)	.04	.05	.04	.66	.513
Work Intensity (WI)	-.02	.05	-.02	-.32	.748
Gender	.00	.05	.00	.01	.992
2 (Constant)	-.10	.05		-2.06	.041
Work/School Compatibility (WSC)	-.02	.06	-.02	-.34	.737
Work Stressors (WS)	.08	.06	.10	1.39	.165
Intrinsic Rewards at Work (IR)	.09	.06	.11	1.56	.121
Extrinsic Rewards at Work (ER)	.01	.05	.01	.164	.870
Work Intensity (WI)	-.06	.06	-.08	-1.10	.273
Gender	-.00	.05	-.00	-.06	.949

WSC X WI	.00	.06	.00	-.01	.990
WS X WI	-.04	.05	-.05	-.77	.440
IR X WI	.05	.06	.06	.81	.421
ER X WI	.15	.06	.19**	2.77	.006
IR X Gender	-.04	.06	-.05	-.71	.477
ER X Gender	-.01	.05	-.02	-.24	.810
WS X Gender	.00	.05	.00	-.00	.997
WI X Gender	-.08	.05	-.10	-1.47	.144

Dependent Variable: Student Engagement: Student Effort
**p < .013.
* p < .05.

Hypothesis 7: The relationship between the work quality dimension of intrinsic rewards at work and student engagement will be moderated by gender; that is the positive relationship between intrinsic rewards and student engagement will be magnified for female students.

   This hypothesis was not supported in the current analyses; the relationship between the work quality dimension of Intrinsic Rewards at Work and Student Engagement was not significantly moderated by Gender. Moreover, there were no significant interactions found across any of the four Student Engagement dimensions (see Tables 4.0-7.0).

Hypothesis 8: The relationship between the work quality dimension of extrinsic rewards at work and student engagement will be moderated by gender; that is, the negative relationship between extrinsic rewards at work and student engagement will be magnified for male students.

   This hypothesis was not supported in the current analyses, as there were no significant main effects found for Extrinsic Rewards at Work and any of the Student

Engagement dimensions. Additionally, there were no significant interactions found between Gender and Extrinsic Rewards at Work as related to Student Engagement (see Tables 4.0-7.0).

Hypothesis 9: The relationship between the work quality dimension of work stressors and student engagement will be moderated by gender.

This hypothesis was not supported in the current analyses, as the relationship between Work Stressors and Student Engagement was not moderated by Gender. There were no significant interactions found across any of the four student engagement dimensions (see Tables 4.0-7.0).

Summary of Results

Students who worked 30 or more hours per week did not differ significantly from students who worked less than 30 hours per week across the four dimensions of Student Engagement. Overall, the most powerful predictors of Student Engagement were Work Stressors and Intrinsic Rewards at Work as evidenced by significant findings on the Student Engagement dimensions of Active and Collaborative Learning and Student-Faculty Interaction. Additionally, Work Stressors and Intrinsic Rewards at Work approached, but did not reach, significance on the Student Engagement dimension of Academic Challenge. With regards to the hypothesized interaction effects, one significant interaction was found for the Student Engagement Dimension of Student Effort. Students who experienced lower levels of Extrinsic Rewards at Work while working more intense hours were less engaged then their counterparts who worked similarly intense hours but who experienced more Extrinsic Rewards at Work. Additionally, the interaction term

Work/School Compatibility X Work Intensity approached but did not reach significance

for the Student Engagement dimension of Academic Challenge.

CHAPTER 5: DISCUSSION

*"Students who are less engaged are at the greatest risk of dropping out" (*CCSSE, *2009, p. 8).*

This study explored the relationship between community college students' working lives and their engagement in school. Student engagement has been studied widely across developmental and grade level based on its strong association with student persistence and its equally powerful, but negative association with school drop-out (e.g., Astin, 1975; 1993; Blustein et al., 2000; CCSSE, 2007; 2008; 2009; Fredricks et al., 2004; Kuh, 2001; Terenzini; 2005; Voekl, 1996). Previous research (e.g., Buchman & DiPrete, 2006; U.S. Department of Education, 2004) has also observed a significant decrease in male engagement from school in both two-year and four-year colleges as over half of all Bachelors degrees in this country are awarded to women across racial and ethnic groups. In the context of community college, identifying correlates of student engagement among men and women has become increasingly critical, as the undeniable link between education and an individual's ability to survive has become more magnified in a struggling economy. Jobs for individuals with at least an associate's degrees are projected to grow two times as fast as those requiring a high school degree (*Preparing the Workers of Today,* 2009), while the discrepancies between salaries for individuals with a high school diploma/GED versus an Associate's, Bachelor's or Graduate degree continues to widen (US Department of Labor Bureau of Labor Statistics, 2006; 2008). Furthermore, community colleges in the United States are educating close to 50% of all students engaged in higher education while less than 20% of these students are able to

obtain a Bachelor's degree by transferring to a four-year college within eight years of

enrolling (Bailey & Morest, 2006). In fact, community colleges lose an estimated 50% of

their students between the first and second years of enrollment (CCSSE, 2007; Harper &

Quaye, 2009) creating a significant interest in factors that foster student engagement

among government officials, researchers and higher education personnel.

The Community College Survey of Student Engagement (CCSSE), the primary

outcome measure of the present study, is a national survey that has been used by

hundreds of community colleges over the past nine years to examine best practices for

student engagement. While much has been learned about some of the strongest correlates

of student engagement and the most significant risk factors for drop-out, little is known

about a variable present in the lives of more than 60% of community college students:

their work. An estimated 54% of community college students work 20 or more hours per

week while an estimated 36% of students work more than 30 hours per week while

attending school full-time (CCSSE, 2009). Research has pointed to close student-faculty

relationships, class-based activities that capitalize on students' on-campus time, high

expectations for students, and small learning communities (CCSSE, 2007; Tinto, 1993) as

being strong predictors for student engagement while being a 1st generation college

student, taking time off between high school and college, being academically unprepared

for college-level work, being low-income, being male, being a student of color, being

non-traditional aged and working more than 30 hours per week (Bailey & Morest, 2006;

CCSSE, 2007; 2008) are all known risk factors for student disengagement. Despite

knowing that students who work more than 30 hours per week are at risk for becoming

disengaged from school, we know little about how the intensity and quality of students'

work lives specifically relate to their engagement in school. While the CCSSE inquires

about the number of hours students work (commonly referred to as Work Intensity), there

is virtually no research on the quality of students' working lives or how the intensity and

quality of students' work lives contributes to or detracts from their engagement in school.

The research that does exist on the relationship between students' working lives

and their ability to persist in school focuses primarily on adolescent students (i.e.,

Greenberger & Steinberg, 1986; Mortimer et al., 2002) or four-year college students (i.e.,

Pascarella & Terenzini, 1991; 2005), leaving a notable gap in the literature with regard to

community college students. The present study sought to fill this gap in the student

engagement literature through exploring the unique and interactive contributions of Work

Intensity, Gender, and Work Quality to Student Engagement.

Work Quality as defined by the present study includes Compatibility between

Work and School, the experience of Intrinsic and Extrinsic Rewards at Work and the

degree to which Work Stressors are present. Student Engagement is comprised of four

dimensions including Active and Collaborative Learning, Academic Challenge, Student-

Faculty Interaction and Student Effort. Utilizing Bronfenbrenner's (1979) Ecological

Framework, which emphasizes the potential for positive and reciprocal relationships

between microsystems (i.e., Work and School), the present study hypothesized that Work

Quality, Work Intensity and Gender would predict Student Engagement among

Community College students. In the following pages, the significant and non-significant

findings are discussed in light of current research and the specific hypotheses of this

study. The findings are then followed by a discussion of limitations and implications for future research, educational and counseling practice and policy.

