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College for The Sake of What? Promoting the Development of Wholly Educated Students

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College for The Sake of What? Promoting the Development of Wholly Educated Students

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I dedicate this dissertation to:

Lora Leone Yoder

Wife, best friend, and teammate

Your unwavering love, support, and patience have sustained through everything this process and life could throw at us. There are no words that truly express my gratitude and love for you.

Grandpa & Grandma Dickman

Your legacy lives on in those of us you loved and always supported.

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Abstract

There is increasing pressure on institutions of higher education to accurately measure student success. What was once thought of as a way to develop students holistically via a liberal arts degree, higher education is now often regarded as a means to an end: a well-paying job. Lost in the drive for quantifiable data is the holistic development of individuals who are capable of interacting with and influencing the world around them. Thus, higher education struggles to respond to market pressures while maintaining a focus on wholly developing individuals. In this research study, it is proposed that student "success" should include household income, critical thinking, psychological capital, and psychological well-being. Furthermore, research is needed to identify predictors that lead to whole student development. Interpersonal relationships were proposed as a critical predictor of holistically developed students; specifically, interpersonal relationships with fellow students and faculty mentorships. It was further purposed that these factors are moderated by student internship/work experience. This study was conducted using an online survey of 250 respondents and utilized regression analyses to assess the relationships between the predictors and the proposed outcomes of holistic education. Amazon's Mechanical Turk was used to recruit participants ($N = 369$) who completed an online survey. The sample included slightly more males (57%) than females (43%), and a median age of 32. Hierarchical multiple regression was used to analyze results. Strong positive main effects were found for both personal relationships ($\beta = .636$; $R^2 = .405$, $p < .001$) and faculty mentorship ($\beta = .551$; $R^2 = .304$, $p < .001$) on holistic student development. Internship/work experience value also exhibited a positive relationship with holistic student development ($\beta = .376$; $R^2 = .141$, $p < .001$). Together, the three factors accounted for a substantial proportion of the variance in the holistic student development ($R^2 = .496$, $p < .001$). The hypothesized two-way and three-way interactions were

not significant. Results suggested that there is a link between personal relationships, faculty

mentorships, internship/work experiences, and the outcome of wholly developed students, but

those relationships did not interact in a synergistic manner.

Keywords: whole student development, psychological capital, psychological well-being,

critical thinking, higher education, personal relationships, mentorship, internships

Chapter I: Literature Review

A multitude of pressures today are facing higher education as the traditional concept of education is broken apart and piecemealed to the masses and the competition between universities intensifies (Barber, Donnelly, & Rizvi, 2013; Strohush & Wanner, 2015). Consequently, the purpose of higher education is being actively debated (Altbach, Reisberg, & Rumbley, 2009; White, 2013). This purpose is often framed in terms of an investment transaction. Under this framework, a college degree is simply a means to an end, where the end is obtaining a well-paying job (Abel & Deitz, 2014; Connolly, 2003; Karageorge, 2014). A significant shift away from what has historically been the purpose of higher education: providing students with an education to develop the whole person to be a productive and contributing citizen (Schieffer & Lessem, 2014).

For this reason, the first purpose of this study is to build a holistic measure of student development (HSD) that includes four dimensions of college success including (a) traditional employment metrics (salary, household income) (b) critical thinking, and also measures that are aligned with the historical purposes of education including (c) psychological capital (hope, efficacy, resilience, and optimism) and (d) psychological well-being (purpose and meaning, supportive relationships, engagement, contribution to the well-being of others, self-acceptance, personal growth, personal mastery, efficacy). The second purpose of this study is to test the extent to which three key experiences during college (personal relationships, faculty mentorship, and internship/work experiences) are predictors of HSD (e.g., high scores across all four of the dimensions). In the following literature review, three relevant topics will be discussed: (1) the challenges facing higher education; (2) the purpose of higher education including critical elements in HSD; and (3) hypothesized predictors of whole student development.

Challenges Facing Higher Education

The cost of education continues to rise (Nakamura, 2013), therefore, value, quality, and return on investment (ROI) will become increasingly important to students and parents who are seeking to get the most out of an education (Logan & Curry, 2014). While there is sufficient evidence to indicate that ROI, in terms of dollars, is likely to be realized for graduates (e.g., Gabriel & Schmitz, 2015; Harmon, Oosterbeek, & Walker, 2003; Karageorge, 2014; Sanchez & Laanan, 1997), the uncertainty of future work, rising costs of education, and mounting student loan debt are forcing many to ask the question of whether the current model and measures of success are sustainable (e.g., Elliot, 2014; Nonis, Hudson, Philhours, & Hu, 2015; Strohush & Wanner, 2015). Further complicating the ROI equation in calculating the value of education is that the future of work is likely to be a vastly different landscape than it was in the past (Borenstein, 2011; Hodgson, 2016; Rifkin, 1997). As a critical aspect of an individual's identity, work is often intertwined into their non-work identity (Gratton, 2010). Now technology has created an untethered environment where work and other roles see greater assimilation, to the point that an individual's identity away from work is under threat (Jones, 2015, Nakamura, 2013)

With a constant drive for efficiency, information sharing, and interconnectedness, competition seems inevitable as current and future workers are faced with opposition from both peers and technology (Gratton, 2010). Instead of a hyper human, sterile workforce, that is assimilating to robotic function and efficiency (Samson, 2004) focused solely on ROI, the world is in desperate need of wholly developed individuals who bring psychological capital (hope, efficacy, resilience, optimism), psychological well-being (purpose and meaning, supportive relationships, engagement, contribution to the well-being of others, self-acceptance, personal growth, personal mastery, efficacy), and critical thought to the organizations where they work.

This would suggest that institutions and students should be concerned about more than future earnings and consider how they may contribute to the support, growth, and engagement of their graduates as they will face the obstacles of an uncertain and volatile world. As the world shrinks, the humanity and depth of relationships with each other and the global community gradually become superficial. There is a desperate need for individuals to immerse themselves as citizens of the global community and actively participate and engage (ten Dam & Volman, 2004), rather than simply possess a passive awareness of the world around them.

The idea of citizenship has experienced a revolution in its characterization over the years (e.g., Graber, 2004; Schudson, 1998) and has been examined at different levels (i.e., local, national, global) as economic interdependence and information technology continue to develop (Myers, 2010). Amid the contention over a concrete portrayal of the ideal global citizen (Oosterhoff, Metzger, & Babskie, 2015), a theme of active engagement has emerged (Stürmer & Kampmeier, 2003). The world is desperate for individuals to engage in their communities, contributing to the well-being of others through education, pay taxes that enhance the health and social welfare of those around them, and serve the community by fulfilling their civic responsibility. Making the world a just and humane place will require global citizens who find hope, meaning, and purpose in moving from a sterile, robotic world, to one that promotes growth, efficacy, and supportive relationships. This change in perspective has potential for students to not only possess an awareness of "them, there" but establish a deeper connection to others, and create a sense of "us, here" in a much more holistic integration of the world community (Hawkins, 2009).

College for the Sake of What?

Historically, colleges and universities have emphasized a liberal arts education and whole student development that included skills for critical thinking, well-being, and character development in addition to workforce skills. However, the challenges that higher education faces, particularly financial challenges, elucidate an increasing pressure to focus on potential student financial outcomes to "differentiate" the school from the competition (Bagley & Portnoi, 2014; Marginson, 2006; Mause, 2009; St. George, 2006; Winston & Zimmerman, 2000). With this added pressure, institutional leaders are likely to shift their focus to reducing costs and increasing employment metrics, possibly at the cost of a liberal arts education because that is what their institutions will be rewarded for under the emerging climate (Kerr, 1995).

In a climate of competition, several other differentiators are overlooked, including what students might need to face life challenges and be active members of society (White, 2013). When salary and employment are overemphasized, colleges and universities should differentiate themselves with a focus on developing holistic citizens (Barber et al., 2013; White, 2013) and adopting a more holistic framework for measuring student returns on investment (Carmichael & Sutherland, 2005).

A more holistic approach to a college education returns to previous goals and, in business vernacular, moves to a "balanced scorecard" approach to strategy. Parents, faculty, and institutions who shift their focus to a new narrative can move the focus beyond graduate income level as the benchmark of success to also include building psychological skills that serve to motivate the student in times of hardship, while encouraging them to flourish both in their personal and professional lives. It is important to note that income is still an essential piece of the puzzle – and therefore will be included – but alone does not paint a complete picture of holistic

graduates, who are ready to face the challenges of their world. Instead of concentrating on what is easy to measure (salary, employment, etc.), universities should focus on measuring the extent to which they are fulfilling their missions and embrace a holistic view of their student's lives (Gallup, 2014).

Holistic Student Outcomes

Vast amounts of research have explored what factors might contribute to educational outcomes (e.g., Fike, McCall, Raehl, Smith, & Lockman, 2010; Hall, Edwards, & Wang, 2016; Meacham, McClellan, Pearse, & Greene, 2003). The following section will explore the key elements of a college education that are hypothesized to encapsulate HSD when psychological factors are considered. More specifically, four categories of student outcomes are critical, complementary, and important to consider as a whole: (a) salary/employment, (b) critical thinking, (c) psychological capital (PsyCap), and (d) psychological well-being (PWB).

Household Income

Today, the success, or lack thereof, of a students' education and subsequent career is often measured by employment and salary level (e.g. Carlson & McChesney, 2015; Coates & Edwards, 2011; Salas-Velasco, 2006) in graduates' first years in the workforce. These post-graduation metrics are then used in marketing to potential new freshman, as well as donors, alumni, and internship sites to illustrate school effectiveness (Brennan, Brodnick, & Pinckley, 2008; Duniway, 2012; Fallon, 2011). There is additional pressure coming from the federal government to focus on cost, value, access, and affordability as a part of the college scorecard (U.S. Department of Education, 2006; 2013).

Given the current political pressure on institutions, there is a need to standardize salary metrics. For example, the U.S. Department of Education utilizes a variety of metrics when

analyzing salary and income levels in post-secondary education. On one hand, they tout a

comparison of national median income in contrast to post attendance earnings. While at the same

time touting schools who produce graduates, who have a higher percentage of earnings above

and beyond a high school diploma. Neither metric accounts for cost of living in a school's state

or region, leaving schools in states such as Alabama, Kentucky, and Mississippi (CNBC, 2016)

at a disadvantage when compared to their counterparts in California and New York. Thus, when

it comes to paying back student loans, the U.S. Department of Education uses and entirely

different metric when determining a graduate's ability to pay back their loans. Despite income

levels being a common metric of success, they often distract from the deeper purpose of

education.

Income level is a necessary, but insufficient aspect of a wholly developed individual.

Some research has suggested that if there is sufficient wealth to meet or marginally exceed basic

individual needs, then some measure of happiness can be realized (Kahneman & Deaton, 2010;

Ruberton, Gladstone, & Lyubomirsky, 2016). For this reason, the Department of Education's

(DOE) metric for discretionary income will be utilized (Federal Student Aid, n.d.a). If an

individual has discretionary income (i.e., >150% of poverty guidelines for their state of

residence), then they are not thought to be facing a financial hardship and able to pay some

portion of their student loans under an income based repayment plan (Federal Student Aid,

n.d.b).

Adequate income is a necessary outcome for graduates so that they can function in

society and in many cases, pay back outstanding student loan balances (Elliot, 2014). However,

where a student is employed or how much money they make is only part of the puzzle; these

outcomes are necessary, but insufficient for HSD. In addition to household income, critical

thinking has also been recognized as a critical element of student development.

Critical Thinking

One of the most widely agreed upon outcomes of education has been to increase a

student's ability to think critically (Voelker & Voelker, 2013). Institutions tout their ability to

develop critical thought in their students (Drennan, 2010), but are often only paying lip service to

the idea (Arum & Roksa, 2011; Daly, 2001). There has been a call to clearly measure the impact

of curriculum set forth by colleges and universities on their graduates' ability to think critically

so that measurable gains can be achieved (Allen, Rubenfeld, & Scheffer, 2004). While there is

still debate surrounding the conceptualization of critical thinking (Gupta & Upshur, 2012;

O'Hare & McGuinness, 2009), Scriven and Paul (1987) proposed a definition that is commonly

used for the construct in current theory and research:

> Critical thinking is the intellectually disciplined process of actively and skillfully
> conceptualizing, applying, analyzing, synthesizing, and/or evaluating information
> gathered from, or generated by, observation, experience, reflection, reasoning, or
> communication, as a guide to belief and action. In its exemplary form, it is based on
> universal intellectual values that transcend subject matter divisions: clarity, accuracy,
> precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and
> fairness.

Variations of this definition have been set forth (e.g., Mulnix, 2012), and attempts have

been made to synthesize critical thinking down into a more generalized definition (e.g., Ennis,

1985, 1991); however, Scriven and Paul's conceptualization continues to represent the

foundation for current work. For example, critical thinking should be an active process that is

multifaceted and generative of rational, accurate, and reasoned responses. Moving beyond

domain specific subject matter (O'Hare & McGuinness, 2009), critical thinkers should be able to

moderate a variety of information sources and move toward holistic decisions or behaviors.

