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Measuring Positive Psychology Constructs to Determine the Effect of a Well-being Intervention at GateWay Community College

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Abstract

In partnership with GateWay Community College (GWCC), the following service-learning project outlines an application plan to implement validated measures of positive psychology constructs through GWCC's *Strategies for College Success* (CPD150) course. Supported by a situation analysis and literature review, constructs of Hope, Grit and Career Decision Self-Efficacy were identified as key constructs to be measured in alignment with the course curriculum and research demonstrating a positive correlation to student achievement and well-being outcomes. The application plan describes the identified measures for each construct, resources to support implementation within CPD150, and recommendations for additional measures and limitations.

Keywords

Hope, Grit, Career Decision Self Efficacy, measurement, positive psychology, well-being, community college, service learning

Disciplines

Adult and Continuing Education | Community College Leadership | Other Education

Measuring Positive Psychology Constructs to Determine the Effect of a Well-being

Intervention at GateWay Community College

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University of Pennsylvania

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at GateWay Community College

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Service Learning Project

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In partnership with GateWay Community College (GWCC), the following service-learning project outlines an application plan to implement validated measures of positive psychology constructs through GWCC's *Strategies for College Success* (CPD150) course. Supported by a situation analysis and literature review, constructs of Hope, Grit and Career Decision Self-Efficacy were identified as key constructs to be measured in alignment with the course curriculum and research demonstrating a positive correlation to student achievement and well-being outcomes. The application plan describes the identified measures for each construct, resources to support implementation within CPD150, and recommendations for additional measures and limitations.

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Introduction

The following paper is a service learning project in partnership with GateWay

Community College (GWCC) and a cohort of master's students at the University of

Pennsylvania studying Applied Positive Psychology. GWCC engaged in this project with the

goal of identifying measurement tools to assess the impact of current well-being and Positive

Psychology initiatives in place. Our partner Kerry Sanderson, Director of Career Services at

GWCC outlined the college's ongoing efforts with Positive Psychology (PP) and highlighted the

current need to focus on quantifiable outcomes. Through an analysis of GWCC's demographics

and current initiatives, our cohort presents a review of positive psychology constructs and

identifies measurement tools for GWCC to apply within their current context.

Situational Analysis

In order to develop an effective measurement of GWCC's initiatives to instill positive

psychology within the campus, we first developed an understanding of the community college

sector at large, the demographics of GateWay's students and its larger context, taking into

account the current initiatives that are already underway.

Sector Background

GateWay Community College is a public, 2-year institution located in Phoenix, Arizona.

It is classified as a medium-sized institution serving about 5,000 students, virtually all of whom

(98%) are local and in-state, and about three quarters (77%) of whom are enrolled part-time. Half

of the students in attendance are over the age of 25 (National Center for Education Statistics,

2018). GateWay Community College is a minority-serving institution (MSI), with 46% of its

student body identifying as Hispanic or Latino. With this demographic, GateWay classifies as a

Hispanic-Serving Institution (HSI) as stated by the National Center for Education Statistics (National Center for Education Statistics, 2018).

According to the American Council on Education's website, MSIs form a crucial part of U.S. higher education as "engines of upward mobility", meaning that they help raise individuals out of low-income brackets (ACE (n.d.). retrieved from https://www.acenet.edu). MSI's allow access to education for millions of first-generation and low-income students. Their success is essential to that of higher education and hundreds of communities across the U.S. Hispanic-Serving Institutions especially have been reported to have a mobility rate of double that of non-MSIs, indicating that two-year institutions have the possibility of propelling twice as many students from the lowest income quintile to the top income quintile when compared to non-MSIs (Espinosa, Kelchen, & Taylor, 2018). Therefore, GateWay's success is one that could be of critical importance to the nation's future. However, MSIs also differ from other types of higher education institutions in that they present a unique set of challenges and needs based on their distinctive student body.

The demands of being a full-time student can be stressful on their own. The most common stressors for traditional college students include changes in sleep patterns and eating habits, shifting responsibilities, and increasing workloads (Ross, Niebling, and Heckert, 1999). As of fall 2017, GateWay students include working adult students, with 23% participating in evening courses (GateWay Community College, 2019). Working adult students contend with traditional school stressors in addition to the demands of family and work. One study found work stressors had the greatest impact on well-being for adult students (Kohler-Giancola, Grawitch, & Brochert, 2009). The experience of stress has been linked to several negative health outcomes and impact of academic performance in students (Shankar & Park, 2016).

GWCC Strengths and Challenges

GateWay Community College has 3 satellite campuses and serves a widely diverse group of students including refugees, veterans, and working adults. Diversity is represented in terms of age, enrollment status, and ethnicity. Because 21% of the residents in the service area live below the poverty level, there are also food distribution and homelessness support services near the college (GateWay Community College, 2019).