Main Findings

Hypothesis 1: Work Intensity and Student Engagement

As noted in the previous chapter, this hypothesis was not supported in the present study. Students who worked more than 30 hours per week did not report being less significantly engaged in school when compared to students who worked less than 30 hours per week, despite previous research which points towards working 30 hours per week (i.e., CCSSE, 2007) as a risk-factor for disengagement. There was one non-significant trend found within the Student Engagement dimension of Active and Collaborative Learning: students who work more than 30 hours per week may be more likely to be actively and collaboratively engaged in their learning, which is counterintuitive to the present hypothesis. Relatedly, it is important to note that my sample had more full-time students (60%) and more students who reported working more than 30 hours per week (51%) than the general community college population. The CCSSE reports that 60% of community college students are part-time, 40% are enrolled full-time, and 36% report working more than 30 hours per week. Based on research (i.e., CCSSE 2007; 2008; 2009; Steinberg & Dornbusch, 1991) that identifies part-time enrollment status as a risk factor for decreased student engagement, my sample of predominantly full-time students and students who report working more than 30 hours per week, may help explain why there were no significant differences found between students who work more than 30 hours per week and students who work less than 30

hours per week. Stated simply, my sample may be more engaged overall than the general community college population. Additionally, the supplemental analysis that was run for enrollment status differences in engagement supports this interpretation; full-time students were more engaged than part-time students in the present sample across three out of the four student engagement dimensions: Active and Collaborative Learning, Academic Challenge and Student-Faculty Interaction.

The present sample was representative, however, of the cross-section of students who report being enrolled full-time while simultaneously working more than 30 hours per week (22%) (CCSSE, 2009). These findings suggest that there may be a subgroup of the population who are highly engaged in school while being simultaneously engaged in full time employment. It may also be that students who work more than 30 hours per week and who attend school full-time are accustomed to working intense hours while attending school. These students may have adapted to balancing their roles of student and worker in high school, which promoted a proverbial "steeling" (Rutter, 1985) of their resources to manage both contexts successfully. In fact, Mortimer and colleagues (2002) argue that cumulative hours of work over time might be more important in promoting or inhibiting positive student outcomes when compared to present work intensity. This notion, when applied to the present sample of community college students, might help explain the lack of significant differences in student engagement found between students who work more or less intense hours.

Additional research (i.e., Mortimer et al., 2002; Shanahan & Mortimer, 1996) related to the potential positive relationship between work intensity and student

engagement when taking into account the *quality* of work, provides further support for this finding. In other words, students who are working more than 30 hours a week may be engaged in higher quality work which is associated with consistent and high levels of engagement in school as well. The quality of work as defined in the present study could consist of work that is compatible with school, work that is intrinsically and/or extrinsically rewarding, and/or work low in work stressors. A closer examination of the hypotheses involving Work Quality and Student Engagement follows, which will help further unpack the associations between students' work experiences and their engagement in school.

Hypothesis 2: Compatibility between Work and School and Student Engagement

Compatibility between Work and School is comprised of the extent to which students' work helps them to contribute to class discussions, to realize the importance of education, to realize the subjects they enjoy, and to consider if what they learn in school helps them to perform better at work. Previous research (Lubbers et al., 2005; Mortimer et al., 2002) supports the notion that work quality, when characterized as Compatibility between Work and School such as those work experiences offered through co-op programs, is positively associated with student engagement and well-being. This hypothesis was not supported in the current analyses; higher levels of Work Quality on the dimensions of Compatibility between Work and School were not significantly related to any of the four Student Engagement dimensions. Although this finding is inconsistent with the literature described above, the findings can be placed within the overarching theoretical framework of the present study (Bronfenbrenner, 1979) and additional

research (i.e., Shanahan & Flaherty, 2001). More specifically, the very ability to balance work and school can have positive repercussions on one's performance in both domains, presumably irrespective of the compatibility between the two domains. Work can provide structure and organization in students' lives, a positive benefit, which has the potential to generalize to other life domains such as school (Jahoda, 1982; Kuh, 1995; Shanahan & Flaherty, 2001). Research highlighted previously on adolescents' work lives may be applicable to the community college population. Mortimer and colleagues (2009), for example, argued that adolescents who work can experience increased self-efficacy based upon their new work-based responsibilities. By taking on another role (i.e. worker) in addition to their student role, students add a dimension to their evolving identity and the successful juggling of these two roles can significantly contribute a positive sense of self.

Students who are used to working many hours in jobs that are seemingly unrelated to their educational pursuits may adapt to or find resilience through these experiences, suggesting that even when students' work is not directly related to their school lives, their ability to balance multiple roles helps them stay engaged in school. Based on the most commonly cited job titles in the present study (i.e. Cashier, Sales Associate and Security Guard), it seems that the majority of students are in fact employed off-campus in positions that are not directly related to their educational pursuits, but which may aid in their ability to pay for school and their living expenses. While research (Astin, 1998; Pascarella & Terenzini, 1991) based on four-year college students demonstrates that on-campus work opportunities help students maintain engagement and persistence in school, there seem to be less opportunities for on-campus employment at

community colleges. Despite students' work not being specifically related in content to their educational and career aspirations, it seems that school and work may still be compatible in the sense that work provides the financial resources necessary for students to attend school. The current measure did not inquire about this question directly; however, it seems clear that the instrumental benefits of work allow many students to afford and attend school. Additionally, the measure used in the present study was initially used longitudinally with an adolescent population (9th-12th grade students). High school students may have endorsed the item related to recognizing the importance of education and the item that employment has helped them recognize the subjects they like to a greater extent then community college students who may already recognize the importance of education based on their enrollment in college. Both the adolescent and four-year college student populations differ significantly from the community college population, developmentally and demographically, which also may have contributed to the lack of significant findings for Compatibility between Work and School and Student Engagement.

Hypothesis 3: Intrinsic Rewards at Work and Student Engagement

Intrinsic Rewards at Work was defined in the present study as the extent to which new things are learned at work, the perceived usefulness of what is learned for the future, the presence of learning opportunities and the use of skills and abilities at work (Mortimer et al., 2002). Hypothesis 3 found support on two dimensions of Student Engagement. Those who experienced more Intrinsic Rewards at Work were more engaged in school on the dimensions of Active and Collaborative Learning and Student-

Faculty Interactions. The significant findings associated with the relationship between Intrinsic Rewards at Work and Student Engagement are consistent with the literature reviewed in this study. More specifically, the presence of Intrinsic Rewards at Work has been associated with increases in well-being, overall job satisfaction and self-efficacy (i.e., Barling et al., 1995; Call & Mortimer, 2001; Weiss & Cropanzano, 1996). Additional research (i.e., Conti, 2001; Csikszentmihalyi, 1990) has indicated that when individuals are intrinsically engaged in their work, they are able to be more present and consequently enjoy what they are doing solely for the sake of the task at hand. This ability to be present and subjectively enjoy work may promote well-being and positive feelings in neighboring life domains as well (Bronfenbrenner, 1979; 2005; Edwards et al., 2007). In the present study, it seems very plausible based on the significant relationships detected between Intrinsic Rewards at Work and Active and Collaborative Learning and Student-Faculty Interaction, that there is a positive relationship between work and school domains consistent with the ecological model proposed.