Some have criticized the lack of specificity in defining various aspects or have sought depth in proposed definitions (Gupta & Upshur, 2012), but many conceptualizations remain domain specific and fail to recognize the multi-disciplinary foundation of critical thinking, which falls in line with the broad perspective of a liberal arts education.

Critical thinking is differentiated from cognitive ability as it should go beyond personal traits (Krupat et al., 2011) and be a skill set that is learned and developed over a lifetime (Kuhn, 1999). As an intellectually disciplined process, critical thought takes effort that runs counter to our innate desire to be lazy (Paul & Elder, 2012). However, the world needs citizens who—although inundated with information—delve deeper and recognize issues for more than their face-value, actively engaging their world with critical thought and a willingness to understand the issues that are salient to themselves, their communities, and their world.

Process. One of the primary points of consensus in the critical thinking literature surrounds the idea that regardless of an individual's ability to think critically, undertaking an intellectual *process* is necessary (Daly, 2001; Ennis, 1985; Scriven & Paul, 1987; Willingham, 2007). Recognizing the inherent idleness of human thought (Kahneman, 2013; Paul & Elder, 2012), wholly developed individuals should determine the authenticity and objectivity of information upon which they subsequently base action or belief. Taking actionable steps that require cognitive effort, drives beyond basic functioning and should indicate a healthy functioning individual, who is actively engaging a process. There is no prescribed set of rules by which each process should be structured, but individuals should be willing to reason dispassionately, seek new or disconfirming evidence, and welcome other cognitive processes that require energy before jumping to conclusions, acting impulsively, or simply conforming to the status quo (Willingham, 2007).

Source. Information and the *source* of information being utilized to juxtapose positions or base decisions is salient to those individuals who are participating in critical thought (Ennis, 2001). A process which is based on misinformation or incomplete data is not much better than simply conforming to the status quo. Furthermore, the mindless application of information into a process is not in alignment with the metacognitive awareness that is needed to signal to the participant that critical thought is occurring (Mulnix, 2012, Scriven & Paul, 1987). Analysis and synthesis require that information is present, whether it is observed, experienced, or reasoned, information is a necessary component of critical thought.

Application. Finally, *application* of the resulting belief or action needs to occur. Completion of a process based on sound information that is not applied to alter or confirm a belief or action is fruitless. Application of reasoned thinking requires the individual be accepting of results, even when they are disconfirming previous thought or belief (Mulnix, 2012). Ingraining the cognitive effort to think critically is likely to be a lifelong process, but a skill that employers across nearly every industry value.

Practical application. The disposition to think critically is valued by employers (Kuncel & Beatty, 2013) because those employees who possess the ability to evaluate, conceptualize, analyze, and synthesize information are more likely to anticipate and adapt to challenges (Ackerman, Gross, & Perner, 2003; Evens, Verburgh, & Elen, 2013), and continue to develop over their lifetime (McKeachie, Pintrich, & Lin, 1985). There is a need for critical thinkers to construct a meaningful workforce (Flores, Matkin, Burbach, Quinn, & Harding, 2012), so institutions must create the enabling conditions where critical thought is developed and allowed to flourish (Paul & Elder, 2012; Willingham, 2007). In addition to being a highly valued competency by employers, critical thinking is a crucial aspect of an engaged citizen.

Higher education has long recognized that the world needs citizens who are willing to challenge convention in thoughtful and reasoned ways. Exploring new and creative ideas to the increasing complexity of issues is central activity of critical thinking (Brookfield, 1987). Understanding the depth and breadth of issues and challenges that arise in life will be important if citizens are able to actively engage in conversations that transform our world. One means by which depth and breadth of understanding can be achieved is through critical thought, which in turn contributes to rational deliberation. Considering both sides of an issue, belief, or action is imperative in a democratic society where ideas and values can be pluralistic (Weinstein, 1991).

A world full of citizens who think critically by: (a) being open-minded about possible alternatives to thought and action, (b) challenging their own and the assumptions of others, (c) possessing a willingness to use failure as a source of information for learning, and (d) not allowing groupthink to override critical thought is something that institutions of higher education should facilitate (Ackerman et al., 2003; Mulnix, 2012; Willingham, 2007). Because critical thinking can be developed throughout an individual's lifetime (Kuhn, 1999), colleges and universities should take advantage of the student's willingness to develop such a vital life skill during what is often a pivotal time in a person's life (Ackerman et al., 2003). These settings are the ideal place to move a student's understanding of the world to the next step of meta-cognition (Kuhn, 1999). Understanding that critical thinking is a set of skills that must be applied properly (Willingham, 2007), education should aim to prepare students to participate in society (ten Dam & Volman, 2004), developing an internal motivation to engage problems and make decisions via critical thought (Facione, Facione, & Giancarlo, 1997). Instilling the confidence and curiosity to think critically is a vital role that educators should play in a student's life, helping them realize the returns of critical thought in both their professional and personal lives (Paul & Elder, 2012).

Psychological Capital (PsyCap)

Employment/salary and critical thinking alone, however, still paint an incomplete picture of whole student development. Graduates also need to be able interact positively with the world. Drawing from positive psychology, PsyCap represents a higher order construct that has been shown to be critical to the healthy functioning of individuals in the work environment. PsyCap is comprised of hope, self-efficacy, resilience, and optimism (Luthans & Youssef, 2007; Luthans, Avolio, Avey, & Norman, 2007). These concepts become important to creating a psychologically healthy student because they create psychological resources that can be drawn upon later. Developing individuals who have the necessary resources to face the challenges and uncertainty of life will allow those individuals to leverage their psychological advantage and persist in their pursuit of great lives and great jobs.

PsyCap is distinct from other forms of capital (Luthans, Avey, Avolio, Norman, & Combs, 2006; Luthans & Youssef, 2004) such as social capital (i.e., who you know) and human capital (i.e., what you know), and instead focuses on who people are and who they can become (Thompson, Lemmon, & Walter, 2015). The self-focus is important because there will be times when students need to draw upon their own stored resources, especially in times when they feel there is no one to turn to for help. Additional benefits of rooting PsyCap within positive psychology is that the focus becomes long-term (Luthans, Youssef-Morgan, & Avolio, 2015) and the processes and outcomes are often elevated (Cameron & Caza, 2004) to exceed minimally expected results such that exceptional performance and remarkable results are achieved (Cameron, 2008). Thus, the construct can be developed (Luthans, Avey, Clapp-Smith, & Li, 2008; Luthans, Luthans, & Jensen, 2012) and operates in a state-like fashion—that is, can be sustained and operate as a personal attribute. Since its conceptualization (Luthans & Youssef,

2004), the constructs that comprise PsyCap have been included because they can be developed

through training programs or other forms of change management (Luthans et al., 2008). This

suggests that institutions should be able to create an educational experience over four years that

promote this type of growth in student populations.

PsyCap is an important piece of the whole student balanced scorecard and creates a

psychological benefit for students because of the numerous positive outcomes associated with

the construct. A vast collection of studies has explored the outcomes of PsyCap both at the

individual level as well as the team and organizational levels (Avey, Reichard, Luthans, Mhatre,

2011; Newman, Ucbasaran, Zhu, & Hirst, 2014). Several of the outcomes are particularly

powerful for graduates entering the workforce as they pertain to salient values for employers. For

example, students who possess high levels of PsyCap, in the face of challenge, are more likely to

exert greater effort in their work and thus perform better (Luthans et al., 2007). Looking

specifically at job performance, PsyCap has been shown to account for higher levels of

performance than personality and core self-evaluations (Luthans et al., 2007). Beyond simple

metrics of performance, those graduates, who possess higher levels of PsyCap, are also likely to

realize higher levels of job satisfaction, creativity, problem-solving, innovation (Avey et al.,

2011), lower levels of absenteeism (Avey, Patera, & West, 2006), and are more likely to exhibit

individual and team organizational citizenship behaviors (OCB; Avey, Hughes, Norman, &

Luthans, 2008). These outcomes are likely behaviors that are consistent with great lives and

possessing great jobs.

A quick overview of each construct (i.e., self-efficacy, optimism, hope, and resilience) is

necessary to better understand the intricacies of PsyCap. Defined as a composite construct

> "an individual's positive psychological state of development and is characterized by: (1)
> having confidence (self-efficacy) to take on and put in the necessary effort to succeed at

challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success" (Luthans et al., 2007).

The importance of each of the four elements to human functioning is discussed below, followed by a discussion of how all four work together and how they are an important student outcome and a complement to employment outcomes.

Self-efficacy. A student's confidence in their own ability will often motivate them to welcome challenges as they arise and energizes them to pursue their goals (Luthans et al., 2015). Originally rooted in Bandura's work (1982; 1986), individuals who have high self-efficacy tend to set higher goals, invest the necessary effort to achieve those goals, and persevere when faced with obstacles (Stajkovic & Luthans, 1998). While self-efficacy is often specific to various domains (Bloomquist, Farashah, & Thomas, 2016), developing the general self-efficacy of students who also possess hope, should prove synergistically beneficial as they not only execute their plans, but do so with confidence (Luthans et al., 2015).

Optimism. Optimism as a construct becomes important because those who are optimistic are likely to face challenges head on, while taking the situation for what it is and taking active steps to manage their way through the challenge (Luthans et al., 2015). Individuals with a positive approach tend to feel in control when things are going well and subsequently strive to better themselves and their futures. Within higher education, developing student optimism can build students who focus on the positive when facing difficult and look for ways to better themselves even further when things are going well.

Hope. Within the context of PsyCap, hope is having the will to succeed and is bolstered when students can formulate plans and predetermine pathways to success before obstacles are presented. When faced with adversity, students who have hope will not only have a plan, but will

have a backup plan that they can employ if their initial plan is unsuccessful. Knowing that there

is already a pathway in place, will help students face a variety of issues that range from a poor

performance rating to being betrayed by a colleague (Luthans et al., 2015). While hope is a

necessary component of PsyCap, it has a synergistic relationship with self-efficacy.

Resilience. The fourth and final construct in the higher order construct of PsyCap is

resilience, which is a student's ability to get back to where they were before they faced a change

in state. Traditional views of resilience have focused on the ability of individuals to bounce back

from adversity (Masten, Cutuli, Herbers, & Reed, 2011). Taking this idea of bouncing back a

step further, students who are high in resilience should be able to not only get back to their

previous state, but move beyond that prior state and be better equipped to execute their plans for

a great life. The development of resilience is often thought of in three domains: resilience assets,

risk factors, and values (Masten et al., 2011; Youssef & Luthans, 2007). If everything was

always good, then it should be easy to remain optimistic. What becomes important is what

happens when things do not go according to plan.

PsyCap as a multidimensional approach. Thinking about how to help students develop

PsyCap (Luthans et al., 2015) requires a multidimensional approach. This tactic rings true when

thinking about holistic education through the lens of a balanced scorecard. There are a multitude

of factors in play and each provides a differentiated value to the overall vision of a wholly

educated students. Taken together, the individual aspects of PsyCap should prove to strengthen a

student's psychological advantage as they seek a great job and a great life.

In defining a wholly educated graduate, employment, the ability to think critically, and

PsyCap require one outcome to complete the picture. Psychological well-being is a fourth

element to consider in the HSD. Graduates might possess employable skills that are in demand

(i.e., critical thinking) and enter the workforce with efficacy, hope, optimism, and resilience, but people who are able to thrive and live a full life are also characterized by elements basic to human flourishing such as a sense of purpose and strong interpersonal relationships. These additional dimensions are discussed below.

Psychological Well-Being (PWB)

In addition to household income, critical thinking, and PsyCap, one additional element should be considered in HSD: psychological well-being (PWB) outside of the workplace. Six psychological dimensions are regularly noted as critical to human well-being: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth (Miquelon & Vallerand, 2008; Ryan & Deci, 2000; Ryff, 1989). Researchers have spent a great deal of time debating the definition, various aspects of well-being, and its distinction from other synonyms such as contentment, life-satisfaction, and happiness (e.g., Ryff & Keyes, 1995; Springer & Hauser, 2006; Springer, Hauser, & Freese, 2006; Vittersø, 2004). The main contention in recent years has been to delineate between what is captured in subjective well-being versus PWB assessments (Disabato, Goodman, Kashdan, Short, & Jarden, 2016; Lambert, Passmore, & Holder, 2015; Ryan & Deci, 2001) and their philosophical roots. Greater interest lies in PWB, which is rooted in eudaimonic well-being or the belief that fulfillment or realization of an individual's true nature is the key to well-being (Waterman, 1993).

Aristotle is credited as the first to make a distinction between hedonic and eudaimonic well-being. Subsequent research suggests that statistically the two are highly correlated with each other as well as their correlations with a variety of outcomes seem to be very similar (Disabato et al., 2016). However, the conceptual distinction is important. From a hedonistic viewpoint, well-being or happiness is primarily found in the pursuit of pleasure and enjoyment.

In contrast, eudaimonic well-being finds its roots in the pursuit of a virtuous life worth living

(Huta & Waterman, 2014; Miquelon & Vallerand, 2008; Ryan & Deci, 2001). On the surface

both views promote an individual's well-being, but for hedonic or subjective well-being the

transactional nature of a focus on state well-being blurs psychological benefits that may be

realized in the pursuit of self-fulfillment and self-actualization (Vittersø, 2004). Within higher

education, the former, hedonic well-being, is unlikely to be a goal. However, building a

psychologically healthy, flourishing life is well within the purview of the historical goals of a

liberal arts education.