Our review of GateWay's current program offerings and initiatives identified robust student support as an area of strength. In 2019 the college was granted three million dollars to foster student well-being and academic attainment under a grant called EXITO - *Equitable Experience Infused Throughout* (United States Department of Education, 2019). EXITO is intended to increase student completion rates by enhancing the academic experience and student well-being as well as creating a student-ready culture (GateWay Community College, 2019). Assistance with writing, math, and other developmental courses, plus over 150 academic and occupational programs are offered at the college (GateWay Community College, 2019). A counselor-led *Strategies for College Success* class (CPD150) is mandatory for students (with a GPA of 2.6 and below) seeking their first-degree. To help case managers create individualized success plans, new students take a 12 question survey that assesses non-cognitive and academic needs during the onboarding program (GateWay Community College, 2019).

In addition to all the support provided for academic success, GWCC has instituted the five Cs of well-being culture: character, care, connection, career, and contribution. Together they encourage adherence to positive psychology principles that improve well-being. Staff members are committed to the learning and implementation of positive psychology strategies to improve student experiences, retention, and graduation rates. Staff training and a common language

around strengths has been carried out across the campus (Sanderson, personal communication, 2020). Together these initiatives are helping to shape the culture of GateWay as a "Well-Being Institution" (GateWay Community College, 2019).

Foundations for Application Plan

As mentioned previously, GateWay Community College has been granted 3 million dollars to design and implement its ÉXITO proposal (United States Department of Education, 2019). Our conversation with Sanderson uncovered that although the school has just launched ÉXITO, it has already been working toward implementing Positive Psychology through initiatives such as the aforementioned CPD150 course (Sanderson, personal communication, March 10, 2020). CPD150 includes modules that introduce students to topics that are meant to enhance their well-being and personal/career success. Examples include teaching students how to define their purpose, build character through goal-setting, and learn about their unique strengths. Positive education's 5 C's of well-being have been embedded in CPD150 and throughout the school, and a few other academic programs have included concepts such as character strengths, gratitude, mindfulness, grit, purpose, and resilience within their curriculum (GateWay Community College, 2019).

Although GateWay has developed and implemented all of the above initiatives, the school has not yet developed instruments to measure their impact. In our situational analysis we have determined that GateWay's CPD150 course uses positive psychology constructs (CPD150 Syllabus, internal document, 2020) to improve students' academic achievement and well-being. In partnership with the GWCC team, we identified the aim for this project is to build and implement an effective assessment tool that can be used to evaluate the impact of CPD150 and assess the need for development of future program scaling (Sanderson, personal communication,

2020). We decided to focus the following literature review and application plan on the CPD150 course due to its direct impact on teaching and supporting student skills associated with well-being.

Literature Review

Through our analysis of course content, assignments, and objectives, we identified the following constructs as key mechanisms in the CPD150 course that contribute to student success and well-being: *Character Strengths*, *Self-Efficacy*, *Purpose, Hope* and *Optimism*, *Grit* and *Perseverance*, *Self-Control* and *Subjective Well-Being*. The following literature review seeks to define each construct and discuss effective measurement tools to assess their impact on well-being and academic success.

Character Strengths. College is a ripe time for the development of varying psychological dimensions, including character (Lounsbury et al. 2009), and GWCC infuses their CPD150 course with opportunities for students to learn and develop their *character strengths*. Character strengths are universally valued, trait-like differences among individuals that produce positive life outcomes (Niemic, 2018). Students complete the VIA Inventory of Strengths (VIA-IS; Peterson & Seligman, 2004) to become aware of and identify with their most prominent constructive traits. Research in education and psychology consistently shows an association between character strengths and positive outcomes for students. For example, one study found that 22 out of the 24 character strengths were significantly and positively related to college satisfaction, and 16 strengths were positively related to academic success as measured by GPA (Lounsbury et al., 2009).

The VIA-IS *Technical Report* identifies three global factors that encompass the 24 character strengths: Caring, Inquisitiveness, and Self-Control (McGrath, 2019). Caring strengths,

exemplified by traits like Fairness, Forgiveness, and Teamwork (McGrath, 2019), are considered interpersonal strengths and have been found to positively correlate with social adjustment in college, while Inquisitiveness strengths such as Creativity, Curiosity, and Love of Learning have been found to correlate with academic adjustment (Parter, 2018). Self-Control strengths (such as perseverance, prudence, and self-regulation) are strongly correlated with characteristics likely to lead to success such as grit (Duckworth & Gross, 2014).

Using character strengths has been shown to help students gain self-efficacy (Vela et al., 2018), but it may also make them happier. A study, which looked at the effects of a character strengths focused undergraduate course, found significant increases in well-being as compared to controls with a large effect size of *d=.846* (Smith, Ford, Erickson, & Guzman, 2020). Despite evidence that character strengths interventions elicit positive changes in behavior and increases wellbeing, CPD150 focuses more on students' use of character strengths to complete assignments geared toward goal-setting and time management. (CPD150 Syllabus, internal document, 2020). GWCC students benefit by developing their strengths in multiple domains and, as our literature review suggests, they can gain other valuable skills such as self-efficacy, grit, coping strategies, and a clear *purpose*. Lastly, the use of virtues and character strengths may increase students' resilience in college (Gustems-Carnicer & Calderon, 2016), which indicates that using strengths may help students navigate life changes associated with school attendance and improve retention.