Active and Collaborative Learning (defined as the frequency with which students participate in class discussions, work with other students both in and outside of class, make class presentations, tutor other students or participate in community service projects) shares many common factors with work that is intrinsically rewarding. Namely, students who are actively and collaboratively engaged in school are more likely to want to learn for the sake of learning and to interact with faculty and fellow students to increase their learning and skill development. This approach towards school may also be useful in their subsequent classes and in their future work. Additionally, research

demonstrates that students who are intrinsically motivated are more persistent when faced with challenging tasks, attain higher grades in school, and have the ability to retain content learned in school over a longer period of time (Conti, Amabile, & Pollack, 1995; Gottfried, 1990). This research supports the notion that developmentally instigative characteristics (Bronfenbrenner, 2005; Renn & Arnold, 2003) can influence students' interactions with the environment and their likelihood or reluctance to seek out increasingly complex and challenging tasks at work and/or school. As the significant findings of this study suggest, when a student endorses Intrinsic Rewards at Work, that student may also be more intrinsically oriented towards school-work leading to higher levels of student engagement.

Similarly, students who reported higher levels of Intrinsic Rewards at Work were also more significantly engaged in Student-Faculty Interactions. Student-Faculty Interaction is defined as the type and frequency of interactions students have with faculty both in and out of class, the extent to which they discuss career goals, the promptness of feedback, and the overall quality of their interactions. Consistent with the reasoning presented above, students who experience Intrinsic Rewards at Work may experience a net positive effect that influences their school lives. Additionally, there may be a self-selection process present (Renn & Arnold, 2003; Steinberg et al., 1993) whereby students who are more actively and collaboratively engaged in school and in their interactions with faculty may choose and be chosen for more intrinsically rewarding jobs. Furthermore, based on the knowledge that most community college students are driven to work out of financial necessity (CCSSE, 2007; Jacobs & Vorhees, 2006; Silverman et al.,

2009), students who have intrinsically rewarding work may be in a better financial position than their peers who have less intrinsically rewarding work that is purely for the sake of their survival (Maslow, 1954). These students may have the luxury to pursue work based on natural interest and learning opportunities, which in turn allows them to feel energized in their school context as well (Bronfenbrenner, 1979).

Lastly, the contribution of Intrinsic Rewards at Work approached but did not reach statistical significance on the Academic Challenge dimension of Student Engagement. This trend suggests that with a larger and potentially more diverse sample (i.e. including more part-time students), a significant relationship between students who experience Intrinsic Rewards at Work and who experience school as academically challenging may have been found.

Hypothesis 4: Work Stressors and Student Engagement

Work stressors, as defined in the present study, consists of the extent to which students endorsed time pressure at work, exposure to noxious conditions at work, work overload, lack of clarity regarding job responsibilities, feeling responsible for things beyond one's control, working very hard, and having to upset others at work to satisfy others at work (Mortimer et al., 2002). The specific relationship stated in Hypothesis 4 was not supported in the current analyses as higher levels of Work Stressors were not significantly related to lower levels of Student Engagement. There were two significant relationships found, however, between higher levels of Work Stressors and higher levels of Student Engagement on the dimensions of Active and Collaborative Learning and Student-Faculty Interaction. Additionally, the relationship between Work Stressors and

Academic Challenge approached but did not reach significance. These significant

findings, though surprising, may make sense based upon the aforementioned uniqueness

of the present sample. More specifically, students in the present sample attended school

full-time and worked full-time at higher rates than is typical of the general community

college population. These students may differ in important ways from part-time students

(who comprise the majority of all community college students) in that they may be more

successful at balancing full-time employment and full-time engagement in school. This

notion is consistent with research by Shanahan and Mortimer (1996) suggesting that

stress can actually promote adaptability and resilience through fostering coping skills that

will be called upon in students' future working lives. Shanahan and Mortimer (1996)

utilize the developmental psychopathology literature in characterizing this phenomenon

as "steeling," (Rutter, 1985); the notion being that students are readied for future

challenges through the development of adaptive coping responses gained through

challenging work environments. These students also may have more experience working

while attending school and have subsequently adapted to engaging successfully in both

contexts.

     Speculatively, it is also possible that students' more stressful work experiences

promote greater motivation for and engagement in school as they may view school as the

primary venue to attain more meaningful, satisfying and less stressful future work.

Lastly, it's important to note that this hypothesis was exploratory in nature based on the

fact that Mortimer and colleagues' (2002) research using the Work Stressors measure

examined the relationship between Work Stressors and well-being as opposed to Work

Stressors and Student Engagement. In the present study, I hypothesized that this negative relationship would be replicated for Work Stressors and Student Engagement. Although it is not unreasonable to assume that individuals who are stressed at work may also experience lower levels of well-being and subsequently be less engaged in school (i.e., Bronfenbrenner, 1979), the present study did not measure well-being. The constructs and correlates of well-being and student engagement may share similarities but may also be quite different; therefore, the lack of a significant negative relationship between Work Stressors and Student Engagement is not entirely unexpected.

Hypothesis 5: Extrinsic Rewards at Work and Student Engagement

Extrinsic Rewards was defined in the current study as wage rate, wage satisfaction/positive perceptions of good pay. Extrinsic Rewards is also informed by motivation theory, which highlights how motivation to work can be a result of something separate from work itself that proves rewarding. Factors might include recognition from others, financial incentives or status (Amabile et al., 1994; Loo, 2001). Research (Maslach & Jackson, 2001; Vansteenkiste et al., 2007) has shown a relationship between extrinsic work value orientation and negative outcomes, including lower psychological well-being, increased emotional exhaustion, less job satisfaction and a greater likelihood of leaving that job. Additional research (e.g. Warren, 2002) suggests that students who are more oriented towards their work roles are less oriented towards and engaged in school. This research informed the present hypothesis that students who engaged in more Extrinsically Rewarding Work and valued these rewards over more Intrinsically Rewarding Work would also be less engaged in school. Despite the research-informed

rationale for the hypothesized negative relationship between Extrinsic Rewards at Work and Student Engagement, this hypothesis was not supported in the current analyses; higher levels of work quality on the dimension of Extrinsic Rewards at Work were not significantly correlated with lower levels of Student Engagement. Potential reasons for the lack of significant findings include the characteristics of the present sample, the uniqueness of community college students' relationships with work and school, and the national work and opportunity structure.

More specifically, the majority of students in the present sample were engaged in school full-time, while a large proportion of these students also reported working more than 30 hours per week. As mentioned previously, the present sample may be a generally more engaged sample of students who are able to successfully balance full-time school and employment. A brief look at the frequencies for pay rate between students who work more than 30 hours per week and those who work less than 30 hours per week may also shed light on this finding; students who reported working more than 30 hours per week, made more per hour on average and were more likely to be salaried than those students working less than 30 hours per week. This finding suggests that students who worked more than 30 hours per week were also more likely to be extrinsically rewarded with regards to higher pay at work. As cited in previous chapters, the majority of all community college students *have* to work, at least part-time, presumably to support themselves and/or their family members, and/or to be able to attend school. The jobs that these students are able to obtain with a high school diploma/GED educational level, typically do not carry high status or high pay which are characteristics that comprise an

extrinsically rewarding work environment. Therefore, although students who worked more intense hours were also more likely to make more money, pay rate alone does not constitute an Extrinsically Rewarding work environment. Additionally, the restriction of range with regards to the pay for jobs students reported may also be a prominent reason that Extrinsic Rewards at Work did not significantly predict Student Engagement as the majority of students reported making between $8.00-$15.00 per hour.