Psychological well-being focuses on eudaimonic happiness and human flourishing, which

is an individual's ability to prosper in a social-psychological sense, including mastery,

autonomy, purpose, engagement, and self-acceptance. Furthermore, PWB includes aspects

beyond the basic human psychological functions such as positive relations with others and

optimism. For example, personal relatedness should move past what the individual receives and

encompass giving to others, which may be more important to psychological health (Brown,

Nesse, Vinokur, & Smith, 2003). Although independently the sub-dimensions of psychological

well-being are important, the totality of how they work together is of greater importance and

characterized into a single well-being score known as flourishing (Diener et al., 2010).

Individuals, who identify that they are leading a flourishing life, are likely to experience a

variety of positive outcomes and therefore colleges and universities should be doing their part to

develop flourishing citizens. Research suggests that well-being is related to a wide variety of

positive outcomes such as physical health (Pettit, Kline, Gencoz, Gencoz, & Joiner, 2001),

productivity (Donald et al., 2005; Harter, Schmidt, Asplund, Killham, & Agrawal, 2010), better

social relationships (Diener, 2013), and greater life expectancies (Lawless & Lucas, 2011). In

this respect, well-being is more than a balance between pleasure seeking and pain avoidance (Ryff, 1989).

If individuals have high levels of PWB (i.e., flourishing), they should be better equipped to face adversity and engage the world around them. For example, those individuals who score high in autonomy are more resistant to social pressures and able to self-evaluate based on personal standards (Ryff & Singer, 2008), discounting what the latest fad or social media post may elicit. The key takeaway for institutions, parents, students, and policy makers is that there is a need to think beyond simple metrics of salary and employment. While these metrics are important, college should be more than a means to a financial end.

Bringing Holistic Outcomes Together

Students who are wholly educated—the combination of critical thought, psychological capital, psychological well-being, and an adequate income—could be expected to lead better lives. In addition, they are more likely to face adversity with better attitudes and in healthier ways because of psychological resources that are available to them and their ability to reframe hardship (Masten et al., 2011). At a minimum, it should be possible for them to perceive that they can make the best of their situation and demonstrate the belief that they are productive members of their communities, organizations and society. Holistic education must go beyond satisficing (Dill, 1997).

Moreover, the characteristics need to be ones that can be developed by students. Therefore, criteria for inclusion in this construct of a wholly educated student include state-like or developable attributes of individuals that behave as trait-like constructs. Focusing on attributes that only have strong correlations with individual traits does not adequately acknowledge that individuals can be developed and the pre-deterministic nature of trait-based concepts would

negate the role of parents, teachers, and institutions in the development of students. Thus, in this study, HSD will be operationalized as those students who score positively across all four dimensions.

There are other valued student outcomes that could be included in HSD that are industry or sector specific (e.g., competency based education [Sportsman, 2010]) and others which may be conditional upon the school and its mission (e.g., spiritual or religious [Hall et al., 2016]). Some research has explored the breadth of possible educational outcomes (e.g., Loris, 2010) and hypothesized which should be pursued by colleges and universities seeking to holistically develop their students (e.g., Wick & Phillips, 2008). However, they are often general enough that it becomes difficult to measure if institutions are achieving their desired outcomes. "Acquiring intellectual skills or capacities" (Schneider & Shoenberg, 1998) could be measured in such a variety of ways that it may be easily 'attainable' by all institutions and therefore not indicative of whole person development. For example, a "certain level of proficiency" may entail very different levels and be operationalized in unique ways at various colleges and universities.

Another benchmark for inclusion in this study is that the outcomes that comprise the HSD integrated construct have a theoretical relationship with activities that institutions themselves can implement. There are numerous educational outcomes posited by researchers that skip the psychological factors needed to carry out such initiatives. For example, "civic knowledge and engagement" (LEAP, 2008) or "gaining self-knowledge" (Schneider & Shoenberg, 1998) are fantastic outcomes, but as noted earlier, are likely outcomes when people are psychologically thriving. Therefore, it is important for institutions to consider how they can develop the student so that the student is better able to serve their community, rather than encouraging students to simply engage while failing to provide them with the resources

necessary to do so. While there are clearly many valuable educational outcomes and each one

has its place in higher education, it is the combination of critical thinking skills, psychological

capital, and psychological well-being that should provide the students the necessary resources to

achieve more contextual educational outcomes across all types of institutions (i.e., state, private,

career schools).

One way to visualize the key elements of HSD included in this study is through the lens

of a balanced scorecard. Originally designed by Kaplan and Norton (1992; 1996) as a

performance management framework, the balanced scorecard has evolved over the years to

become one of the most widely recognized strategic management tools in use today. The

advantage of a balanced scorecard approach is that it implicitly recognizes multiple outcomes

that are critical and must be managed *as a group*. None of the factors should be considered

independently because an organization's success depends on how they work together. For

example, a business' long-term success depends on yearly profits, customer service, and

employee capability.

Furthermore, the balanced scorecard increases the visibility and saliency of all the

factors. As it relates to the world of higher education, institutions who emphasize salary and

employment as their measures of student success could produce students who are employed but

lack critical thinking skills, a sense of optimism, purpose, and well-being. Changing what is

measured, and therefore pursued, by a university as it relates to their perceived success of

alumni, communicates the importance of those constructs (Kaplan & Norton, 2001). As noted

earlier, household income is an important factor, but it does not tell the whole story.
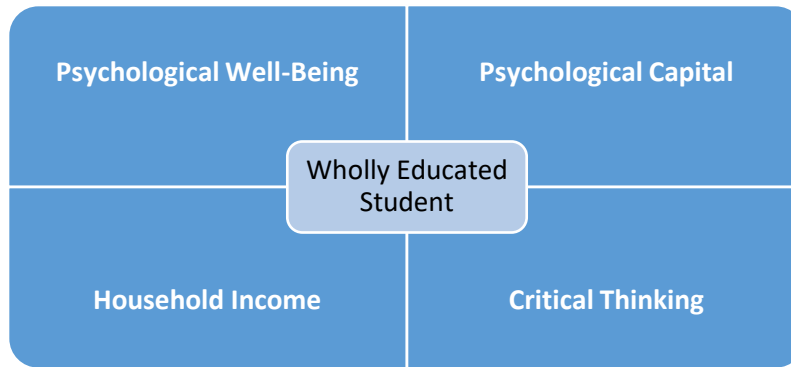
Figure 1. Sample balance scorecard of wholly educated students.

A student's psychological development is realized when PsyCap and PWB are included as outcomes in addition to household income and critical thinking. If institutions are going to be strategic in the product they produce – wholly educated students – they need to consider outcomes that go beyond the College Scorecard and consider what is good for their graduates which is turn is good for their communities and world. Balancing a student's ability to earn an income with their psychological capital, while considering how a flourishing student should also be able to think critically is becomes critical to the long-term success of graduates and the institutions they attend. Focusing on the betterment of individuals for a greater purpose or good aligns with the historic (and even most current) mission statements espoused by academic institutions (Morphew & Hartley, 2006).

Played out in today's business climate, institutions must consider the extent to which they produce students who can earn an income. However, if income levels and employability become the primary focus, a dichotomous environment is created where a student is either making an above average wage or the institution has failed to properly develop their graduate. In this single bottom line approach, there is little room for grace, failure, setback, or times of transition in what has become a highly volatile business climate. Consequently, when an individual's identity is tied into this success-failure dichotomy the ebbs and flows of life can be magnified. When students are unable to meet their basic needs, it is not likely that they will invest much time and

energy into those around them. Universities which seek to fulfill their mission and espoused values of whole student education, must be more strategic in the way they measure student success than current metrics highlighted by the College Scorecard.

A balance to this win/lose dichotomy is to incorporate psychological resources that serve to sustain individuals through those ebbs and flows of life; aiding an individual's ability to be resilient, hopeful, self-efficacious, and optimistic. Aligned with the balance scorecard approach, graduates' income levels should be considered in light of also measuring and therefore developing psychological capital and psychological well-being. Combining psychological well-being (i.e., the extent to which a graduate is currently flourishing) with their psychological capital (i.e., the extent to which they have resources to draw upon to continue flourishing) should prove useful to a society in need of active and engaged citizens (ten Dam & Volman, 2004). The vision is that as graduates enter the workforce, they will be able to draw on the challenges faced and lessons learned during their time at school, and know where to go when they need to leverage the necessary resources to mitigate the challenges and uncertainty of the world.

Finally, critical thinking skills should prove useful as students draw upon those various sources and synthesize information into meaningful actions. Minimum levels of post-graduation earnings lay the foundation for satisficing government metrics and individual needs. Developing the psychological health of graduates creates value for all stakeholders – both fulfilling current psychological needs and creating resources to draw upon – but critical thinking is a key element that ties the balance together in a meaningful way.

Critical thinking skills are consistent with the majority of research on educational outcomes (Abrami, et al., 2015; Loris, 2010; Padrón, 2008) and serve to empower graduates to engage in active processing which manifests rational, accurate, and reasoned responses to an

otherwise volatile world. A major contribution to a wholly developed student's life is the ability

for the discrete skills of critical thinking to be applicable across a multitude of domains and

contexts (Abrami et al., 2015). Enabling those who think critically to engage their communities

in a participative manner and truly make an impact on their world.

Consequently, critical thinking, psychological capital, psychological well-being, and an

adequate income should be key indicators of students who are not only working, but leading

great lives. Having identified the outcomes which should be significant and specifically

measurable to policy makers, institutions, parents, and students, the practices that universities

may want to consider as they implement plans to better wholly educate students should be

discussed.

Predictors of Holistic Student Development

The next question becomes: "What are the key experiences during college that should be

associated with predicting HSD?" Significant work has already been done in this area (e.g.

Chickering & Gamson, 1987; Seifert, Pascarella, Goodman, Salisbury, & Blaich, 2010; Umbach

& Kuh, 2006) and has identified several practices in undergraduate education that are critical to

student development in post-secondary education. The more than 20 practices have been

synthesized into seven categories or principles, which include faculty-student contact,

cooperation among students, active learning, and respect for diverse students and diverse ways of

knowing (Chickering & Gamson, 1987; Pascarella, Cruce, Wolniak, & Blaich, 2004). Other

experiences have also received attention such as first-year seminars, internships, and

undergraduate research (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006).

As they relate to whole student development, it is proposed that three experiences are

likely to be particularly important including: (a) close personal relationships that are influential

in a student's life, (b) faculty-student contact, and (c) internships or work experiences. These

three experiences are the most important for HSD because they provide social (Lakey & Orehek,

2011) and professional support (Jacobi, 1991), while allowing students to practically apply

lessons and gain exposure to challenges during a time when support is high (Kuh, 2008). In the

following section, each of the three predictors will be discussed, identifying how the construct is

defined, the dimensions within the construct, the reasons why this experience is critical, and the

way it will be operationalized.

Personal Relationships

Personal relationships are a critical piece of the emotional and social support system

humans enjoy. Even to the point that it has been argued that relatedness is a basic need of human

motivation (Alderfer, 1969; Baumeister & Leary, 1995; Maslow, 1968). Sometimes measured in

terms of intimacy (Carmichael, Reis, & Duberstein, 2015; Williams, Connolly, & Segal, 2001),

relationships with other individuals can vary widely between friends, family, and romantic

partners. When it comes to friends, which is the common type of personal relationship formed at

school, closeness or quality of the dyads are particularly important to researchers who are

attempting to capture the depth and breadth of those relationships (Berscheid, Snyder, & Omoto,

1989; Dibble, Levine, & Park, 2012; Parks & Floyd, 1996). Personal relationships as they relate

to a student's time in school are those interpersonal peer relationships, where there is affective

concern for the other (Baumeister & Leary, 1995) and perceived intimacy, closeness, or support

to the individual who reports a friendship dyad exists (Marigold, Cavallo, Holmes, & Wood,

2014). Personal relationships may include classmates, teammates, co-workers, and roommates or

other members of a residence hall.

Relationships with close friends should serve as a source of resource renewal so that individuals can face the challenges both at work and in life so that they are able to pursue great jobs and great lives (Carmichael et al., 2015). Quality friendships are likely to provide social support that mitigate against poor mental and physical health that results from stress (Lakey & Orehek, 2011; Marigold et al., 2014). In addition, low levels of negative affect and increased positive affect are often realized when individuals perceive that they have social support (Finch, Okun, Pool, & Ruehlman, 1999). Increased well-being, health, and longevity are all likely outcomes of individuals who have social support and connection (Berkman, Glass, Brissette, & Seeman, 2000). Throughout careers, these relationships can increase meaning and impact (Liden, Wayne, & Sparrowe, 2000).

Personal relationships formed while attending college may last a lifetime, but when it comes to replenishing psychological resources, simply having friends is unlikely to be enough. Some research has suggested that access to friends is not sufficient in mitigating psychological concerns and that, as humans, there is a need to have reciprocated friendships (Malikiosi-Loizos & Anderson, 1999). Moving beyond acquaintances to meaningful relationships is a key piece of relatedness and is critical if psychological growth is to occur (Deci & Ryan, 2000).