Self-Efficacy, & Purpose. The CPD150 course was implemented to address non-cognitive skill gaps in the student lifecycle and to improve career development outcomes (EXITO Grant Proposal, internal document, 2019). One way it does this is by helping students increase *self-efficacy*, which has been shown to foster autonomous learning and self-confidence

(Macaskill & Denovan, 2013). Increases in self-efficacy have shown to positively influence the odds of students persisting into future semesters and being academically successful (Wright, Jenkins-Guarnieri, & Murdock, 2012). *Self-efficacy* theory states that an individual's belief in their ability to effect positive change drives goal-directed action, allows for adjustments to change, and increases perseverance to reach goals (Lopez & Snyder, 2011). In using goal-setting exercises to increase self-efficacy, CPD150 aims to teach students how apply it to career development for success (CPD150, internal document, 2020),

One of the goals of degree seeking college students is career development, and career decision self-efficacy (CDSE) is an important element of this. CDSE refers to how confident students are in their ability to choose and commit to the right career (Vela, Sparrow, Whittenberg, & Rodriguez, 2015). CDSE has been repeatedly linked to positive educational outcomes and career satisfaction. One study, which looked at how character strengths and family influenced Mexican American college student's CDSE, found psychological grit and curiosity to be significant predictors of increased career decision self-efficacy (Vela, Sparrow, Whittenberg, & Rodriguez, 2018). Increases in career self-efficacy also have positive links to student motivation, hope, and satisfaction with their courses and chosen major (Komarraju, Swanson, & Nadler, 2013), likely leading to overall satisfaction with their college experience. Career development self-efficacy is measured using the Betz and Taylor (2001) CDSE scale, which consists of a Likert-type scale ranging from 1 (no confidence) to 5 (complete confidence). Similar to how other measures of self-efficacy ask individuals to reflect on their ability to act, items on the CDSE scale prompt students to reflect on their ability to create good resumes and make decisions about future careers without being stressed (Betz & Taylor, 2001).

In the same week that goal-setting, motivation, and strengths are introduced, the idea of finding purpose is presented. Students' self-efficacy beliefs, which give them the motivation to believe they can achieve their goals, has been significantly and positively associated with purpose in life (DeWitz, Woolsey, & Walsh, 2009). Purpose as defined by Victor Frankl (1985) is meaning through creation, accomplishment, experience, or perseverance. Having purpose in life instills motivation and engagement in school and work while generating a sense of well-being (Cotton Bronk et al., 2009). Steger, Frazier, Oishi, and Kaler (2006) developed the Meaning in Life Questionnaire, a 10 item, 7 point Likert scale to measure purpose in life. The scale has shown to have good internal consistency and validity in studies measuring purpose with students (Lund et al., 2019).

Intuitively, one might assume having a purpose results in hope, and research does support this. One study conducted with three different age groups (adolescents, young adults, adults) found that hope mediated the relationship between purpose and life satisfaction in all groups (Cotton Bronk et al., 2009). Developmental psychologists have found that purpose helps young people develop a stronger sense of identity (Erikson, 1968/1994), something that is crucial to first-year student populations as well. Seligman (2002, p. 14) posits that "The Meaningful Life" is the ultimate path to well-being that involves having a purpose beyond the self. CPD150 places a focus on purpose, in part, because of its relationship to hope, optimism, and well-being.

Hope & Optimism. GWCC includes Hope as a component to their course curriculum for students. *Hope* is identified as an influencing component for well-being across many domains (Lopez, Snyder, & Petrotti, 2003). A review of the CPD 150 syllabi and course objectives identifies Hope as a core component through the implementation of purpose and goal setting interventions (CPD150 Syllabus, internal document, 2020). We now explore definitions of Hope,

its influences on well-being and student success, and effective measurement of Hope for students.

Defining Hope is essential to understanding how Hope can promote and sustain well-being in individuals. Hope has been defined as a cognition, emotion, and construct. Lopez, et al. (2003) analyze developmental psychologists' definitions of Hope as a cognition that allows individuals to endure action toward an identified goal. Cognition, one of the components of the mind, includes awareness, attention, perception, reasoning, judgement, memory, and the ability to produce and understand language and solve problems (Colman, 2015). From an emotional definition, context influences hope as it defines if goals are attainable, achievable, important to the individual, and accepted by the community as valuable (Lopez et al., 2003). Snyder (2000) defined Hope as a construct through his theory that Hope consists of goal-oriented cognitions, as individuals identify pathways to achieve a goal, and the motivation and agentic thought to carry out goal-directed action. In definitions of Hope, we see the construct identified as an essential component for individuals to direct goals and behaviors that promote well-being.