If students are employed in less extrinsically rewarding jobs while they are engaged in school, then it follows logically from this hypothesis that students would not be less engaged in school. According to this hypothesis and the supporting research, students who are less extrinsically rewarded at work have less of an incentive to quit school or be less engaged in school; in short, their work opportunities are presumably not fruitful enough financially to justify leaving school. This leads us to conclude that students' working lives, be they stressful, only minimally rewarding with regard to pay or status, and/or incompatible with school, are still instrumental in enabling students to attend and pay for school. The hypothesized moderating effects of Work Intensity and Gender are described next.

Hypothesis 6: Work Intensity as a Moderator between Work Quality and Student Engagement

Work Intensity was defined in the present study as the number of hours per week in which students are gainfully employed, ranging from 1-80 hours per week. The mean for the present sample was 28 hours (SD = 12.71). This hypothesis found one significant interaction term that involved the Student Engagement dimension of Student Effort;

Work Intensity moderated the relationship between Student Effort and Extrinsic Rewards at Work. In this case, the relationship between Student Effort and Work Intensity was stronger for individuals who experienced less Extrinsic Rewards at Work. Stated simply, students who experienced lower levels of Extrinsic Rewards at Work reported putting in less effort at school, the more hours they worked when compared to students who experienced higher levels of Extrinsic Rewards at Work while working equally intense hours. This finding is supported by the Ecological Framework (Bronfenbrenner, 1979) proposed in the present study; namely, if students are depleted emotionally and physically, and are also demoralized by the lack of rewards for their efforts, they may have little left to put into school, underscoring how the microsystems of school and work are intricately connected. There was an additional trend for Work Intensity to moderate the relationship between Work/School Compatibility and the Student Engagement dimension of Academic Challenge. This non-significant trend suggests that for individuals who experience Compatibility between Work and School, their endorsement of being academically challenged and engaged (i.e., cognitively engaged in school) may be magnified when working more intense hours. Given that this finding was non-significant, the main conclusion is that only Work Intensity significantly moderated the relationship between Student Effort and Extrinsic Rewards at Work.

Hypotheses 7, 8 and 9: Gender as a Moderator for Intrinsic Rewards at Work, Extrinsic Rewards at Work, Work Stressors and Student Engagement

These hypotheses were not supported in the current analyses; the relationship between Intrinsic Rewards at Work and Student Engagement was not significantly

moderated by Gender; the relationship between Extrinsic Rewards at Work and Student

Engagement was not moderated by Gender; and the relationship between Work Stressors

and Student Engagement was not moderated by Gender. The lack of significant

interaction effects with regard to Gender relates to the lack of significant main effects for

Gender in predicting Student Engagement. Although Gender has been studied as a

predictor of student engagement and persistence in higher education based on the

findings that being male is a risk-factor for dropping out of high school and college,

males and females did not differ significantly with regard to Student Engagement in the

present sample.

Potential explanations for the lack of significant findings for these hypotheses can

be found through the timing of the study with regard to students' developmental levels

and with regard to the study design. More specifically, approximately two-thirds of my

sample was comprised of women, which is consistent with the community college

percentage of females. The gender gap in two-year colleges is even more magnified than

the gender gap in four-year colleges, however, suggesting a female advantage at the

community college level (Buchman & DiPrete, 2006), which becomes increasingly

critical as the number of students using community college as a bridge to four-year

institutions continues to rise. Those males that were included in the study and who

comprised one third of my sample, may be more engaged based on their status of being

enrolled in community college. More precisely, for men to attend community college,

they may need to transcend gender role norms in their communities, thereby reflecting a

greater connection to academics. Additionally, it may be that male students who make it

to community college are more engaged than their peers who either dropped out of high school or graduated, but did not or could not pursue higher education following their high school graduation. Furthermore, because the timing of this study measured engagement during the spring semester of students' first year, male students who remained in school for a second semester, may be more engaged than male community college students who initially enroll during the first semester of college.

Summary of Significant Findings

The main findings described above can be situated in Bronfenbrenner's Ecological Model (1979; 2005), which has served as the main theoretical lens of this study. Students in the present sample were by and large enrolled full-time in school and working a significant number of hours per week. There were no significant differences found between students who worked more intense hours and students who worked less intense hours while attending school. This suggests that engagement in the microsystem of work related positively to the microsystem of school for many students. Students who worked more than 30 hours per week did not differ in their levels of engagement when compared to students who worked less than 30 hours per week, presumably because these students overall, are adept at balancing school and work. This finding may also relate to the concept of developmentally instigative characteristics (Bronfenbrenner, 2005; Renn & Arnold, 2003) in that certain students may be predisposed for selecting and being selected for increasingly complex and challenging tasks in work and school domains. As Mortimer and colleagues (2002) suggest, working during the adolescent and young adult years can prepare individuals to face future challenges at work and school successfully

through acquirement of the skills necessary to balance school and work. Additionally, Staff and Mortimer (2007) argue that employment patterns during adolescence have the potential to prepare disadvantaged youth for future work and educational attainment by providing them with generalizable skills such as time management. We know that many community college students are considered high-risk or disadvantaged based on their level of preparedness for college, the number of hours they work, being the first in their families to attend college, being a racial or ethnic minority, and being disadvantaged economically among other factors (CCSSE, 2007; 2008). Although we do not have data to confirm students' working status before they enrolled in community college, it is likely that many of these students worked relatively intense hours during high school as well (Wegman & Davis, 1999).

Mortimer's LYDS, from which the present study based many of its hypotheses and drew most of its Work Quality measures, has significant relevance to the main findings of this study. Namely, moderate levels of work can promote students' persistence in school through providing structure, the development of generalizeable skills for future careers and perhaps most importantly, through providing financial support for school (e.g., Astin, 1998; Kuh, 1995; Pascarella & Terenzini, 1991), which can in turn help promote greater involvement in school (Mihalic & Eliot, 1997). A key difference between the findings reviewed for adolescent workers and the community college student workers comprising the present study, may have to do with the definition of *moderation.* Because over 50% of community college students work more than 20 hours per week and 36% of full-time students work more than 30 hours per week, it

would seem that community college students may have a higher threshold for Work

Intensity when it comes to work detracting from their engagement in school.

Additionally, students who enjoyed Intrinsic Rewards at Work were more

significantly engaged in school with regard to their interactions with faculty members and

the extent to which they were engaged in Active and Collaborative Learning. This finding

makes intuitive sense. We cannot assume any level of causality, however, between

Intrinsic Rewards at Work and Student Engagement as this relationship may also be due

to other student characteristics not measured in the present study such as motivation, job

skills/history, professionalism, and financial resources. These individual factors may have

enabled students to choose more intrinsically rewarding work and be chosen for more

intrinsically rewarding work, a hypothesis which is consistent with Bronfenbrenner's

description of developmentally instigative characteristics. Irrespective of why this finding

was significant, it is safe to say that an intrinsically rewarding microsystem of work has

the potential to positively relate to another microsystem in one's life (i.e. school) as the

feelings of being totally engaged and challenged by a task at work may positively spill

over into the school domain. Students who feel confident in and efficacious at their work

tasks may also feel more confident in their interactions with faculty and have an

increased desire to discuss their future careers. Similarly, these students may be more

likely to actively and collaboratively engage in their school-work and with their peers due

to the net positive effect of their work experiences.