Friendship closeness has been studied as it relates to frequency of interactions (Berscheid et al., 1989), emotional support, enduring relationships, reciprocal exchange (Tsai, 2006), and competition (Schneider, Dixon, & Udvari, 2007). The reoccurring theme in these studies is that close relationships provide social support that is important to healthy human functioning. People need people with whom they can communicate and interact as they function in society and life.

Similarly, relationship quality has been discussed in a variety of contexts (e.g., Gleason, Jensen-Campbell, & Ickes, 2009; Mathur & Berndt, 2006) and how it relates to a variety of

factors (e.g., Cambron, Acitelli, & Steinberg, 2010; Keefe & Berndt, 1996; Verhofstadt, Buysse, Rosseel, & Peene, 2006). However, relevant to the current conversation is the idea that friendship quality is a perception of the individual, who would draw on that relationship for psychological resources and well-being. As previously mentioned, simply having friends is not likely to satisfy the innate human need of relatedness and lead to HSD. Instead, there needs to be a closeness and quality to the personal relationships students carry throughout their lives.

The effects of supportive personal relationships may mitigate the risks associated with stress (Wilcox, 2010). Therefore, operationalizing personal relationships as supportive and positive is crucial because there are a multitude of negative effects associated with stressful and adverse relationships (Boman & Gibson, 2011; Lemay & Dudley, 2009; Smith & Rose, 2011). Social and emotional support from the personal relationships that students form will be critical to their psychological development and sustainability. Highly regarded close friends are likely to provide hope and optimism during seemingly impossible situations and contribute to an individual's ability to remain resilient in the face of adversity. The link between social support and an individual's health has been examined extensively (Verhofstadt et al., 2006). There are varying definitions of social support in the literature (Zimet, Dahlem, Zimet, & Farley, 1988), but what is important in the development of HSD is that there is a difference between general and relationship-based perceptions of social support (Pierce, Sarason, & Sarason, 1991). In other words, the source of the perceived social support is more important than identifying a specific type of social support. Regardless of the type of social support, it is proposed that students who perceive they are being supported by their close and quality relationships are more likely to experience higher levels of psychological capital and psychological well-being. Other conceptualizations include the idea of intimate and familial relationships. While both sources are

likely to contribute to the healthy psychological functioning of individuals (Hobfoll, Nadler, & Leiberman, 1986), they are not necessarily factors that colleges and universities would be able to encourage or influence directly. However, another relationship that universities can directly influence is faculty mentorship.

Faculty Mentorship

Student-faculty contact has been suggested across numerous studies as an impactful practice in creating holistic students (Chickering & Gamson, 1987; Cruce, Wolniak, Seifert, & Pascarella, 2006; Pascarella et al., 2004). The main purpose of mentoring in an academic setting is often to provide support and guidance for a variety of challenges that exist—both in the academic and non-academic lives of the mentees (Jacobi, 1991). Whether the relationship forms in a formal (Johnson, 2007) or informal (Schlosser & Gelso, 2001) manner, the returns of a mentor-mentee relationship for students are often multifaceted (Baugh & Scandura, 1999). For this reason, providing a specific schema of mentorship may preclude valuable relationships that formed or occurred during a student's time in school (Haggard, Dougherty, Turban, & Wilbanks, 2011), so either formal or informal mentorship relationships with an advisor, faculty, or staff member at the student's alma mater will be included.

There is less concern around the specific source (i.e., faculty-student, advisor-student) or type (i.e., formal mentorship program, informal mentorship) of relationship that occurred during a student's time in school. Instead, the satisfaction and quality of the mentorship relationship is critical, regardless of where (Xu & Payne, 2014) or with whom (i.e., faculty member, teacher, advisor, etc.) it occurs. Students who were satisfied with their advising relationships and felt that they had quality mentorship, are likely to experience a greater psychological gain over peers who did not engage in quality or satisfactory mentorships.

Some of the primary returns of mentoring have been identified within three general functional frameworks: 1) psychological support, 2) career-related support, and 3) role-modeling (Scandura & Williams, 2001; St-Jean, 2011). Each of these functions serve to support the mentee by providing reflection, motivation, confidence, integration, guidance, and real-world stories that may be inspirational or practical. These benefits for the mentee are often tailored to specific situations and can be uniquely advantageous because of their salience to the individual and their contexts (Eby et al., 2013). The outcomes of these relationships are beneficial for undergraduates (Tenenbaum, Crosby, & Gliner, 2001) and mentoring in an academic setting can contribute to greater academic achievement and persistence, professional development, and psychological health (Johnson, 2007). Taking a long-term perspective can extend the benefits of the mentor-mentee relationship beyond the student's time as students reflect upon advice and guidance given while in school or make the effort to continue the relationship beyond their time in attendance (Haggard et al., 2011). The contribution to psychological health that mentors may impart to students is especially important. By creating a space to intentionally reflect, mentorships may allow for exploration of various or competing ideas as well as assist students in building resilience so that they are able to navigate challenges in their personal and professional lives (Masten & Coatsworth, 1998). Beyond personal and faculty relationships, one more dimension is important to add (i.e., work experience) because it provides practical application and "real-life" scenarios that students must navigate and experience.

Internship and Work Experience

Internship and work experiences are defined as "structured and career-relevant work experiences, obtained by students prior to graduation from an academic program" (p. 393, Taylor, 1988). They can vary widely by industry, length, and application. Even though the

context may vary, internships are likely to provide a multitude of benefits (Knouse & Fontenot, 2008) such as the crystallization of vocational self-concepts (Brooks, Cornelius, Greenfield, & Joseph, 1995; Taylor, 1988), reduced reality shock (Paulson & Baker, 1999), increased likelihood of securing employment post-graduation (Callanan & Benzing, 2004), greater earnings in second career experiences (Gault, Redington, & Schlager, 2000), and better career related decision-making (Garavan & Murphy, 2001). When internships are done well, they are highly impactful experiences in an undergraduate's education (Kuh, 2008). They are the practical application of learning and mentorship (e.g., support, guidance, networking), providing opportunities to use knowledge, skills, abilities, and other characteristics for further development.

There is an increasing need for experimental learning (Navarro, 2008) so that concerns about the relationship between learning in the classroom and "real-life" can be addressed in meaningful ways (D'Abate, Youndt, & Wenzel, 2009; Pfeffer & Fong, 2002). By providing realistic expectations of work (Sagberg, 2014), a major lesson that may be acquired as part of the process is that internships or apprenticeships may help reduce the shock of entering the workforce (Paulson & Baker, 1999). Mitigating this reality shock and establishing realistic job expectations should allow students to avoid drawing upon their psychological reserves before they face more perilous challenges. In addition, exposing students to the climate and culture of a business, should allow lessons learned in school to become more salient as they see the practical application and external validity issues of knowledge acquired in school. For example, students may discuss ethics in the classroom, but time at work could make clear some ethical dilemmas that may be faced, the disconnect between ideas and practical application, as well as incongruence between expected and actual outcomes (Bush, Bush, Oakley, & Cicala, 2014).

The socialization process of being in a work environment should increase their confidence as they enter the workforce post-graduation. Gaining a realistic preview of work could serve to decrease the negative psychological effects of incongruence between expectations and reality, and in turn, not require students to draw on stored psychological capital. Finally, familiarity of interpersonal interactions in a workplace context, which may not be formally addressed in the school curriculum (Shoenfelt, Stone, & Kottke, 2013), should provide individuals with the ability to seek relationships which enrich their lives and avoid those which will drain resources in the work context.

Developing Wholly Educated Students

The development of wholly educated individuals is a complex and difficult task to undertake, but one worthy of the effort (Wilson, 2015). Providing holistic purpose to the educational endeavors of students is necessary if institutions are going to play a role in developing active citizens, who are able to interact and influence the world around them. The conversation regarding educational outcomes is a heated debate with increased emphasis as the government begins to pressure colleges and universities to focus on quantifiable outcomes. One focus of this research is to identify psychological outcomes of a wholly developed student, so that students, parents, and institutions can better articulate the impact being realized by the education being attained. It is critical that students obtain employment after school and have adequate pay to live, but salary and employment do not comprise a complete picture. Psychological capital, psychological well-being, and the ability to think critically are essential pieces of the wholly educated student, and those individuals who receive an education focused on their holistic development, should be better equipped to face the challenges of life.

Hypothesis 1. The second major focus of this research is to identify what institutions can do to influence the psychological development of a wholly educated graduate. Close personal relationships, faculty-student mentorships, and internship/work experience unaccompanied are likely to have positive relationships with graduates who are wholly developed.

Hypothesis 1a: Personal relationships will be positively related to whole student development.

Hypothesis 1b: Faculty mentorships will be positively related to whole student development.

Hypothesis 1c: Internship/work experience will be positively related to whole student development.

However, personal relationships likely have a positive relationship with specific dimensions of a wholly developed individual. As a source of social support, personal relationships are likely to contribute to the well-being of individuals (Berkman et al., 2000), but may be less likely to directly impact critical thought. Moreover, faculty mentorships may have similar relationships, but perhaps with different aspects of the holistic graduate. Faculty mentorship alone should provide professional support (Tenenbaum et al., 2001); however, it is not likely to have a meaningful impact in psychological resource renewal when personal or non-professional challenges arise. Finally, students who have practical internship/work experience, in addition to professional and personal support, are likely to be more wholly developed than those who did not engage in similar types of experiences. Therefore, HSD, while it should have a positive relationship with the above predictors, is not likely to be fully achieved if only one predictor is present. They work together, enhancing and reinforcing each other to create wholly developed persons.

Hypotheses 2 and 3. Because students are likely to have practical experience and a better understanding of the challenges they will face in life when they participate in an internship/work experience, it is hypothesized that these experiences will also have a synergistic relationship with personal relationships and wholly educated students as well as faculty mentorship and wholly educated students. Lasting personal relationships alone may provide emotional and social support, while faculty mentorship should provide professional support. The synergy of these relationships becomes prominent when students are able to engage in work experiences that may provide challenges, where they can apply advice and coaching in practical ways, and are properly equipped with the means to navigate those challenges because of the support they have in their personal and professional relationships.

Hypothesis 2: Internship/work experience will moderate the relationship between personal relationships and wholly educated students, such that graduates who report quality personal relationships in college and strong internship/work experience will score higher on HSD (see Figure 2).
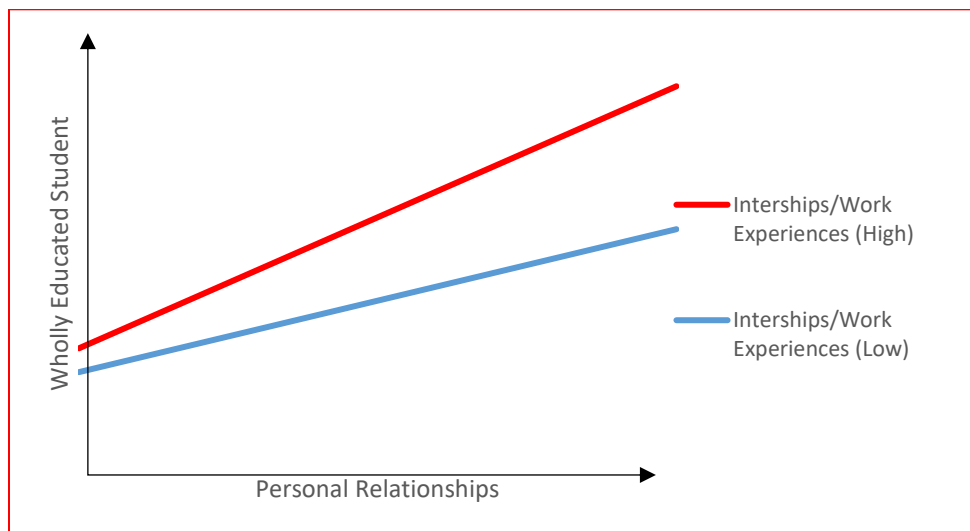
Figure 2. Proposed 2-way interaction of faculty mentorship & internship/work experience

Hypothesis 3: Internship/work experience will moderate the relationship between faculty

mentorships and wholly educated students, such that graduates who report quality faculty

mentorships in college and strong internship/work experience will score higher on HSD

(see Figure 3).
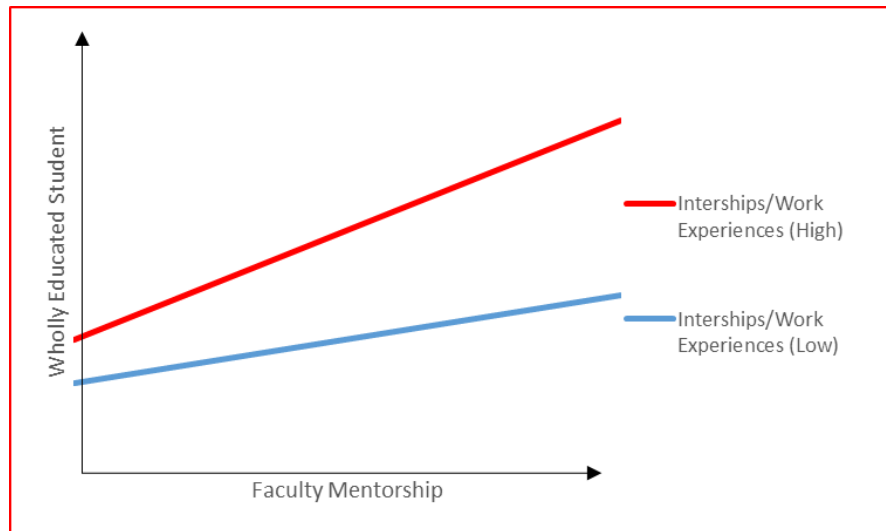
Figure 3. Proposed 2-way interaction of faculty mentorship & internship/work experience.