For college students, Hope is identified as a predictive factor for college student GPA (Snyder, Shorey, Cheavenes, Pulvers, Adams, & Wiklund, 2002). For first generation college students, Hope is identified as a critical factor for predicting student persistence in their college academic program (Browning, McDermott, Scaffa, Booth & Carr, 2018). In relation to the student demographics of GWCC, as a Hispanic Serving Institution, a study of Mexican-American adolescents revealed that Hope is a cross-culturally relevant measure to identify pathways and agency for goals (Edwards, Ong & Lopez, 2007). Additionally, Hope has been measured by the Values in Action assessment of Character Strengths and identified as one of the strongest predictors of individual well-being (Park, Peterson & Seligman, 2004).

While Hope has been identified as a significant factor in predicting student success and well-being, to identify measurement tools and content for instruction, it's important to differentiate hope from additional constructs. An analysis of measurement scales shows differentiation has been made to separate Hope from additional constructs. Hope is most closely related to optimism and self-efficacy (Snyder, et al., 2002). However, Hope differs from self-efficacy and optimism through its focus on outcomes through agentic thought and action. Self-efficacy focuses on the belief that an individual can achieve or act, it does not include the ability to carry-out and sustain actions (Snyder et al., 2002).

While Optimism may predict an individual is hopeful about the likelihood of positive outcomes and that students are more likely to identify achievement-oriented goals, it does not include an individual's ability to identify pathways for their completion (Snyder et al., 2002). Optimism has little to no effect in predicting college student grades (Snyder et al., 2002). When controlling for Optimism and Self-efficacy, Hope is a stronger predictor of subjective well-being (Magaletta & Oliver, 1999). Additionally, Hope is identified to predict semester and overall GPA in college students (Snyder et al., 2002), while optimism and general self-efficacy do not predict GPA (Feldman & Kubota, 2014). As reflected by Gallagher and Lopez (2019) multiple studies and meta-analyses have examined the distinction of Hope and Optimism and found Hope to be a unique construct that predicts well-being and academic performance beyond Optimism.

Many measures have been developed to assess Hope in individuals across domains. The most validated and consistently used measures of Hope utilize Snyder's Hope Theory to identify goal related agency and pathways (Gallagher & Lopez, 2019). The Adult Hope Scale (Snyder, Harris et al., 1991), includes 12 items, an 8-point Likert and self-report to assess dispositional

hope in adults 15 years and older. Although other scales to assess Hope have been developed (Snyder, Sympson et al, 1996; Sympson, 1999; Snyder, et al., 2002), when reviewing studies correlated to academic success and student well-being (Feldman & Kubota, 2014; Martin, Rand & Shea, 2011; Bailey, Frisch & Snyder, 2011), the most commonly utilized measure for Hope is the Adult Hope Scale. The Adult Hope Scale has an internal reliability of .70-.80 and can be administered in 2-5 minutes (Snyder et al., 2002).

   Grit, Perseverance, & Self-Control. GateWay's CPD150 course begins by teaching and measuring grit in students. *Grit* is highly correlated with academic achievement, motivation, student's engagement, retention, and probability of graduation (Wolters & Hussain, 2015; Duckworth & Quinn, 2009). We conducted a literature review to define grit, understand the fundamental differences between self-control and grit, its influence on academic achievement, and how to effectively measure grit in GWCC's student population.

   Grit encompasses goal consistency and perseverance of efforts; and is defined as the persistent pursuit of a higher degree goal in the face of obstacles (Duckworth, Peterson, & Mathews, 2007). Grit requires a superordinate goal of such compelling significance to inspire long-term commitment in spite of alternative compelling goals (Duckworth & Gross, 2014). Grit also requires *perseverance* of efforts in the face of inevitable obstacles, mistakes, and failures (Duckworth & Gross, 2014). This is particularly important in Community College non-traditional student populations like GWCC's. One of the identified challenges non-traditional students face which affects their perseverance in college is the need to cohere to their roles as spouse, parent, worker, and student (Markle, 2015). Since grit *combines* perseverance and goal consistency over time, grittier people may accumulate more hours of deliberate practice to develop the skills necessary for outstanding performance (Duckworth & Gross, 2014). This is

important especially when the domains of family, work, and school compete for student's time and energy (Markle, 2015). The presence of grit predicts the completion of challenging goals over time and exceptional achievement (Duckworth & Quinn, 2009), which bolsters student success.

Grit is also positively correlated with self-efficacy, optimistic explanatory styles (Duckworth et al., 2007), growth-mindset, and *self-control* (Duckworth & Gross, 2014). Self-control and grit are sometimes used interchangeably; they are strongly correlated (rs>.6) and both lead to academic success beyond intelligence (Duckworth & Gross, 2014). However, to select the construct best suited for GWCC students' academic success, it is important to understand similarities and differences between self-control and grit. Duckworth and Gross (2014) posit that both grit and self-control consist in aligning one's actions with goals while suppressing competing impulses. According to the authors, grit is the alignment of behavior with a single highest valued goal for a period of years or decades. Self-control consists in aligning behavior with any valued goal, and not necessarily one pursued for a long period of time. The psychologists clarify it is possible to have high degrees of self-control without a superordinate goal; in fact, many people who possess self-control do not have a life-long passion. At the same time, some have high levels of grit, persistently pursuing a superordinate goal or life-long passion for decades, but often fail to control themselves in other domains (Duckworth & Gross, 2014). Duckworth and Gross (2014) explain that self-control measures tend to better predict adaptive functioning and everyday success. Grit better predicts the completion of long-term challenging goals and exceptional achievement (Duckworth & Gross, 2014).