Students whose work could be characterized as higher in stress were also more

engaged in school. This finding, though counterintuitive upon first glance, also makes

sense in relation to Bronfenbrenner's (1979) Ecological Model. Students who are used to working many hours while going to school presumably are resilient and adaptable enough to balance both contexts successfully. The juggling act, in and of itself, could promote increased engagement in school as a result of students feeling efficacious as they consider how challenging their dual roles are, and how they are still able to persist in the face of these challenges. As mentioned earlier, it is not a far stretch to consider the possibility that stressful work conditions can also be a motivator for students to escape a stressful working environment through attaining higher education. Going to school then becomes significantly more meaningful as students realize that they may have to stay in a stressful and unrewarding job if they do not obtain additional education.

Lastly, students who were less extrinsically rewarded at work but working intense hours, were less engaged in school with regard to their Student Effort. In terms of microsystems reciprocally influencing one another, it may be that students who are working long hours in low paying jobs are demoralized by their work experiences of getting little in return for their efforts, an attitude which then carries over into their school context. Students may have little energy or motivation left to put towards their studies. Because Student Effort is comprised of the amount of time students put into preparing papers, reading before class, studying, and the frequency with which students used peer tutoring, skills lab and computer lab, it logically follows that students who are working more intense hours do not have as much time and energy to put into the aforementioned tasks. Students may be engaged when they are physically present at school (i.e. actively

and collaboratively learning, engaging with faculty and feeling academically challenged);

however, they may not have the time nor energy to put into efforts outside of school.

In sum, students who work while attending school seem to experience more

positive than negative relationships between their work and school contexts. Intense

hours of work and lack of compatibility between work and school seem to have little

negative associations with student engagement as proposed. Additionally, the most

engaged students seem to be those students who are working moderate to intense hours of

work (20-30+) in jobs that are intrinsically rewarding and that are also stressful. These

findings add to the literature on Community College Student Engagement as they are

somewhat surprising and differ from what we know about adolescent and traditional four-

year college student engagement as related to students' working lives. Supplemental

analyses were also performed in order to ascertain any significant demographic correlates

of student engagement that were unaccounted for by the hypotheses in the present study.

These are discussed next, followed by a discussion of limitations, and implications for

future research, practice and policy.

Supplemental Analyses

Correlations, t-tests and ANOVA's were performed in order to explore some of

the demographic risk factors identified by CCSSE research for student disengagement.

There were no significant differences found on Student Engagement dimensions as

related to age, self-reported GPA, gender, or educational level of students' mothers or

fathers. There were some significant findings, however, with regard to the following

demographic statuses: Race and Ethnicity, International Student Status, English

Language Learning Status, Involvement in a Learning Community, Enrollment Status, and Credit Hours.

Consistent with previous CCSSE research (i.e., Marti, 2009; McLenney & Marti, 2006), no significant differences were found across racial and ethnic groups for the Active and Collaborative Student Engagement dimension. There were also no significant differences found across racial and ethnic groups on the Student Engagement dimensions of Academic Challenge and Student-Faculty Interaction. There were two significant differences found, however, on the Student Engagement dimension of Student Effort between Black and White students and Asian, Asian/American students and White students; Black students and Asian/Asian American students were more significantly engaged in Student Effort than their White peers. An important finding related to these results is that high risk students who comprise a population of under-prepared students, students of color, 1st generation college students and non-traditional learners are actually more engaged than their lower-risk counterparts (CCSSE, 2007; McLenny & Marti, 2006). These students, however, tend to have lower aspirations for themselves and are less successful in persisting, suggesting that the relationship between student engagement and persistence is more complicated for particular groups of students. In other words, high-risk students often work harder but experience lower success rates in their academic pursuits, a finding which is consistent with the "Engagement-Achievement Paradox" found among high school students whereby Black students endorse higher levels of engagement, motivation and affect in class but have lower GPA's when compared to their White counterparts (Shernoff & Schmidt, 2008). Based on previous CCSSE findings in

addition to the present study's findings, it seems that this paradox may continue into the community college context with regard to Black students' higher engagement on Student Effort. Additionally, this finding is consistent with research (CCSSE, 2009) that suggests that Black students, and in particular male Black students, are at a greater risk for drop-out when compared to White, female students (Sum et al., 2008). This has been attributed to forces of discrimination, oppression, and inequitable resources as reflected in research (Sum et al., 2008; Swanson, 2004) demonstrating that students from historically marginalized groups have a 50:50 chance of graduating from high school, making the likelihood of graduating from college even less.

The finding that Asian/Asian American students were more engaged in Student Effort than their White peers finds some support in research which purports that Asian/Asian American students' level of academic achievement is generally consistent with and in some cases exceeds White student academic achievement (Chang, 2003; Kim, Chang & Park, 2009). This finding merits further investigation, however, based on recent research which points to the "model minority stereotype," as leading researchers to the false conclusion that Asian/Asian American students are universally more engaged and higher achieving than their counterparts of differing race/ethnicities (Kim et al., 2009). In fact, a most recent study demonstrated that Asian/Asian American students were less engaged in Student-Faculty Interaction than their non-Asian peers (Kim et al., 2009). Further research is needed to uncover the nuances of how race and ethnicity relate to student engagement and persistence among specific populations of community college students.

Additional significant findings related to the demographic characteristics of the present sample relate to students' identification as English Language Learners, as International Students and/or as members of a Learning Community. More specifically, students who reported English as their second language (ESL) were more engaged in school on the dimensions of Academic Challenge, Active and Collaborative Learning, and Student Effort. Stated simply, students who identified as non-native English speakers were more engaged in school than their native English-speaking counterparts. Relatedly, International Students were more engaged in school on the dimensions of Active and Collaborative Learning, Academic Challenge and Student Effort. These results also find support in the literature that points to increased engagement levels among students who are identify as international students or who identify as first or second generation immigrants (McLenny & Marti, 2006). Additionally, students who were members of Learning Communities were more engaged in Student-Faculty Interaction. This finding seems intuitive based upon the nature of learning communities, which aim to foster more enriching faculty-student interactions. Learning communities also foster more frequent student-student interactions through smaller class sizes and the clustering of certain classes to promote closer relationships among the same group of students. Speculatively, it might be easier for students who are more comfortable with their classmates to interact with their faculty members more frequently, as the relationships between students and their respective faculty member are closer.

With regard to enrollment status differences in engagement, the finding that full-time students were more engaged than part-time students on dimensions of Active and

Collaborative Learning, Academic Challenge and Student-Faculty Interaction in the present study is consistent with previous research which identifies part-time status as a risk factor for disengagement (i.e. CCSSE, 2007; Pascarella & Terenzini, 2005). Relatedly, the finding that students who accrued between 45-60 credit hours at the time of the study were more engaged than their peers who had accrued between 1-14 credit hours on the dimension of Active and Collaborative Learning, finds support in the literature (CCSSE, 2007; Tinto, 1993) that highlights that community colleges lose 50% of students in between the 1st and 2nd year of enrollment: students who have more credit hours are presumably among a group of "survivors," who are persisting towards degree completion.

Limitations

There were several limitations inherent in the present study related to the sample, measures, and study design that should be noted. First, as described in the discussion of main analyses, the sample may not be representative of the national community college population based on the fact that the proportions of part-time and full-time students were virtually inversed in my study; that is, the majority of students were enrolled full-time while less than half of students in the present sample were engaged in school part-time. Because part-time status is a risk-factor for increased student disengagement and drop-out, it is reasonable to say that the present sample was a more highly engaged sample than the national community college population, decreasing the overall generalizability of these findings. With that said, this study does offer important insights with regard to students who are enrolled in school full-time while working full-time. Additionally,

Bunker Hill Community College may not be representative of community colleges across the state or nation based on their involvement in a grant devoted to fostering student engagement, which has led to the inception of learning communities for first year, full-time students. Learning communities have been shown to increase student engagement, which provides further credence to the proposition that the present sample was more highly engaged as 20% of the sample was engaged in a learning community.