Hypothesis 4. Finally, it is hypothesized that personal and faculty mentorship

relationships together should have a synergistic interaction with each other in predicting whole

student development, but the synergistic relationship also depends upon the student's

work/internship experience during their time in school. For a graduate who has faced challenge

in their academic life, reflection on conversations with a trusted mentor and the ability to relate

those conversations in meaningful ways to their internship experience could provide efficacy and

ongoing guidance in facing workplace challenges. Likewise, having close personal relationships

where graduates can confide personal and professional issues or bounce ideas off those they trust

could provide emotional support and guidance, resulting in more optimism, hope, and purpose

during an otherwise difficult time. Having multiple sources of renewal, reflection, and

application should consequently provide and renew the psychological resources necessary to sustain graduates during a variety of life's challenges. In other words, students who engage in work experiences, enjoy close personal relationships, and engage in quality faculty mentorships will be more holistically developed than students who lack any of these experiences.

Hypothesis 4: Internship/work experience, personal relationships, and faculty mentorships will synergistically interact such that graduates who report strong positive scores on all three will score significantly higher on HSD (see Figure 4).
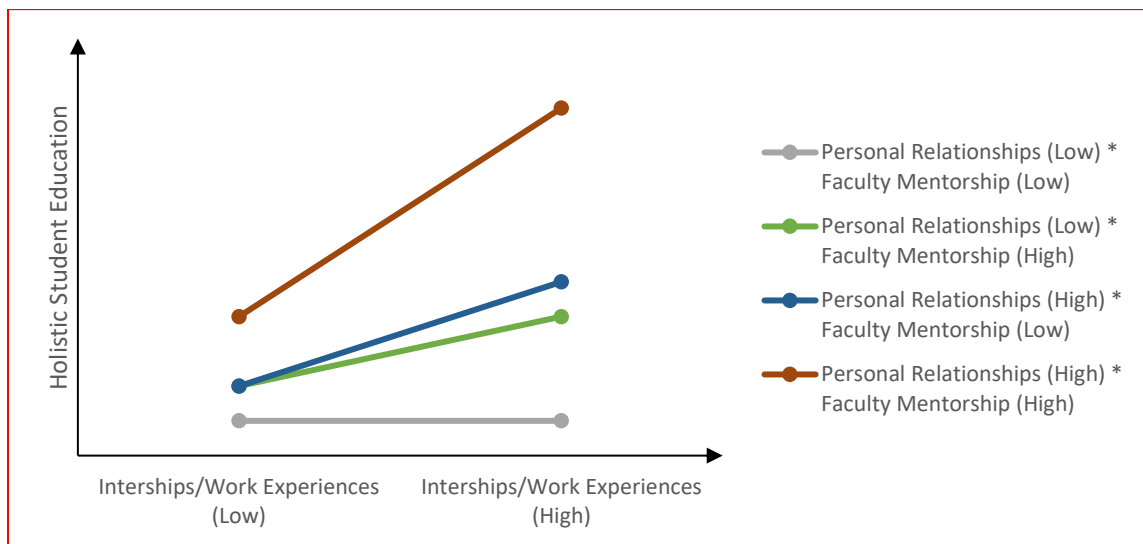
Figure 4. Proposed 3-way interaction

Chapter II: Method

Participants

A power analysis conducted per the guidelines set forth by Cohen (1992), indicated that

to detect a medium-size main effect ($F = .15$) with three predictors (hypotheses 2 & 3), a sample

size of approximately 119 participants was necessary. Hypothesis 4 however posited that a three-

way interaction may occur. In Monte-Carlo simulations, Shieh (2009) noted that a sample size of

181 could be required for detection of moderate effects ($\rho = .10$) with adequate power ($1 - \beta =$

.90) for moderator variables. Based on Shieh's analysis a sample size of 181 was required and a

target of 225 was set to ensure adequate power. To maximize sample size and achieve desired

power, participants were recruited through Amazon's Mechanical Turk (MTurk). Research has

suggested that samples collected using MTurk are more demographically diverse than other

internet samples (Dworkin, Hessel, Gliske, & Rudi, 2016) and American university samples

(Hauser & Schwarz, 2016), as well as being comparable in terms of reliability (Buhrmester,

Kwang, & Gosling, 2011).

Holistic Student Development (Dependent Variable)

The measure of Holistic Student Development (HSD) was calculated by combining

participant scores on the following four measures: (1) Discretionary Household Income, (2)

Critical Thinking, (3) Psychological Capital, and (4) Psychological Well-Being. One aim of this

research was to practically operationalize holistically developed graduates – participants who

scored well on all four dimensions – therefore a combined index was utilized as one dependent

variable. Standardized scores were calculated for the critical thinking, psychological capital, and

flourishing measures and a 0/1 dichotomous measure of household income was used as the

fourth dimension. After standardized scores were computed, a total score of HSD was calculated by summing the four standardized scores for each participant.

Graduates of institutions that are educating students with depth and breadth should score well on all four pillars of holistic education. For example, graduates should have adequate household incomes (i.e., meet a minimum level of household income), engage in critical thought, maintain healthy levels of psychological capital, and report positive psychological well-being. Psychological capital and psychological well-being are important because they indicate that individuals are functioning at healthy levels.

Household income. Income measurements utilized were consistent with metrics used by the U.S. government to measure discretionary income (U.S. Department of Education, 2015). Participants were asked to provide the Adjusted Gross Income (AGI) of their current job "What is the annual Adjusted Gross Income of your current job (e.g., annual salary, bonuses, etc.)?" In addition, participants were asked the number of members who reside in their household, so that discretionary income can be calculated.

Designed for income-based repayment of federal loans, the DOE determines discretionary income as the difference between adjusted gross income and 150% of the poverty threshold for the individual's state of residence, adjusted for family size. For instance, the poverty guidelines for a United States resident who has a household size of two in 2015 was $15,930 (Department of Health and Human Services, 2015), therefore 150% of this figure would be $23,928. Discretionary income is then the difference between adjusted gross income and the adjusted poverty threshold ([e.g., if AGI = $49,644 then $49,644 - $23,928 = Discretionary Income or $25,716]; Department of Health and Human Services, 2015; Federal Student Aid, n.d.b). Thus, participants who reported being employed and annual income greater than $23,928

for a household of two in Ohio were coded 1 (yes, they have discretionary income) and those

below this threshold received a score of 0 (no, they do not have discretionary income or were not

employed; [see Table 1]). Self-reported employment and annual salary has been used as an

accurate indicator of employment status and salary in previous research (e.g., Currie & Widom,

2010; Elbogen, Johnson, Wagner, Newton, & Beckham, 2012). See Appendix A: Household

Income for complete measure and Table 1 for adjusted poverty thresholds by household size.

Table 1
Summary of Discretionary Household Income Thresholds

Variables	Scores		
Household Income			
One person[a]	0: >	$18,497[b]	≤ :1
Two people[a]	0: >	$23,928[b]	≤ :1
Three people[a]	0: >	$28,307[b]	≤ :1
Four people[a]	0: >	$36,386[b]	≤ :1
Five people[a]	0: >	$43,112[b]	≤ :1
Six people[a]	0: >	$48,813[b]	≤ :1
Seven people[a]	0: >	$55,497[b]	≤ :1
Eight people[a]	0: >	$61,544[b]	≤ :1
Nine people or more[a]	0: >	$73,766[b]	≤ :1

Note: [a]Size of family unit. [b]Discretionary income - Source: U.S. Census Bureau, Poverty Thresholds for 2015 by Size of Family.

Critical thinking. Four sub-scales (18 total items) of two larger measures were

combined to assess graduates' ability to think critically. The first five items consist of the critical

thinking subscale from the Motivated Strategies of Learning Questionnaire (MSLQ; Pintrich,

Smith, Garcia, & McKeachie, 1993) where respondents rated themselves on Likert scale from (1

= *completely false*; 7 = *completely true*). Example items include "When a theory, interpretation,

or conclusion is presented, I try to decide if there is good supporting evidence" and "I treat

information as a starting point and try to develop my own ideas about it." Based on meta-analytic

research, the mean reliability of the critical thinking sub-scale is α = .77 (Credé & Philips, 2011).

The remaining 13 items were derived from van Woerkom & Croon's (2008) Critically Reflective Work Behavior scale. Three subscales which are designed to measure critical opinion sharing (4 items; α = .81), challenging group think (6 items; α = .73), and experimenting (3 items; α = .84) fit well with the MSLQ sub-scale to capture the import aspects of Scriven and Paul's (1987) conceptualization. Examples include "I put critical questions to my supervisor about the working of my organization" (critical opinion sharing), "When I am the only one to disagree with the rest, I just keep quiet (R)" (challenging groupthink), and "I like to try things out, even if it sometimes leads nowhere" (experimenting). Participants scored themselves on a 1 = *totally disagree* to 7 = *totally agree* Likert scale. The mean score of each scale was averaged together to determine the participants critical thinking score.

Self-report measures of cognitive capabilities can be used, if they have been replicated with other measures and done so in the appropriate manner (Garner & Alexander, 1989; Pintrich & De Groot, 1990; Tsui, 1999). For the MSLQ, extensive psychometric evaluation was conducted during the decade before its publication (Pintrich et al., 1993) and its validity continues to be examined today (e.g., Credé & Philips, 2011). Further support for the use of self-report is highlighted when individuals are self-assessing their ability at a single point in time, rather than over a lifetime (Bowman, 2010). All items can be found in Appendix B: Critical Thinking.

Psychological capital. The Psychological Capital Questionnaire (Luthans et al., 2007) is a 24-item measure designed to assess four dimensions of psychological capital (hope, self-efficacy, resilience, and optimism), which comprise an individual's appraisal of situations, perseverance, and probability of success. Participants responded on a Likert scale (1 = *strongly disagree*; 6 = *strongly agree*). Example items include "there are lots of ways around any

problem" and "right not I see myself as being pretty successful at work." Cronbach's alpha has been reliable across numerous studies ([M = .89, Mdn = .90]; Dawkins, Martin, Scott, & Sanderson, 2013). Similar to critical thinking, sub-scale scores (self-efficacy, optimism, hope, resilience) will be averaged together to give participants one psychological capital score. See Appendix C: Psychological Capital for complete scale.

Psychological well-being (PWB). The Flourishing Scale (Diener et al., 2010) is an eight-item measure designed to capture an overview of individual psychological well-being and human functioning. Individuals who average a score of 4 or greater may characterize a fully functioning individual who is at a reasonably healthy level of psychological well-being and able to pursue a great life and great job. One major advantage of the flourishing scale is that it looks at the amount of time well-being is experienced rather than the intensity of those feelings, which is aligned with a holistically developed person (Diener et al., 2010).

Participants responded on a Likert scale (1 = *strongly disagree*; 7 = *strongly agree*). Example items include "I lead a purposeful and meaningful life" and "I actively contribute to the happiness and well-being of others." Internal consistency of the Flourishing Scale indicates the scale is reliable with a Cronbach's alpha between .87 - .91 (Hone, Jarden, & Schofield, 2014). See Appendix D: Psychological Well-Being for complete scale and instructions.

Independent Variable Measures

Personal relationships. The Friendship Rating Scale (Marigold et al., 2014) is a 12-item measure designed to assess the perceived social support and quality of friendships. Addressing the need to identify factors that institutions may influence or foster by creating enabling conditions, personal relationships were constrained to those friendships that were formed during

an individual's time at their alma mater. The setting in which the relationship was fostered is not as important as the quality, closeness, and period of life in which the friendship was created.

Participants rated their relationships with the individuals who they perceive were their closest friends from college (i.e., whom they interacted with most often or with whom they participated in activities) on a Likert scale (1 = *strongly disagree*; 7 = *strongly agree*). Sample items include "my friend would go out of his/her way to help me" and "my relationship with my friend is very rewarding (i.e., gratifying, fulfilling)." Alpha coefficient in an undergraduate sample was α = .92. They were also asked how many individuals they considered to be their closest friends in college while completing the survey. See <u>Appendix E</u>: Personal Relationships for complete scale.

Faculty mentorship. The Mentorship Quality and Mentorship Satisfaction Scales (Xu & Payne, 2014) were given to participants after they were presented with the following definition: "Mentoring has been traditionally defined as a developmental relationship between an older, more experienced mentor and a younger, less experienced protégé for the purpose of helping and developing the protégé's career,'' then asked to identify the number of mentors they had while attending their alma mater. The Mentorship Quality Scale is an adapted scale that consists of three items designed to measure the perceived quality of the mentorship experience from the protégé's perspective. Thinking about their mentorship relationships that began in school, participants used a 5-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*) to rate their agreement with items such as "I have effectively used mentoring" and "I have enjoyed a high-quality mentoring relationship(s)." Cronbach's alpha for the scale is estimated at α = .88.