Given the demographics and socioeconomic status of the GWCC student population, the college path may present obstacles and stressors. Graduating from college can be considered an

exceptional achievement for nontraditional students and one that benefits from considering

graduation a superordinate goal, to be pursued above all else. Indeed, grit is a critical strength for

first-generation Latino college students to cope with stress, anxiety, and depression and for a

higher GPA and degree completion (O'Neal et al., 2016). In a sample of 213 diverse college

students, grit was predictive of self-regulated learning indicators of self-efficacy, time, study

environment management strategies, procrastination and academic achievement (Wolters &

Hussain, 2015).

Grit has a reliable measure distinct from other personality traits such as

conscientiousness, emotional regulation (Wolters & Hussain, 2015), and self-control (Duckworth

& Gross, 2014). The eight-item Short Grit Scale (GRIT-S; Duckworth & Quinn, 2009) measures

perseverance and consistency of interests over time and has been used with a diverse adult

population, showing internal consistency, re-test stability, and predictive validity for GPA

(O'Neal et al., 2016). The total GRIT-S score was a better predictor of engagement and retention

amongst West Point cadets than perseverance of effort or consistency of interests when measured

alone, which demonstrates the value of evaluating grit as a compound measure (Duckworth &

Quinn, 2009). Higher scores in GRIT-S were associated with better academic performance

among first-generation Latino students (O'Neal et al., 2016) and black male college students at

predominantly white institutions (Strayhorn, 2014).

Another valuable insight is that differences in grit may be a factor in how people pursue

happiness (Von Culin, Tsukayama, & Duckworth, 2014). Happiness was defined by Seligman

(2002) as composed of positive affect, meaning, and pleasure. Analyzing the relationship

between grit and happiness, two-cross sectional studies found a strong association between

engagement and grit, an inverse association between grit and positive affect; and a small

association between grit and meaning (Von Culin et al., 2014). It could be that grittier students have less positive affect, but are more engaged in their studies therefore enjoy better academic outcomes. This is significant for the GWCC community as they pursue the development of student well-being in alignment with academic achievement as outlined in the EXITO grant.

      Subjective Well-Being. Although not specifically outlined in its objectives, through its focus on the development of individuals the CPD150 course is designed to help set the stage for a positive college experience (EXITO Grant Proposal, internal document, 2019). Subjective well-being (SWB), is defined as an individual's overall appraisal of their lives and experiences (Diener et. al, 2017). As an umbrella construct, SWB differs from happiness as it refers to specific measures to evaluate the emotional experience of individuals (Diener et al., 2017). SWB measures include satisfaction, positive affect, and low negative affect (Diener et al., 2017). Our literature review has identified many positive associations between character strengths, optimism, self-efficacy, purpose, and well-being (Cotton Bronk et al., 2009; Martin et al., 2011; Smith, Ford, Erickson, & Guzman, 2020). Researchers primarily utilize self-reports to measure SWB (Diener, 2020) such as the Fordyce Happiness Measure (Fordyce, 1977), the D-T Scale (Andrews & Withey, 1976), the Bradburn Affect Balance Scale (1969), and the Affectometer 2 (Kammann & Flett, 1983). Studies show self-report tools provide an accurate measure of SWB.

Discussion

      Our review of the literature illuminated relationships between the identified constructs of GWCC's CPD150 course and student well-being and academic achievement. Through a careful review of each construct's definition, measurement and outcomes, we found the relationship is not linear, but rather that select constructs amplify and build on each other. We have found character strengths to affect each of the outlined constructs either directly or indirectly. In

constructs like hope, hope itself is a character strength (Niemiec, 2018). In the case of grit, character strengths like perseverance can lead to cultivation of grit. Based on the predictive outcomes and associated measures related to student success and well-being, we have prioritized the following constructs for measurement at GWCC: Hope, Grit and Career Decision Self-Efficacy.

Application Plan

Positive psychology school interventions are evidence-based activities that focus on increasing positive psychological capital with measurable outcomes (Waters, 2011; Pawelski, in press). CPD150 is a positive intervention at GateWay (Sanderson, personal communication, March 10, 2020). Measuring the effectiveness of the course would help assess the need and impact of scaling it up to all students on campus and potential implementation across Maricopa County Community College District (Sanderson, personal communication, March 10, 2020). Because CPD150 was created to directly influence outcomes in at least two of the five C's: character and career, with the potential to influence the remaining three, (EXITO Grant Proposal, internal document, 2019) it is important that our measure determine if the course delivers on desired objectives.