Additional limitations can be found through the measures used in the present study, where there were varying degrees of internal consistency found among the outcome measures of student engagement and relatively few items for some of the criterion measures. For example, the Cronbach's Alpha for the Student Effort dimension of Student engagement was .59 while the Cronbach's Alpha for Extrinsic Rewards at Work was .54. The internal consistency of Student Effort in the present study was actually slightly higher than in previous research; however, it is still relatively low. Additionally, the internal consistency of Extrinsic Rewards at Work was significantly lower than in previous research (i.e. .70 in Amabile et al., 1994). This leads to another limitation in the study regarding the measures used to assess the Intrinsic and Extrinsic Rewards at Work. Amabile and colleagues' measure (1994) inquires about attitudes towards work, which may have prevented students from thinking about their current job, despite being instructed to do so on the Work Quality Survey. It may have been helpful to use a more present-focused measure of Extrinsic Rewards at Work that is specific to Community College Students' work lives. As noted in Chapter 3, Mortimer and Colleagues' measure (2002) for Extrinsic Rewards at Work was comprised of just 3

items, which is why it was not used in the present study. The WPI was the best measure

that could be found in the literature to assess Extrinsic Work values/motivation; however,

future researchers on community college student work patterns may want to develop a

more specific measure for Extrinsic Rewards at Work that includes a question that asks

students if they feel that their work helps them attend and engage in school (i.e. assessing

the importance and value students place on their work role as related to its financial

benefits).

Limitations were also identified in the study design. Namely, the post-hoc

correlational design of the study does not allow for any causal conclusions regarding the

impact of Work Intensity and Work Quality on Student Engagement. The survey

administration, which occurred simultaneously with the CCSSE administration may have

also been less ideal. For example, some students questioned if their responses would be

revealed to their instructor (e.g., social desirability) and potentially impact their grades.

Despite great efforts to disabuse students from the belief that their survey answers could

be linked to them directly, some students may have answered in ways that would make

them look more engaged in school to please faculty and administration. Additionally,

many students raised the important point that their student engagement varies across

classes and instructors; therefore, the act of making a generalization about their

experiences as the CCSSE requests may not most accurately capture their student

engagement across courses. Furthermore, the results were strictly quantitative, assessed at

one point during the spring semester, which closely coincided with final exams. Some

students may have reported being more engaged by virtue of final exams approaching

and the need to study more frequently. Alternatively, some students may have felt less engaged at the end of the semester based on feeling burned out or apprehensive about exams. Because the results are not triangulated with faculty observations or other measures of student engagement (i.e. qualitative narratives by students themselves), the findings are less comprehensive. Relatedly, I do not have follow-up data regarding whether or not students returned to school for a third semester or information about their GPA's; two proxies for student engagement that would help enhance the credibility of the current findings.

Additionally, due to the multidimensional nature of student engagement outcome measures, the effect size of hypothesized relationships were quite small while the actual effect sizes found in the present study were even smaller. This may relate to the lack of inclusion of demographic variables as covariates, which could have contributed significant variance to student engagement. More specifically, SES status, academic readiness, financial aid status, immigrant status and family of origin SES were not included in the present study. With that said, the supplemental analyses conducted did explore significant demographic variables identified in previous CCSSE research (i.e. Race/Ethnicity, Age, Gender, GPA, Education Level of Parents, Credit Hours, English Language Learners, Enrollment Status and Learning Community Status), which did not change the significance of the main findings. The small effect sizes may then be more symptomatic of the complexity of the relationships between students' work lives and their engagement in school, which could be studied in a many different and complementary ways in future research, which will be outlined next.

Implications for Future Research, Education, Counseling Practice and Public Policy

Implications for future research

Future research could build on the findings in the present study through looking at how students' work lives evolve over the course of their time at Community College and beyond. Similar to how Mortimer and Colleagues (2002) approached studying work and school with adolescent students, there is a significant need to follow community college students longitudinally to more fully unpack the relationships between their time intensive employment and engagement and persistence in school. Additionally, a mixed methods or qualitative study could help triangulate the quantitative findings in the present study. Exploring how students experience their work lives, their school lives and the connection between these two microsystems will be paramount in gaining a more in-depth perspective on what factors help students manage these two domains successfully. An experimental study design would also allow for a greater understanding of the specific impact of employment on student engagement among community college students. For example, a time-series experimental design where students rotated between not working and working in jobs that varied with regard to intensity and quality, as defined in the present study, would allow researchers to capture student engagement measures pre- and post-test, in control and experimental conditions. This would allow for greater control and internal consistency in measures of work quality and work intensity that would pave the way for more specific and powerful findings.

It may also be helpful to include a measure of well-being and depressive affect in subsequent research as well-being has been linked to performance in multiple domains

including work and school. This could also help rule in or out additional variables that may be powerful in predicting, mediating or moderating engagement and persistence in school. Future research could also build on the literature (i.e., Kuh, 1995; Tinto, 1993) that points towards connections between students' intellectual and social worlds as being a powerful contributor to student retention. This research could be applied to the working domain where students' relationships at work including mentoring, peer and supervisory relationships could be explored as related to students' engagement in school. Consistent with Tinto's (1993) contributions to student retention theory, future research could explore how the social and intellectual worlds of students work lives may "spill over" into their school lives.

Lastly, future research should explore racial, ethnic, immigration status, gender and SES differences in student engagement among community college students, based on the findings of the present study and in previous CCSSE research. More specifically, future research should look at the contextual and systemic influences on student engagement in addition to individual factors such as racial identity development, immigration status, international student status and the interconnections between these statuses that may positively or negatively relate to community college student engagement.

Implications for Education, Counseling Practice and Public Policy

Despite the findings that Work Intensity and Work Stressors did not negatively relate to Student Engagement as predicted, there is always room for improvement in helping students navigate the contexts of school and work more successfully. Further, the

percentage of students working full-time while going to school full time makes further study of the relationship between these two contexts imperative. The potential implications and applications of the present study include the need for more federal, state and school-based support for students attending community college, which would constitute an exosystem level intervention (Bronfenbrenner, 1979). This support could take the form of increased grants for students, more work-study positions, and the creation of relationships with local employers. These interventions could create more jobs on or adjacent to campus and aid in the incorporation of students' working lives into the school curriculum. If faculty members are educated on the extent to which their students are working (i.e. including the intensity of hours, the quality of the work and the specifics of students' jobs), they may be in a prime position to help students make meaningful connections between their work and school lives. These intentional connections between work and school contexts, characteristic of the mesosystem of interest in the present study, may then help promote engagement in school and a more general feeling of purposefulness among students when they are at work.

Community colleges could also offer courses that are thematic and modeled after specific and common types of jobs held by community college students via the learning communities already established at some institutions. This intervention would be an example of a microsystem-based intervention, which may have positive net effects on students' subsequent microsystems (such as their work, family and community contexts). For example, there were a large proportion of students who identified themselves as Sales Associates in the present sample; a course could explore the generalizable skills acquired

as a Sales Associate that translates to other career paths, both related an unrelated to the current position of Sales Associate. Such courses could include career development and exploration as a core component of the curriculum, including interest and personality inventories, narrative and autobiographical reflections on what students appreciate and dislike about their current jobs in addition to reflection time about the type of career and quality of life students would like to obtain (using their current work experiences as data).