The Mentorship Satisfaction Scale is a three-item scale that is designed to measure the perceived satisfaction of the protégé regarding the mentorship relationship. Asked to rate their

agreement using a 5-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*), participants

were given items such as "I am/have been satisfied with my mentoring" and "mentoring as failed

to meet my needs (R)." Reliability for the scale has been estimated at α = .88. See Appendix F:

Faculty Mentorship

Internship/work experience (IWE). A 10-item measure of internship/work experience

was created to assess whether participants took part in vocational experiences during their

undergraduate tenure and to what extent did they find the experiences valuable. Partially adapted

from an intern evaluation survey (McCormick et al., 2014), the first four items asked respondents

what types of internship/work experience they completed, how many intern/work experiences

they had, the duration of those experiences, and on average how many hours per week they

participated in those activities during each year in school.

Six items adapted from McCormick et al., (2014) were used to assess the quality or value

realized by those experiences. For example, participants rated their agreement on a 5-point Likert

scale (1 = *strongly disagree*; 5 = *strongly agree*) for items such as "My internship/work

experience allowed me to apply skills and knowledge I learned in school" and "I benefited from

my experience in the internship/work experience." See Appendix G: Internship/Work

Experience.

Design and Procedure

Regression analysis was used to test the main effects and moderating effects of the

purposed hypotheses. To solicit the desired sample demographics and achieve acceptable power,

Amazon's Mechanical Turk (MTurk) was used in the recruitment of participants. As noted

earlier in the method section, in addition to providing a means to increase sample size, MTurk

provides demographically diverse and reliable samples (Buhrmester et al., 2011), which are more

effective at recruiting the desired participants than other convenience samples (Antoun, Zhang, Conrad, & Schober, 2016). MTurk is an online instrument where a post is made containing a brief description of the study, required qualifications for inclusion, and conditions for compensation. Those respondents who indicated they met the criteria for inclusion were directed to a Qualtrics survey which includes the informed consent. To be included, participants should have graduated from a four-year North American college or university and been at least 18 years old. Consenting participants were taken through the survey, and those who did not were thanked for their time and sent to the final thank you screen.

Chapter III: Results

Data Cleaning and Preparation

A total of 407 participants were recruited. Participants who failed two attention checks or indicated they did not graduate from a four-year college or university were eliminated (25 did not meet at least one of these criteria). After checking the assumptions of regression (i.e., linearity, normal distribution of residuals, homoscedasticity, independence), an additional 13 participants were eliminated from the analyses ($N = 369$). Participants included in the final sample were 21-70 years old ($M = 34.45$; $Mdn = 32$; $SD = 10.06$). The sample was comprised of 56.91% male and 43.09% female.

Means, standard deviations, reliability coefficients, and intercorrelations for all variables in this study are presented in Table 2. The four dependent variables exhibited good reliability and means that were consistent with previous research. The holistic student development (HSD) integrated variable showed moderate reliability ($\alpha = .662$), as expected, which is consistent with a measure that captures multiple, independent constructs, that reflect the breadth of wholly developed individuals.

Critical thinking, had good internal reliability ($\alpha = .887$) and a mean ($M = 4.85$) that fell slightly above neutral (i.e., *slightly true of me*). Psychological Capital ($\alpha = .929$) and the PWB scales ($\alpha = .925$) both exhibited high internal consistencies and remained aligned with previous research. Mean scores for Psychological Capital ($M = 4.74$) and psychological well-being ($M = 5.71$) were moderate with average scores being closely aligned with agreement on the scales. This would indicate that broadly speaking, participants commonly believed that they occasionally utilized critical thought, but felt that they had moderate levels of psychological resources available to them and that they led lives that were flourishing. The data suggested that

on average participants were satisfied with their friendships (M = 5.63), had quality mentorship

with which they were satisfied (M = 4.02), the majority (78%) participated in some sort of

internship or work experience (M = .78), and most (85%) had discretionary income (M = .85).

Hypothesis Testing

      Hypotheses 1a – 1c. All hypotheses were tested using hierarchical linear regression.

Hypotheses 1a – 1c predicted that personal relationships, faculty mentorships, and

internship/work experiences (IWE) would be positively related to HSD (see Table 3).

Hypotheses 1a and 1b were supported; both personal relationships (β = .636; p < .001) and

faculty mentorship (β = .551; p < .001) had strong positive relationships with HSD. Hypothesis

1c was partially supported. Simply having an IWE during college was not found to relate to HSD

(β = .006; p < .911), but the value of those experiences had a moderate positive relationship (β =

.376; p < .001) with HSD. Standardized Beta coefficients are a measure of influence on the

dependent variable and indicate the slope of the regression line. For example, for every one-unit

increase in personal relationships, HSD will increase by .636 units.

      An examination of the correlational matrix (Table 2) indicates that the predictors also

related to the HSD sub-dimensions. Personal relationships were positive correlated with

psychological well-being (r = .637, p < .01), psychological capital (r = .564, p < .01), critical

thinking (r = .377, p < .01), and the presence of discretionary income (r = .189, p < .01). Faculty

mentorships were positively correlated with psychological well-being (r = .502, p < .01),

psychological capital (r = .502, p < .01), critical thinking (r = .336, p < .01), and the presence of

discretionary income (r = .130, p < .05). Internship/work experience value was positively

correlated with psychological well-being (r = .365, p < .01), psychological capital (r = .291, p <

.01), critical thinking ($r = .283$, $p < .01$), but was not related to discretionary income ($r = .108$, $p = .06$).

Table 2
Summary of Means, Standard Deviations, Intercorrelations, and Reliability Coefficients

Variable	N	M	SD	1	2	3	4	5	6	7	8	9	10
1. Personal Relationships	369	5.63	0.97	**.930**	.455**	.066	.404**	.637**	.377**	.564**	.189**	.116*	.636**
2. Faculty Mentorship	313	4.02	0.94		**.915**	.056	.355**	.502**	.336**	.502**	.130*	.073	.551**
3. Internship/Work Experience (Y/N)	369	0.78	0.42			-	.169**	.020	-.069	.004	.055	.126*	.006
4. Internship/Work Experience Value	305	3.74	0.75				**.782**	.365**	.283**	.291**	.108	.012	.376**
5. Psychological Well-Being (PWB)	369	5.71	1.04					**.925**	.266**	.698**	.185**	.173**	.772**
6. Critical Thinking	369	4.85	0.79						**.887**	.508**	.085	.130*	.703**
7. Psychological Capital	365	4.74	0.65							**.929**	.153**	.207**	.867**
8. Discretionary Income (Y/N)	369	0.85	0.35								-	.514**	.431**
9. Discretionary Income (Continuous)	364	35222	37822									-	.331**
10. Holistic Student Development (HSD)	365	0.98	1.21										**.662**

Note: Cronbach's alphas presented along diagonal. For the Internship/Work Experience (Y/N) and Discretionary Income (Y/N) variables Yes = 1, No = 0. Discretionary Income (continuous with outliers eliminated) measured as a continuous variable ranging from ($43,102) - $186,693. Personal relationships, psychological well-being, and critical thinking measured on a 1 – 7 scale. Faculty mentorship and internship value measure on a 1 – 5 scale. Psychological capital measured on a 0 – 6 scale. Holistic Student Development is the addition of the standardized scores for the psychological well-being, critical thinking, PsyCap, & discretionary income (Y/N). *$p < 0.05$ (2-tailed). **$p < 0.01$ (2-tailed).

Table 3.
Regression Analysis to Test the Main Effect of Independent Variables on Holistic Student Development

Variable	N	B	SE	β	t(df)	p
Personal Relationships	369	.804	.051	.636	15.714(363)	<.001
Faculty Mentorship	313	.639	.055	.551	11.590(308)	<.001
Internship/Work Experience (Y/N)	369	.017	.153	.006	.110(363)	.912
Internship/Work Experience Value	305	.603	.086	.376	7.018(300)	<.001

Note: Internship/Work experience (Y/N) Yes = 1, No = 0.

Hypotheses 2 – 4. Hypotheses 2–4 posited that the personal relationships and faculty mentorship would be enhanced (moderated) by also having an IWE. Both whether people had the IWE and the value of the internship were tested.

Hypothesis 2 proposed that personal relationships and IWE would synergistically interact to enhance the relationship with whole student development. Initial tests indicated that 40.6% (R^2 = .406, p < .001) of the variance in HSD could be explained by the model which included personal relationships and having an IWE, but it was almost entirely due to the strong relationship between personal relationships and HSD (Table 4). Personal relationships by the value of an IWE indicated that 42.2% (R^2 = .422, p < .001) of the variance in HSD could be explained by the model (Table 5). However, neither interaction term was significant (IWE [Y/N] β = -.012, p = .895; IWE Value β = -.062, p = .202). Thus, Hypothesis 2 was not supported.

Hypothesis 3 proposed that faculty mentorship and IWE would synergistically combine to enhance HSD. Results indicated that 30.4 % (R^2 = .304, p < .001) of the variance in HSD was explained by the model which included faculty mentorship and having an IWE, but like hypothesis 2, it was due almost entirely to the strong relationship between faculty mentorship

and HSD (Table 6). Faculty mentorship by the value of an IWE indicated that 34.1% ($R^2 = .341$, $p < .001$) of the variance in HSD could be explained by the model (Table 7). The interaction terms were not significant (IWE [Y/N] $\beta = -.031$, $p = .748$; IWE value $\beta = -.054$, $p = .299$), indicating hypothesis 3 was not supported. While personal relationships, faculty mentorship, and the value of IWE each had positive effects on HSD individually, they were not found to combine to synergistically create interactive positive effects.

Finally, hierarchical linear regression was utilized in hypothesis 4 to test the synergistic interaction effects of the three predictors on holistic student development. Step one included entering the three independent variables (personal relationships, faculty mentorship, and IWE). In the second step, the two-way interaction terms were entered. In the third step, the three-way interaction term was entered. Moderated moderation was used so that the interactions were not constrained to be independent of the other predictors in the model (i.e., the moderation of personal relationships effect on HSD by faculty mentorship, depends on IWE). The regression analysis indicated personal relationships, faculty mentorships, and having an IWE together are a strong predictor HSD ($R^2 = .493$, $p < .001$; see Table 8) as are personal relationships, faculty mentorships, and the value of IWE ($R^2 = .496$, $p < .001$; see Table 9). However, the three predictors did not interact ($\beta = -.039$, $p = .627$; $\beta = .063$, $p = .280$) indicating that Hypothesis 4 was not supported.

Table 4

Hypothesis 2: Regression Analysis to Test for the Interaction of Personal Relationships by Internship/Work Experience on Holistic Student Development

Predictors	B	$SE\ B$	β	$t(df)$	R^2	ΔR^2
Model 1					.406	.406***
Personal Relationships [PR]	.794	.050	.639***	15.734(362)		
Internship/Work Experience [Y/N]	-.105	.118	-.036	-.893(362)		
Model 2					.406	<.001
PR x Y/N	.016	.123	.012	.133(361)		

Note. In these analyses, all variables were centered (i.e., the mean of each variable was subtracted from each score). * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5

Hypothesis 2: Regression Analysis to Test for the Interaction of Personal Relationships by Internship/Work Experience Value on Holistic Student Development

Predictors	B	$SE\ B$	β	$t(df)$	R^2	ΔR^2
Model 1					.422	.422***
Personal Relationships [PR]	.720	.060	.579***	12.043(299)		
Internship/Work Experience Value [IWV]	.227	.077	.141**	2.943(299)		
Model 2					.425	.003
PR x IWV	-.076	.060	-.062	-1.279(298)		

Note. In these analyses, all variables were centered (i.e., the mean of each variable was subtracted from each score). * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 6

Hypothesis 3: Regression Analysis to Test for the Interaction of Faculty Mentorships by Internship/Work Experience on Holistic Student Development

Predictors	B	SE B	β	t(df)	R^2	ΔR^2
Model 1					.304	.304***
Faculty Mentorship [FM]	.715	.062	.552***	11.588(307)		
Internship/Work Experience [Y/N]	-.073	.139	-.025	-.524(307)		
Model 2					.305	<.001
FM x Y/N	-.047	.146	-.031	-.321(306)		

Note. In these analyses, all variables were centered (i.e., the mean of each variable was subtracted from each score). * $p < .05$. ** $p <.01$. *** $p <.001$.

Table 7

Hypothesis 3: Regression Analysis to Test for the Interaction of Faculty Mentorships by Internship/Work Experience Value on Holistic Student Development

Predictors	B	SE B	β	t(df)	R^2	ΔR^2
Model 1					.341	.341***
Faculty Mentorship [FM]	.618	.071	.478***	8.752(253)		
Internship/Work Experience Value [IWV]	.330	.088	.206***	3.765(253)		
Model 2					.343	.003
FM x IWV	-.095	.091	-.054	-1.040(252)		

Note. In these analyses, all variables were centered (i.e., the mean of each variable was subtracted from each score). * $p < .05$. ** $p <.01$. *** $p <.001$.