Recommended Application

In this section we identify and describe the scales associated with each construct to be implemented within CPD 150. It is recommended that each measure be implemented as a pre and post measure across the 16-week course.

In discussion with Sanderson, Hope Theory (Snyder, 2002) was determined to be central to outcomes of CPD150 (Sanderson, personal communication, March 10, 2020). Including a measure for Hope will allow instructors to assess students' agentic thought and ability to identify

pathways to the attainment of goals (Snyder, 2002). Agency and pathways thinking are both important factors in pursuing higher education and career development aims. As outlined in our literature review, The Adult Hope Scale includes 4 items to measure pathways thinking and 4 items to measure agentic thought (Snyder, 2002).

Grit is currently embedded within the CPD 150 curriculum and is a familiar construct for faculty and staff (CPD150 Syllabus, internal document, 2020). Within the current syllabus, students complete the Grit scale (GRIT-S) the first week of the course as a self-reflection tool, discussing grit, passion and perseverance (CPD150 Syllabus, internal document, 2020). Inclusion of the GRIT-S scale as a measurement tool allows instructors to analyze students' behavior and attitudes as they pursue long-term goals (Duckworth & Quinn, 2009). Students' attitudinal behavior is aligned with student retention and degree completion (Duckworth & Quinn, 2009).

For the GWCC team, a central aim is to ensure students are satisfied with their identified career path (Sanderson, personal communication, March 10, 2020). The CDSE scale would provide instructors a measure for students' confidence and efficacy to identify and pursue a career (Betz & Taylor, 2001). Using CPD 150 to measure CDSE may help GWCC identify if students are developing goals and self-efficacy to make meaningful decisions about their studies and long-term career path.

Implementation Steps

The following section describes the implementation plan.

Materials. It has been stated that GWCC faculty and staff have developed a strong culture of professional development to increase awareness of well-being constructs. (Sanderson, personal communication, March 10, 2020). To support the implementation of measurement in

CPD150, we recommend the addition of three slides (Appendix C) to their existing instructor training presentation around the 5 C's of well-being in the classroom (5C's In the Classroom, internal document, 2018). The purpose of these slides is to ensure all faculty members understand the identified constructs, establish common language of constructs, and connect their measures to the outcomes established through the EXITO grant and the 5 C's of well-being.

We compiled the identified scales in an accessible format for implementation in the course. To simplify data collection and analysis, we recommend the identification of a digital platform for administering assessments. From personal communication with GWCC (Sanderson, personal communication, March 10, 2020), Canvas has been identified as the current digital class platform which may be used for the administration of the identified measures. The Hope Scale and GRIT-S scale have been formatted for upload and an application for the administration and analysis of the CDSE scale has been identified (Appendix D). To measure pre and post measurement results, the platform should include student ID number collection.

Training. To engage the instructors of CPD150 in the implementing process, we recommend that prior to the implementation of the measure, all CPD 150 instructors attend existing professional development session with the inclusion of an overview of the identified constructs, associated measures, and their connection to desired outcomes, outlined in the EXITO grant and 5 C's of well-being. In the session, instructors will learn from the existing instructor training PowerPoint presentation around the 5 C's of well-being (5C's In the Classroom, internal document, 2018), with the additional three previously mentioned slides incorporated (Appendix C), that describe identified measures within the context of CPD150 intended outcomes. Recommended objectives for the session: instructors will be able to describe hope, grit and career decision self-efficacy; Instructors will be able to identify the connection

between the course objectives of CPD150, the 5C's of Well-being and the identified measures; and will be able to implement the identified measures within the language of the CPD 150 course materials.

Execution. All students will be asked to complete a full scale of each identified measure on the first day and last day of the course. It is recommended that completion of measures be graded as part of the participation grade. It is important that instructors consider additional measures to mitigate issues that may lessen the effectiveness of CPD 150. Measures for regular student attendance and completion of assignments, and recommended interventions are discussed in the appendix. After data has been collected as a pre and post measurement, the data should be analyzed to see if there is any change in each construct. Analysis should include any change in students' overall scores for Hope, Grit and CDSE. Additional analysis can be completed across each measure to identify if students had a change in any particular dimension of each scale based on a more thorough item analysis.

Intended Outcomes. Before GWCC adopts CPD 150 more broadly, the school community needs evidence of its effectiveness in building students' Grit, Career Decision Self-Efficacy, and Hope and whether it impacts academic achievement and degree completion. Also, the consistent application of identified research measures will help GWCC staff ascertain how to improve CPD 150. In our application plan, we suggest a computer-based data collection program linked to an electronic resource with which students are already familiar (Canvas), and in-person contact points already part of CPD 150. Our expectations are that both recommendations will create an efficient data collection and management system and also increase the number of responses.

Potential Future Applications. Measurement and data analysis can be further used to identify areas in which CPD 150 can be improved. After GWCC gains insight into how CPD 150 impacts students' Grit, Hope, Career Decision Self-Efficacy and academic performance, we recommend a detailed analysis of curriculum content, pedagogy and professional development to uncover how teaching can be further developed. We also recommend incorporating quantitative and qualitative feedback from end of course student surveys to measure student experience and quality of instruction as factors that may influence each construct.