The creation of more jobs on and off-campus that can offer students Intrinsic Rewards (i.e. opportunities to learn, opportunities for challenge and growth, autonomy and a sense of competence) is also indicated. If provided ample resources, community colleges could help create relationships with outside employers in various industries, which would allow for more intrinsically rewarding work experiences for students. Using Northeastern University as a prime example, co-op programs have been shown to help students both instrumentally support their education and allow them to explore different jobs and careers while gaining useful and generalizable skills (Yi, Kaeli & Duwart, 2000). The addition of community college personnel who could focus solely on enhancing job opportunities for students while they are enrolled in school, as part of financial aid services or the career center, could also help students find employment conducive to their engagement in school. These higher education personnel could also help perform regular follow-ups to ensure these jobs are offering the kind of experiences that enhance and don't detract from student engagement.

With regard to counseling practice, students who seek academic, career and/or mental health counseling should be working with counselors who are aware of the intersections of work, mental health, and student persistence. Disseminating research such as the present study's findings can only help prepare higher education administrators and counselors to effectively and sensitively provide services to students who are working and attending school full-time. Community colleges could sponsor conferences focused on understanding the challenges of being a student and worker full-time. These conferences could include students sharing their experiences of being both a student and worker, common employers of students, community college faculty members and higher education administrators who have insight into the logistical and financial dilemmas that students face. Educating students is also a crucial part of helping students succeed in balancing school and work. Incorporating CCSSE findings and research similar to the present study into first year seminar curricula is just one way to do this. Overall, a comprehensive effort to make students, faculty, college administrators and employers aware of the relationships between students' school lives, their work lives and correlates of student engagement may help students persist in school.

The implications for public policy as already foreshadowed include most basically, more funding for students to attend college and survive financially while doing so. This could take the form of better grants, lower loan repayment programs, and the creation of better and higher paying jobs for students on and off-campus through government support. As demonstrated in President Obama's most recent State of the Union Address on January 27th, 2010:

In the 21st century, the best anti-poverty program around is a world-class education. Still, in this economy, a high school diploma no longer guarantees a good job. That's why I urge the Senate to follow the House and pass a bill that will revitalize our community colleges, which are a career pathway to the children of so many working families. To make college more affordable, this bill will finally end the unwarranted taxpayer subsidies that go to banks for student loans…because in the United States of America, no one should go broke because they chose to go to college.

As Bronfenbrenner's model (1979) demonstrates, the influence of an exosystem such as United States legislation geared towards fiscally supporting community college students has significant potential to impact the microsystems comprising community college students' work and school lives. When students are able to successfully balance their work and school contexts, family lives, community lives and the health of the economy and America will also prosper. The findings of the present study strongly support what higher education researchers and government officials identify as one of the most important agendas of this century: providing future generations with equal opportunity and instrumental supports necessary to pursue and obtain a college education.

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APPENDIX A

Boston College
Lynch School of Education

Informed Consent for Taking Part as a Subject in a Research Study
'"Working" Towards a Degree in Community College'

Introduction:
You are being asked to participate in a research study about your thoughts and feelings on working while you are a student in college. You were chosen because you might have an interest in taking part in the study and you are a student at Bunker Hill Community College who is at least 18 years of age and who is also working outside of school. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

Purpose of Study:
The purpose of this study is to expand current knowledge and awareness about the working lives of community college students. People who take part in this study will include about 300 students at Bunker Hill Community College from different majors.

Description of Study Procedures:
If you agree to be in this study, we would ask you to answer some survey questions, which are likely to take between 25-30 minutes to complete. If you do not wish to answer a question, you can choose not to.

Risks to being in this study:
A potential risk associated with this study is that you may become aware of a certain aspect of your work or school life that is less than optimal. Additionally, as in any research study, there may also be unknown risks of participating in this study.

Benefits to being in this study:
By participating in the study, you are contributing to research that may help better the work lives and educational lives of community college students. A potential benefit from participating in this study is increased awareness about how your working life relates to your engagement in school. Your identity and contact information will not be linked in any way to your answers in the survey.

Keeping things private:
The records of this study will be kept private. The surveys will be kept anonymous and students will not put their names on the survey answer sheets. Numbers will be assigned to the surveys to help us organize the data. The informed consent with your name on it will be stored in a locked cabinet at Boston College. In any sort of report we may write, we will not include your name or anyone elses. Access to the records will be limited to

the researchers. Sometimes, however, sponsors, funders, regulators, and the Institutional Review Board (IRB) may have to review the research records.

Voluntary Participation/Withdrawal:
Taking part in the study is voluntary. If you choose not to take part, it will not affect your current or future relations with the Bunker Hill Community College. You are free to leave the study at any time, for whatever reason. You will not be penalized or lose benefits for not taking part or for deciding to stop taking part in the study.

Dismissal
We ask that you follow the directions to the best of your ability. If you are unable to do so, or the sponsor cancels the study, you may be dismissed.

Contacts and Questions:
If you have any questions or concerns about the survey or your participation, please feel free to contact Kerri Murphy, the principal investigator of this study at 781.640.7484 or by email at murpbefz@bc.edu. You can also contact her advisor David L. Blustein, Ph.D., at 617.552.0795 or by email at blusteid@bc.edu. This study has been approved by the University's Institutional Review Board. If you have questions regarding your rights as a research subject, contact the Office for Protection of Human Subjects at Boston College at 617.552.4778.

Copy of Consent Form:
You will be given a copy of this form to keep for your records and future reference.

Statement of Consent:
I have read (or have had read to me) the contents of this consent form and have been encouraged to ask questions. I have received answers to my questions. I give my consent to take part in this study. I have received (or will receive) a copy of this form.

Signatures/Dates:

Study Participant (Print Name):

_____

Participant Signature: _____ Date

_____

*Student was handed a copy of this consent form for his/her records.

_____

APPENDIX B

Demographic Questionnaire

ID Number: _____   Age: _____   Sex: M or F: _____

What is your enrollment status at BHCC? (i.e. part-time or full-time)_____

Are you the first in your family to attend college:_____?

Select the ethnic group(s) that best describes you. (Please check all that apply):

___ Black, African, African-American   ___ Asian, Asian-American
___ Black, Caribbean (e.g., Haitian, Jamaican)   ___ Hispanic or Latino
___ White (non-Hispanic)   ___ Middle Eastern
      Caucasian, European   ___ Pacific Islander
___ American-Indian, Eskimo   ___ Cape Verdean
                                          ___ Other (please specify):

What is the highest level that you currently plan on reaching in school?

___ Leave school as soon as possible
___ Take a few courses for enrichment/career exploration
___ Get a certificate in a specialty area
___ Finish a 2-year community college degree/earn an Associate's Degree
___ Transfer to a 4-year college and earn a Bachelor's degree
___ Finish college and take further training (medical, law, graduate school, etc.)

Do you currently work?_____

If yes, is your job part or full-time? (part-time = 20 hours or less per week, full time = 20+ hours per week)

_____

Is your job on or off-campus?_____

For each job (part-time and/or full-time) you have held since you began taking classes at Bunker Hill Community College, please fill in the information below:

Job Title	Name of Organization	Hrs worked per/week	Pay Rate	Date Started Month/day/yr	Date Ended Month/Day/yr

What days of the week and how many hours each day of the week did you work <u>during the past week?</u>
 A) Monday _____
 B) Tuesday _____
 C) Wednesday _____
 D) Thursday_____
 E) Friday _____
 F) Saturday_____
 G) Sunday_____

The following questions are related to your current job, if you work more than one job, please think about the job that takes up the most time and answer the following questions based on your experience in that job.

<u>Student Engagement: Active and Collaborative Learning</u>

In your experience at this college during the current school year, how often have you done each of the following?