Table 8

Hypothesis 4: Regression Analysis to Test for the Three-way Interaction of Personal Relationships by Faculty Mentorships by Internship/Work Experience on Holistic Student Development

Predictors	B	SE B	β	t(df)	R^2	ΔR^2
Model 1					.493	.493***
Personal Relationships [PR]	.608	.057	.488***	10.679(306)		
Faculty Mentorship [FM]	.429	.059	.331***	7.250(306)		
Internship/Work Experience [Y/N]	-.130	.119	-.045	-1.099(306)		
Model 2					.493	<.001
PR x Y/N	.050	.147	.036	.343(306)		
FM x Y/N	-.027	.150	-.018	-.183(303)		
PR x FM	-.002	.057	-.001	-.027(303)		
Model 3					.494	<.001
PR x FM x Y/N	-.064	.131	-.039	-.486(302)		

Note. In these analyses, all variables were centered (i.e., the mean of each variable was subtracted from each score). * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 9

Hypothesis 4: Regression Analysis to Test for the Three-way Interaction of Personal Relationships by Faculty Mentorships by Internship/Work Experience Value on Holistic Student Development

Predictors	B	$SE\ B$	β	$t(df)$	R^2	ΔR^2
Model 1					.496	.496***
Personal Relationships [PR]	.575	.065	.463***	8.813(252)		
Faculty Mentorship [FM]	.405	.066	.313***	6.098(252)		
Internship/Work Experience Value [IWV]	.124	.080	.077***	1.544(252)		
Model 2					.514	.018*
PR x IWV	-.193	.071	-.157**	-2.709(249)		
FM x IWV	-.021	.088	-.012	-.238(249)		
PR x FM	.070	.065	.053	1.072(249)		
Model 3					.516	.002
PR x FM x IWV	.120	.111	.063	1.082(248)		

Note. In these analyses, all variables were centered (i.e., the mean of each variable was subtracted from each score). * $p < .05$. ** $p < .01$. *** $p < .001$.

Post-Hoc Analyses

An additional set of analyses explored HSD as a dichotomous variable where participants were coded as holistically developed if they met all four elements above a positive threshold level (a positive score on critical thinking, psychological capital, and psychological well-being; and above discretionary income levels for salary based on household size; see Table 10). This second analysis was done because it is consistent with the idea that students either are holistically developed or not. High scores on one variable (e.g., critical thinking) cannot compensate for discretionary income, PWB or PsyCap. Students need to have acceptable scores on all four. The holistic group that scored positively on all four variables was then compared against all other participants.

Table 10
Summary of Dependent Variable Cutoff Scores

Variables	Scores		
Critical Thinking[c]	0: >	5	≤ :1
Psychological Capital[d]	0: >	4	≤ :1
Psychological Well-Being[e]	0: >	5	≤ :1
Household Income			
One person[a]	0: >	$18,497[b]	≤ :1
Two people[a]	0: >	$23,928[b]	≤ :1
Three people[a]	0: >	$28,307[b]	≤ :1
Four people[a]	0: >	$36,386[b]	≤ :1
Five people[a]	0: >	$43,112[b]	≤ :1
Six people[a]	0: >	$48,813[b]	≤ :1
Seven people[a]	0: >	$55,497[b]	≤ :1
Eight people[a]	0: >	$61,544[b]	≤ :1
Nine people or more[a]	0: >	$73,766[b]	≤ :1

Note: [a]Size of family unit. [b]Discretionary income - Source: U.S. Census Bureau, Poverty Thresholds for 2015 by Size of Family. [c]Critical thinking is scored on a 1–7 Likert scale ($M = 4$), healthy levels of critical thought (i.e., better than just average) should be ≥ 5.00. [d]PsyCap is scored on a 0–6 Likert scale ($M = 3$), healthy levels of PsyCap should be ≥ 4.00. [e]PWB is scored on a 1–7 Likert scale ($M = 4$), healthy levels of PWB should be ≥ 5.00.

A total of 30.6% of participants fell into holistically developed group vs. 69.4% who were below the cut-off scores on at least one of the student development dimensions. The holistic vs. non-holistic dichotomous variable was regressed on each of the predictors in the model. The results of the logistical regression are presented in Table 11. The Hosmer-Lemeshow statistic indicated the model was a good fit for the data ($\chi^2 = 7.872$, $p = .446$) and overall could classify 76.0% of the data correctly. Two of the three predictors significantly increased the odds of distinguishing graduates who were holistically developed from those who were not. The strongest predictor of HSD was personal relationships with an odds ratio of 3.961 indicating respondents who reported above average scores in their rating of college friendships are approximately four times more likely to be holistically developed. B weights in logistic regression are like OLS regression in that for every unit increase in personal relationships, the odds of being holistically developed increase by 1.377 (predicted log odds), but they are more complicated and difficult to interpret. Exponentiated B (*Exp B*) then is the ratio of odds. The odds ratio is the probability of being holistically developed over the probability of being not holistically developed. In other words, *Exp B* is the effect of personal relationships on the odds ratio. (Peng, Lee& Ingersoll, 2002). Faculty mentorship was also predictive with an odds ratio of 1.624 indicating those who reported valuable faculty mentorships are about one and half times more likely to be holistically developed.

Table 11

Direct Effects of Predictors on Holistic Student Development Using Logistic Regression

				95% CI for Exp B		
Predictors	B	*SE*	Wald	Lower	*Exp B*	Upper
Personal Relationships	1.377***	.277	24.624	2.300	3.961	6.823
Faculty Mentorship	.485*	.224	4.690	1.047	1.624	2.519
Internship/Work Experience Value	.139	.244	.324	.713	1.149	1.852

Note. N = 258. B = unstandardized beta coefficient; CI = confidence interval; *SE* = standard error; *Exp B* = exponentiated B. *** $p < .001$, ** $p < .01$, * $p < .05$.

Internship/Work Experience Value was unrelated to holistic development. Combined with earlier findings, these results indicate that supportive relationships, whether they are personal relationships formed in college or faculty mentorships, appear to be related to an individual's holistic development.

Chapter IV: Discussion

The first purpose of the current study was to build a holistic measure of student development. Comprised of four dimensions – critical thinking, psychological capital, psychological well-being, and discretionary income – holistic student development (HSD) can provide a more balanced measure of graduate development with the capabilities and individual resources to flourish. The second major aim of this study is to identify predictors that colleges and universities may influence to help develop their students and equip them to face the challenges of an ever-changing world.

Results were supportive of the first hypotheses which posited that personal relationships, faculty mentorships, and internship/work experience would be positively related to HSD. Subsequent hypotheses which posited that supportive relationships (i.e., personal relationships and faculty mentorships) would interact synergistically with the practical application and experience (i.e., internship/work experience) of facing real world challenges were not supported. The results suggest the salient factors account for a meaningful amount of the variance in HSD (personal relationships = 40.6%; faculty mentorships = 30.4%; internship/work experience value = 14.1%), but do not interact. Each is therefore important on their own, but the combination of factors did not add any extra value.

The importance of personal relationships and faculty mentorship on educational outcomes such as social integration, critical thinking, and academic performance is consistent with previous research (e.g., Jacques, Garger, Thomas & Vracheva, 2012; Zipp & Olson, 2008). The current study adds to this research indicating that these factors are also important to holistic development when critical thinking, psychological capital, psychological well-being, and discretionary income are considered together.

Strong personal relationships and faculty mentor relationships with HSD indicate these should remain an area of emphasis in the development of students. Personal relationships demonstrated the strongest relationship with HSD and as expected had very strong relationships with the psychological aspects, psychological well-being and psychological capital, and a moderate relationship with critical thinking. Colleges and universities need to ensure that they are investing in campus activities and encouraging students to interact. Simply requiring students to remain on campus for their first two years may not be enough unless it leads to strong personal relationships and meaningful interactions (Brandon, Hirt, & Cameron, 2008). Thus, other activities such as intramurals, game nights, and other activities that encourage students to interact with each other and build a network of friends should be encouraged (Astin, 1999, Kuh, 2009, Mayer & Puller, 2008).

Likewise, faculty mentorships demonstrated a strong relationship with HSD. Similar to personal relationships, quality mentorships while a student is in school demonstrate a strong relationship to the psychological aspects of HSD – psychological capital and psychological well-being. Thus, faculty mentorships may help to instill some psychological resources and contribute to graduates' current well-being suggesting that institutions should consider promoting these types of relationships between faculty and students. This will be a difficult undertaking for many schools, especially large public schools, as the current climate does not tend to reward faculty for the time and energy spent on these relationships (Bernardin, 1996). In many schools, tenure status is predicated on research and scholarship, deemphasizing the rewards for faculty to engage after class with their students and provide support or challenge to students in a one-on-one environment (Long, Fish, Kuhn, & Sowders, 2010; Wiley, Wallingford, Monllor-Tormos, & Konyu-Fogel, 2016). Research suggests mentorships can be encouraged by including it as part of

faculty selection and training (Johnson & Huwe, 2002), the promotion and tenure process (Cramer & Prentice-Dunn, 2007), or by implementing institutional policies that encourage mentorship (Greenbank, 2006).

Personal relationships and faculty mentorship also show moderate relationships to critical thinking which may suggest that those relationships help individuals to challenge their own assumptions and provide confidence in sharing opinions. Moreover, the dyadic nature of these types of relationships may allow for questioning, reflection, and feedback to occur which in turn fosters critical thought. As mentors and mentees engage in effective questioning of ideas, opportunities for the mentee to practice critical opinion sharing and challenging preconceived notions are provided (Ashcraft, 2010; Liang & Fu, 2016; Plack & Santasier, 2004; Sasaki, Kawai, & Kitamura, 2016). A graduate's ability to critically evaluate information and communicate it in an effective manner are becoming increasingly necessary skills as the world becomes more interconnected and information overload is more prevalent (Leu, O'Byrne, Zawilinski, McVerry, & Everett-Cacopardo, 2009)

Simply having an internship does not seem to relate to the development of students; rather the value of that internship as perceived by the graduates did relate to their development. Graduates who engaged in valuable internships or work experiences may be more holistically developed than those who had uninspiring or bad experiences. Internship/work experience quality is moderately related to HSD and the sub-dimensions of psychological well-being, critical thinking, and psychological capital, but interestingly unrelated to discretionary income.

These findings indicate that quality internship/work experience may provide valuable developmental experiences for participants to engage in experiential learning or encounter real-life scenarios that help to reduce the shock of transitioning from the classroom to the workforce.

Numerous psychological benefits are likely to be realized when graduates have positive experiences in the workforce during their time in college. These experiences should help students with the social integration process at work (Shoenfelt et al., 2013) allowing them to form positive relationships with others; provide realistic expectations (Sagberg, 2014) that build efficacy in regard to their ability to function in a work environment; and begin to crystalize an individual's vocational self-concept (Brooks et al., 1995).

Implications

The current study has potential implications for faculty, administrators, and staff working in colleges and universities. Whether institutions are part of a state-run university system or are an independent liberal arts college, results suggest that relationships matter. For faculty, the current results indicate that mentorship of students is a critical piece of student development that should be a priority. In-class and out-of-class mentoring interactions between students and faculty are likely to contribute to both the short- and long-term success of graduates. Therefore, faculty should seek a myriad of opportunities to mentor students and integrate learning outside of the classroom environment (Jacques et al., 2012; Terenzini, Pascarella, & Blimling, 1999). In turn, administrators need to evaluate how they reward faculty. Current promotion guidelines tend to reward faculty scholarship and teaching which will in turn direct faculty behavior toward these ends (Kerr, 1995; Wiley et al., 2016). Out-of-class behaviors that promote the development of students are less likely to be pursued as there is little intrinsic benefit to faculty members (Wiley et al., 2016). Instead, administrators need to reassess how they can balance the promotion of faculty scholarship and student interaction so that they are advancing the prestige of their institutions and the development of their students (Griffin, 2012) amid external factors such as

the *U.S. News* ranking of colleges that tend to reward scholarship (Morse, Brooks, & Mason,

2017.

A second implication from the current research is that it is important for staff who work

in student development and student life to be diligent in encouraging meaningful peer-to-peer

interactions. Results suggested that personal relationships have a strong link to the holistic

development of students. Research suggests that personal relationships provide the emotional

and social support necessary to sustain people in a variety of life's challenges (Carmichael et al.,

2015). College represents a place to develop these relationships and enhance one's capabilities to

build future relationships. Sponsoring student engagement in dorm and campus activities can be

leveraged in a multitude of ways, whether they are outdoor activities (Howard, O'Connell, &

Lathrop, 2016), encouraging diverse student interaction (Mayhew, Wolniak, & Pascarella, 2008),

or simply designing residence halls that encourage interaction (Hill, 2004). However, the work

of inspiring peer-to-peer interactions does not end with residence hall staff and student-affairs;

partnerships between staff and faculty should be supported by faculty and administrators

(Browne, Headworth, & Saum, 2009) to create more prevalent and integrated approaches to

promoting personal relationships. Furthermore, given their strong link to holistic student

development, opportunities to foster personal relationships and a sense of community should be

given to all students (i.e., sophomores, transfers, seniors, etc.) throughout their educational

experiences (Kranzow, Foote, & Hinkle, 2015). Fostering a sense of belonging through

undergraduate research opportunities, study abroad programs, and cocurricular activities are all

practical ways in which faculty, administrators, and staff may contribute to enhancing personal

relationships which are formed while a student is in school.