In the future, and contingent upon results of the proposed application, we recommend GWCC administer the proposed scales to the college population at large, particularly during student onboarding and graduation. During the mandatory in-person orientation, Gecko Gear Up (EXITO Grant Proposal, internal document, 2019), professors can introduce the assessment, available electronically on Canvas, to students. We also recommend that course registration be contingent upon students' completion of assessment. Having students complete assessments prior to enrollment would enable GWCC to identify students most likely to benefit from CPD 150 instead of only using a GPA of 2.6 as a gauge. Using the assessment, instead of a low GPA, may improve students' well-being and academic outcomes. The college should also have students take the assessment prior to graduation. An analysis of data would allow GWCC to ascertain the correlation between the CPD 150 course and student changes in the target constructs.

Longitudinally, to assess CPD150's effectiveness in improving academic attainment and performance, we recommend GWCC track the correlation between CPD150 course completion and student GPA, Fall-to-Fall retention, and degree attainment. We also recommend the school collect graduates' career outcome measures, such as employment, starting salary, and job satisfaction of students who completed CPD 150. In doing so, GWCC would better understand

whether and to what extent CPD 150 contributes to the college's mission of supporting student success beyond their time at the institution (EXITO Grant Proposal, internal document, 2019). In addition, such longitudinal data can help GWCC to scale the program within and beyond its campus.

Conclusion

The creation of a wellbeing college requires that staff be able to provide a sanctuary for all students, both traditional and nontraditional, and the tools to achieve academic goals. In the CPD 150 course, instructors teach students the skills necessary to persevere, face intellectual, emotional, and time management challenges, and attain academic goals. In our application plan, the aim is to track the impact of the course on student levels of Hope, Grit, and Career Decision Self-Efficacy. An increase in the aforementioned constructs may lead to subjective well-being and improvements in attainment rates as well. The school's maintenance of accurate data to gauge the efficacy of CPD 150, as an intervention to increase student success, could provide opportunities to improve the course, increase future funding, and scale up the course to reach the entire college population and beyond.

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Appendix A: Measurement

As previously noted, with the stated outcome of measuring the effectiveness of the CPD 150, it is essential to monitor additional measures that may impact fidelity of the course. Nontraditional adult learners perform myriad roles that place demands on their time, energy, and attention. While attendance may increase well-being and adult learners' connection to the academic community, hours spent in class do not necessarily translate to higher grades (Chen, 2017). However, for the purpose of measuring the effectiveness of the course, it is critical to establish a clear baseline of attendance across all course participants. Excessive absences may impact fidelity of the intervention and access to course content, which is a critical variable for accurate measurement. We recommend that all instructors utilize the established protocol at GWCC to submit a care report for students who miss two consecutive classes. Students who miss more than two courses may not provide accurate data for the purpose of measurement at this time.

Assignment completion and student grades present another important data point for instructors. Non-passing grades, missing and incomplete assignments may indicate a lack of engagement or a failure to comprehend material. It is recommended that instructors review weekly grades as an indicator of course engagement and fidelity. While adult learners may need more excused absences than traditional students because of work and familial obligations, they are good planners (Markle, 2015). A course with a clearly laid out plan and set dates for assessment measures would appeal to adult learners with busy lives. To support students and instructors with attendance and assignment completion, a schedule of all class sessions and assignments would support fidelity to the course, and allow adult learners a strong sense of autonomy.

Appendix B: Limitations

It is expected that students will experience an increase in Hope, Grit and CDSE as a result of completing CPD150. However, there are significant limitations GWCC may encounter in implementing the identified measures. Student mental health, curriculum design, student and instructor motivation, and access to technology are discussed.

Positive psychology interventions, in an academic context, are intended for a nonclinical population (Peterson, 2006). While individuals with mild depression might benefit from CPD 150, those with clinical depression might find that a discussion of character strengths increases negative emotions (Vella-Brodrick, 2014). A curriculum is a foundation for an instructional staff, allowing flexibility for an instructor to adapt material to different student populations. To make sure instructors/counselors develop interventions/lessons in keeping with the positive psychology-inspired core principles of CPD 150, funding is needed for positive education professional development workshops.

In the current design of measurement, access to technology is essential, therefore, identifying an accessible technology platform for all CPD150 students is another potential limitation to be considered. Lastly, in working with adult learners, staff must understand students' struggles in handling their various roles and responsibilities (Markle, 2015). Student attendance is necessary for building social resources in an academic setting and may affect motivation. Staff and students have a bidirectional relationship with motivation as the essential ingredient for success. More research is needed to understand best practices for increasing motivation, among staff and students, retention, and positive outcomes.

Appendix C: Artifacts

measuring well-being outcomes (CPD150)

Career Decision Self-Efficacy (CDSE)

✓Students confidence in their ability to choose and commit to the right career.
(Vela, Sparrow, Whittenberg, & Rodriguez, 2015)

✓Character strengths of Grit & Curiosity significant predictors of increased CDSE in student populations.