1) Asked questions in class or contributed to class discussions

Very Often   Often   Sometimes   Never
   A   B   C   D

2) Made a class presentation

Very Often   Often   Sometimes   Never
   A   B   C   D

3) Worked with other students on projects during class

Very Often   Often   Sometimes   Never
   A   B   C   D

4) Worked with classmates outside of class to prepare class assignments

Very Often	Often	Sometimes	Never
A	B	C	D

5) Tutored or taught other students (paid or voluntary)

Very Often	Often	Sometimes	Never
A	B	C	D

6) Participated in a community-based project as a part of a regular course

Very Often	Often	Sometimes	Never
A	B	C	D

7) Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

Very Often	Often	Sometimes	Never
A	B	C	D

<u>Student Engagement: Student-Faculty Interaction</u>

In your experience at this college during the current school year, how often have you done each of the following?

8) Used email to communicate with an instructor

Very Often	Often	Sometimes	Never
A	B	C	D

9) Discussed grades or assignments with an instructor

Very Often	Often	Sometimes	Never
A	B	C	D

10) Talked about career plans with an instructor or advisor

Very Often	Often	Sometimes	Never
A	B	C	D

11) Discussed ideas from your readings or classes with instructors outside of class

Very Often	Often	Sometimes	Never

| A | B | C | D |

12) Received prompt feedback (written or oral) from instructors on your performance

| Very Often | Often | Sometimes | Never |
| A | B | C | D |

13) Worked with instructors on activities other than coursework

| Very Often | Often | Sometimes | Never |
| A | B | C | D |

Student Engagement: Academic Challenge

In your experience at this college during the current school year, how often have you done each of the following?

14) Worked harder than you thought you could to meet an instructor's standards or expectations

| Very Often | Often | Sometimes | Never |
| A | B | C | D |

During the current school year, how much has your coursework at this college emphasized the following mental activities?

15) Analyzing the basic elements of an idea, experience, or theory

| Very Much | Quite a bit | Some | Very Little |
| A | B | C | D |

16) Synthesizing and organizing ideas, information, or experiences in new ways

| Very Much | Quite a bit | Some | Very Little |
| A | B | C | D |

17) Making judgments about the value or soundness of information, arguments, or methods

| Very Much | Quite a bit | Some | Very Little |
| A | B | C | D |

18) Applying theories or concepts to practical problems or in new situations

Very Much   Quite a bit   Some   Very Little
  A   B   C   D

19) Using information you have read or heard to perform a new skill

Very Much   Quite a bit   Some   Very Little
  A   B   C   D

During the current school year, about how much reading and writing have you done at this college?

20) Number of assigned textbooks, manuals, books, or book-length packs of course readings

None   Between 1 and 4   Between 5 and 10   between 11 and 20   More than 20
 A   B   C   D   E

21) Number of written papers or reports of any length

None   Between 1 and 4   Between 5 and 10   between 11 and 20   More than 20
 A   B   C   D   E

22) Mark the response that best represents the extent to which your examinations during the current school year have challenged you to do your best work at this college.

          A   B   C   D   E   F   G
Extremely easy   *Extremely*
challenging

How much does this college emphasize each of the following?

23) Encouraging you to spend significant amounts of time studying

Very Much   Quite a bit   Some   Very Little
  A   B   C   D

Work Quality: Compatibility between School and Work

Please use the following scales to determine how much you agree with the following statements **based on the job listed above that takes up the most of your time:**

A= strongly disagree   B= disagree   C= agree   D = strongly agree

24) What I have learned in school helps me do better on my job.
25) My job provides information about things that I am studying at school.
26) I contribute more to class discussions because of what I learn at work.
27) My job has taught me the importance of getting a good education.
28) My job has made me recognize the subjects I really like and don't like.

Work Quality: Intrinsic and Extrinsic Rewards at Work

29) My job gives me a chance to learn new things.

  A) Not at all true
  B) A little true
  C) Somewhat true
  D) Very true

30) My job uses my skills and abilities.

  A) Not at all true
  B) A little true
  C) Somewhat true
  D) Very true

31) Overall, how challenging do you consider your present job?

  A) Not at all challenging
  B) A little challenging
  C) Somewhat challenging
  D) Very challenging

32) Are the challenges in your job:

  A) Neither: my job is not challenging
  B) Mainly physical
  C) Both mental and physical
  D) Mainly mental

33) Do you think the things you are learning in your job will be useful to you in later life?

  A) Extremely useful
  B) Very useful
  C) Somewhat useful
  D) Not at all useful

34) Would you consider your pay good for the work you do?

  A) Yes, definitely
  B) Yes, it's pretty good
  C) I am not sure
  D) No, it is not good pay

Work Preference Inventory (WPI)

Please rate each item in terms of how true it is of you.

A = Never or almost never true of me   B = Sometimes true of me   C = Often true of me
D = Always or almost always true of me

35) I am not that concerned about what other people think of my work.
36) I prefer having someone set clear goals for me in my work.
37) The more difficult the problem, the more I enjoy trying to solve it.
38) I am keenly aware of the income goals I have for myself.
39) I want my work to provide me with opportunities for increasing my knowledge and skills.
40) To me, success means doing better than other people.
41) I prefer to figure things out for myself.
42) No matter what the outcome of a project, I am satisfied if I feel I gained a new experience.
43) I enjoy relatively simple, straightforward tasks.
44) I am keenly aware of the promotion goals I have for myself.
45) Curiosity is the driving force behind much of what I do.
46) I'm less concerned with what work I do than what I get for it.
47) I enjoy tackling problems that are completely new to me.
48) I prefer work I know I can do well over work that stretches my abilities.
49) I'm concerned about how other people are going to react to my ideas.
50) I seldom think about salary and promotions.
51) I'm more comfortable when I can set my own goals.
52) I believe that there is no point in doing a good job if nobody else knows about it.
53) I am strongly motivated by the money I can earn.
54) It is important for me to be able to do what I most enjoy.
55) I prefer working on projects with clearly specified procedures.

56) As long as I can do what I enjoy, I'm not that concerned about exactly what I'm paid.
57) I enjoy doing work that is so absorbing that I forget about everything else.
58) I am strongly motivated by the recognition I can earn from other people.
59) I have to feel that I'm earning something for what I do.
60) I enjoy trying to solve complex problems.
61) It is important for me to have an outlet for self-expression.
62) I want to find out how good I really can be at my work.
63) I want other people to find out how good I really can be at my work.
64) What matters most to me is enjoying what I do.

Work Quality: Work Stressors

65) How often is there time pressure on your job?

   A) Never
   B) Rarely
   C) Sometimes
   D) Often
   E) Almost Always

66) How often are you exposed to excessive heat, cold or noise at work?

   A) Never
   B) Rarely
   C) Sometimes
   D) Often
   E) Almost Always

67) How often are you held responsible for things outside of your control?

   A) Never
   B) Rarely
   C) Sometimes
   D) Often
   E) Almost Always

68) My job requires that I work very hard.

   A) Not at all true
   B) A little true
   C) Somewhat true
   D) Very true

69) I feel drained of my energy when I get off work.

A) Not at all true
B) A little true
C) Somewhat true
D) Very true

70) I have too much work to do everything well.

A) Not at all true
B) A little true
C) Somewhat true
D) Very true

71) To satisfy some people on my job, I have to upset others.

A) Not at all true
B) A little true
C) Somewhat true
D) Very true

72) Sometimes I am unclear about what I have to do on my job.

A) Not at all true
B) A little true
C) Somewhat true
D) Very true