Internships and work experiences that are perceived as valuable to the participant are another key finding of this research. Institutions who espouse student development should think strategically about how they may provide the opportunity for positive internships/work experiences that are quality experiences. Results indicate that simply having an internship/work experience alone does not seem to contribute to the holistic development of students. In a practical sense, internships may be able to better prepare students for positive experiences by increasing awareness of the political landscape and potential for rejection in the business environment (Brooks, 2014), reducing the shock of transitioning from the classroom to the world of work (Shoenfelt et al., 2013). Institutionalizing programs that promote integrative learning is a key opportunity for the entire campus to get involved in the development of wholly developed graduates. Creating courses that target applied experiences, building support from faculty (and rewarding them accordingly), and aligning applied and experiential learning with the strategic plan of the university will be critical to the successful implementation and subsequent success of internship programs (Townsley, Packard, & Paus, 2015).

Limitations and Future Research

There are potential limitations in this study including the concurrent research design, ambiguity about the causal direction, the pioneering nature of the dependent variable, and possible range restriction. One limitation of the present research is that it is a concurrent research design where participants were given one survey which included measures for both the independent and dependent variables. This increases the likelihood of mono-method bias and limits the ability to make causal inferences. Longitudinal research should be conducted in the future to assess the predictors (e.g., personal relationships, mentoring, internship quality) during college and holistic student development five, ten, and twenty years after they graduate. For

example, do some factors (e.g., internship/work experience) matter at graduation, while other factors (e.g., personal relationships) become increasingly critical as life changes 10, 15, or 25 years down the road? The need for this long-term research is illustrated when comparing business and philosophy majors' salaries at graduation and 10-years post-graduation: while business majors perform well out of the gate, philosophy majors on average often surpass their business school counterparts after ten years of experience in the workforce (Anders, 2016). A longitudinal study can also help to reduce multicollinearity of the predictors which results in deflation of the interaction terms and possibly make them easier to detect (Siemsen, Roth, & Oliveira, 2010).

A second limitation to the current study is the ambiguity about the causal direction for correlation and main effect testing. While the respondents were encouraged to consider the independent and dependent variables at separate points in time, they were assessed at the same later point in time and there was no manipulation of the independent variables. Future research studies could be done where a random sample of students are offered enhanced faculty mentoring opportunities or provided additional relationship-building interventions to assess their impacts on post-college outcomes. This also highlights the need for future research to explore the dimensions of whole student development over a graduate's lifetime.

A third limitation is that it represents the first time that these dimensions have been combined to comprise an integrated measure of HSD. Further investigation should explore this construct and how it relates to other important outcomes such as character development (Baehr, 2017; Lapsley & Carlo, 2014; Power, 2010) or citizenship behaviors (Lin, 2015). It is possible that the current predictors are related to these additional important outcomes.

A fourth limitation is range restriction in the variables likely limiting the strength of the correlations and the ability to detect interactions. For example, since the quality of internships/work experiences and mentorships tended to skew negatively (e.g., most students reported having an internship and rating it as a valuable experience), the lack of negative experiences reduces the range of values and consequently reduces the co-variance (Cortina, Köhler & Nielsen, 2015). Range restriction is also illustrated by other-serving bias, which can be pervasive when advisees are rating advisors (Palmeira, Spassova, & Keh, 2015). This form of hindsight bias is likely to negatively skew ratings of mentorship, because mentees are more likely to place blame on themselves for the negative effects of those relationships. Collecting information from students during their college years may help increase the variability of responses and reduce this other-serving hindsight bias. This may help to moderate range restriction by including students who have varying experiences and not just those who self-selected to participate in this study.

Finally, consistent with previous studies in higher education, future research should explore antecedents to the independent variables presented in this study. For example, examination of the educational backgrounds of participants (i.e., socioeconomic status factors) and which are factors more influential for those participants who may come from various environments should be explored. For example, it is possible that having an internship/work experience or the value of those experiences are affected by prior exposure to workplace environments (e.g., job while in high school) or whether the experience is an economic necessity rather than an experimental learning opportunity.

There exists a possibility that some antecedents to the independent variables may ultimately suppresses the IV's to act as sub-dependent variables or mediators. For example,

personality factors such as high extraversion and low neuroticism may directly influence the

quality of personal relationships (Berry, Willingham, & Thayer, 2000; Wilson, Harris, & Vazire,

2015). Similarly, high levels of neuroticism may negatively affect an individual's psychological

well-being (Arshad & Rafique, 2016; Strickhouser, Zell, & Krizan, 2017). Longitudinal studies

should measure and control for some of the personality variables that may be influencing the

independent variables.

Guided by suggested future research outlined above, a next study could be a longitudinal

design that measures the psychological well-being, psychological resources available, and

critical thinking of incoming students. Baseline scores for each of those metrics could then be

compared to student scores within six months of their expected graduation date (i.e., the

incoming class of 2021 should be given the survey during autumn of 2017 and again in

summer/autumn of 2021). In addition to the psychological and critical thinking measures, data

should be collected regarding entry status (i.e., freshmen, freshmen with credits, transfer, running

start, etc.), living situation during college, and incoming GPA to control for some of the

antecedents to specific factors that institutions can influence. Finally, participation in a variety of

other campus activities and programs could be measured as the intervention to assess how these

activities impact a student's time in school (e.g., hall activity nights, intramurals, orientation,

athletics, etc.). Do some factors influence change in HSD scores more than others? Are specific

activities beneficial for students who have different experiences or academic paths?

Conclusion

The holistic development of students is an espoused value of colleges and universities

across the nation, but often the enacted values of these organizations do not align with this

notion. Higher education, especially liberal arts institutions, should be leading the charge to

wholly develop individuals who are capable of interacting with and influencing their world. This

research has introduced a new measure of whole student development that exemplifies graduates

who have the resources necessary to engage in, and positively contribute to their communities.

Furthermore, the results indicate that institutions should be actively involved in promoting

personal relationships that provide emotional and social support, faculty-student mentorships,

and actively seek to prepare and provide the opportunities for students to engage in positive

internships/work experiences during their time in school.

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Appendix A: Household Income

What is the **<u>Annual</u>** Adjusted Gross Income of your household (e.g., annual salary, bonuses, etc.) as reported to the IRS?

How many members are currently in your household (i.e., you and your dependents as reported to the IRS)?

In which state do you currently live?

Appendix B: Critical Thinking

Directions: Use the scale below to answer the questions. If you think the statement is very true of you, select 7; if a statement is not at all true of you, select 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

Motivated Strategies of Learning (MSLQ; Pintrich, Smith, Garcia, & McKeachie, 1993)
    Critical thinking subscale.

(1) I often find myself questioning things I hear or read to decide if I find them convincing.
(2) When a theory, interpretation, or conclusion is presented, I try to decide if there is good supporting evidence.
(3) I treat information as a starting point and try to develop my own ideas about it.
(4) I try to play around with ideas of my own related to what I am learning.
(5) Whenever I read or hear an assertion or conclusion, I think about possible alternatives.

Critically Reflective Work Behavior (van Woerkom & Croon, 2008)

Critical opinion sharing.

(6) I come up with ideas how things could be organized differently at work.
(7) I make suggestions to my supervisor about a different working method.
(8) I call my organization's policy into question.
(9) I put critical questions to my supervisor about the working of my organization.

Challenging groupthink.

(10) When I do not agree with the way a colleague does his work, I keep quiet (R).
(11) I do not easily express criticism of my colleagues or supervisor (R).
(12) When I do not agree with the way a colleague works, I say so.
(13) When I am the only one to disagree with the rest, I just keep quiet (R).
(14) I easily submit to group decisions (R).
(15) When I do not agree with something at work, I find it hard to say so (R).

Experimenting.

(16) I like to try things out, even if it sometimes leads nowhere.
(17) I experiment with other working methods.
(18) I try out new working methods.

Appendix C: Psychological Capital

Psychological Capital (PsyCap) Questionnaire (PCQ) – 24 item measure
(Luthans, Avolio, & Avey, 2007)

Directions: Below are statements that describe how you may think about yourself right now. Thinking about your **time at work**, use the following scale to indicate your level of agreement or disagreement with each statement.

   1. I feel confident analyzing a long-term problem to find a solution.
   9. There are lots of ways around any problem.
   13. When I have a setback at work, I have trouble recovering from it, moving on. (R)

(1 = *strongly disagree*; 2 = *disagree*; 3 = *somewhat disagree*; 4 = *somewhat agree*; 5 = *agree*; 6 = *strongly agree; 7 = N/A*)

Appendix D: Psychological Well-Being

Flourishing Scale (Diener et al., 2010)

Directions: Below are eight statements with which you may agree or disagree. Think about <u>**your life in general**</u> and use the 1–7 scale below to rate your agreement with each statement.
(1 = *strongly disagree*; 2 = *disagree*; 3 = *somewhat disagree*; 4 = *mixed or neither disagree nor agree;* 5 = *somewhat agree;* 6 = *agree;* 7 = *strongly agree;* 8 = N/A)

1. I lead a purposeful and meaningful life.
2. My social relationships are supportive and rewarding.
3. I am engaged and interested in my daily activities.
4. I actively contribute to the happiness and well-being of others.
5. I am competent and capable in the activities that are important to me.
6. I am a good person and live a good life.
7. I am optimistic about my future.
8. People respect me.

Scoring: Add the responses, varying from 1 to 7, for all eight items. The possible range of scores is from 8 (lowest possible) to 56 (highest PWB possible). A high score represents a person with many psychological resources and strengths.

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Appendix E: Personal Relationships

Friendship Ratings (Marigold, Cavallo, Holmes, & Wood, 2014)

Directions: Now think about **your time in college** and rate your relationship with your best or closest friend(s) **from your time in college.** Please respond to the following statements using the following scale.
(1 = *strongly disagree*; 2 = *disagree*; 3 = *somewhat disagree*; 4 = *neither disagree nor agree;* 5 = *somewhat agree;* 6 = *agree;* 7 = *strongly agree;* 8 = *N/A*).

1. My friend(s) would go out of his/her way to help me.
2. My friend(s) believed I have many good qualities.
3. My friend(s) did not think very highly of me. (R)
4. My friend(s) was responsive to my needs.
5. My friend(s) saw me like I saw myself.
6. My friend(s) didn't know me very well. (R)
7. I felt very much understood by my friend(s).
8. I was extremely happy with my friendship(s).
9. I had a very strong relationship with my friend(s).
10. My relationship with my friend(s) was very rewarding (i.e., gratifying, fulfilling).
11. I was very committed to my friend(s).
12. I felt dedicated to the friendship(s).

Appendix F: Faculty Mentorship

Mentorship Quantity and Definition

Directions: Continue to think about your time in college. Please read the description below and answer the questions that follow. "Mentoring has been traditionally defined as a developmental relationship between an older, more experienced mentor and a younger, less experienced protégé for the purpose of helping and developing the protégé's career."

How many mentors did you have **during your time in college?**

0 --- 20+

Mentorship Quality Scale (Xu & Payne, 2014)

Thinking about your mentoring relationships **during your time in college**, please answer the following questions.

1. My mentor(s) and I have benefited from our relationship.
2. I have effectively used mentoring.
3. I have enjoyed high quality mentoring relationship(s).

Mentorship Satisfaction Scale (Xu & Payne, 2014)

Satisfaction with Mentoring Measure Items

4. I am/have been satisfied with my mentoring.
5. Mentoring has disappointed me. (R)
6. Mentoring has failed to meet my needs. (R)

Note. For both scales, items are rated on a 5-point agreement scale (1 = *strongly disagree*; 2 = *disagree*; 3 = *neither agree nor disagree*; 4 = *agree*; 5 = *strongly agree;* 6 = *N/A*).

Appendix G: Internship/Work Experience

1. Did you have an internship or work experience **during your college years?**
   - ❏ Yes
   - ❏ No

2. If you had an internship or work experience in college, please indicate the type of experience you had **during your college years**?
   - ❏ Internship (Paid)   ❏ Internship (Unpaid)   ❏ On campus employment
   - ❏ Off-campus employment   ❏ Other (Please Specify):_____.

3. If you had an internship or work experience in college, how many total work experiences (i.e. internships, jobs, other employment positions) did you have **while completing your undergraduate degree?**
   a. 0 – 20 sliding scale

4. If you had an internship or work experience in college, what was the approximate duration of each work/internship experience?
   a. 0 – 20 months sliding scale

5. During an average week, how many hours did you participate in these experiences while in school?
   a. Freshman year:
      0 – 40 hours/week (sliding scale)
   b. Sophomore year:
      0 – 40 hours/week (sliding scale)
   c. Junior year:
      0 – 40 hours/week (sliding scale)
   d. Senior year:
      0 – 40 hours/week (sliding scale)

If you had an internship or work experience in college, please rate your internship work experiences **during your undergraduate experience**.

6. My internship/work experience allowed me to apply skills and knowledge I learned in school.
7. My site supervisor answered my questions adequately and provided appropriate support.
8. My internship/work experience during school was useful in the area which I am employed or plan to be employed.
9. I was given responsibility for which I was not prepared.
10. I benefited from my experience in the internship/work experience.
11. I would recommend students seek internship/work experience while in school.

Note: Items are rated on a 5-point agreement scale (1 = *strongly disagree*; 2 = *disagree*; 3 = *neither agree nor disagree*; 4 = *agree*; 5 = *strongly agree*; 6 = *N/A*).