✓Positive links to student motivation, hope, and major satisfaction (well-being).
(Komarraju, Swanson, & Nadler, 2013)

✓Measured using the Betz and Taylor (2001) CDSE scale, which prompting students to reflect on their ability to prepare good resumes and make decisions about future careers.

✓Outcomes provide instructors a measure for students' confidence and efficacy to identify and pursue a career. (Betz & Taylor, 2001)

well-being

measuring well-being outcomes (CPD150)

Grit (goal consistency + perseverance)

✓ Defined as persistent pursuit of a higher degree goal in the face of obstacles (Duckworth, Peterson, & Mathews, 2007)

✓ Grittier students may accrue more hours of practice to develop the skills for outstanding performance (Duckworth & Gross, 2014).

✓ Eight-item Short Grit Scale (GRIT-S) measures perseverance and consistency of interests over time. (Duckworth & Quinn, 2009)

✓ CPD 150 students complete the Grit scale in alignment with a unit (week 1) discussing grit, passion and perseverance.

✓ Higher scores in GRIT-S were associated with better academic performance among certain minorities (O'Neal et al., 2016; Strayhorn, 2014)

well-being

measuring well-being outcomes (CPD150)

Hope (emotion, cognition, construct)

✓ Helps students to endure action toward an identified goal. (Lopez, Snyder & Petrotti, 2003)

✓ Essential component for individuals to direct goals and behaviors that promote well-being (different from Optimism)

✓ Helps young people develop a stronger sense of identity (Erikson, 1968/1994)

✓ CPD150 challenges students to develop clear goals, and agentic pathways to pursue goals.

✓ Adult Hope Scale: 4 items to measure pathways thinking and 4 items to measure agentic thought (Snyder, 2002)

well-being

Appendix D: Measurement Scales

Say: Directions for items 1-13: Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided.

1. = Definitely False
2. = Mostly False
3. = Somewhat False
4. = Slightly False
5. = Slightly True
6. = Somewhat True
7. = Mostly True
8. = Definitely True

___ 1. I can think of many ways to get out of a jam.
___ 2. I energetically pursue my goals.
___ 3. I feel tired most of the time.
___ 4. There are lots of ways around any problem.
___ 5. I am easily downed in an argument.
___ 6. I can think of many ways to get the things in life that are important to me.
___ 7. I worry about my health.
___ 8. Even when others get discouraged, I know I can find a way to solve the problem.
___ 9. My past experiences have prepared me well for my future.
___10. I've been pretty successful in life.
___11. I usually find myself worrying about something.
___12. I meet the goals that I set for myself.
___13. (add a potential distraction question)

Directions for Items 14-21: Please respond to the following 8 items. Be honest – there are no right or wrong answers!

14. New ideas and projects sometimes distract me from previous ones.
- Very much like me
- Mostly like me
- Somewhat like me
- Not much like me
- Not like me at all

15. Setbacks don't discourage me.
- Very much like me
- Mostly like me
- Somewhat like me
- Not much like me
- Not like me at all

16. I have been obsessed with a certain idea or project for a short time but later lost interest.
- Very much like me
- Mostly like me
- Somewhat like me
- Not much like me
- Not like me at all

17. I am a hard worker.
- Very much like me
- Mostly like me
- Somewhat like me
- Not much like me
- Not like me at all

18. I often set a goal but later choose to pursue a different one.
- Very much like me
- Mostly like me
- Somewhat like me
- Not much like me
- Not like me at all

19. I have difficulty maintaining my focus on projects that take more than a few months to complete.
- Very much like me
- Mostly like me
- Somewhat like me
- Not much like me
- Not like me at all

20. I finish whatever I begin.
- Very much like me
- Mostly like me
- Somewhat like me
- Not much like me
- Not like me at all

21. I am diligent.
- Very much like me
- Mostly like me
- Somewhat like me
- Not much like me
- Not like me at all

Scoring Guidelines

Items 1-12 Hope Scale

1. Sum items: 2, 9, 10, 12
   Agency Sub Score: _____
   Scores range from 4 to 32, with high scores reflecting high levels of agency.

2. Sum items: 1, 4, 6, 8
   Pathway Sub Score_____
   Scores range from 4 to 32, with high scores reflecting high levels of pathways.

3. Sum of Agency sub score and Pathway sub score
   Total Hope Score_____
   Scores range from 8 to 63, with high scores reflecting high levels of hope.

Items 14-21 Grit Scale

1. For questions 15, 17, 20 and 21 assign the following points:
   5 = Very much like me
   4 = Mostly like me
   3 = Somewhat like me
   2 = Not much like me
   1 = Not like me at all

   Sum of Scores:_____

2. For questions 14, 16, 18 and 19 assign the following points:
   1 = Very much like me
   2 = Mostly like me
   3 = Somewhat like me
   4 = Not much like me
   5 = Not like me at all

   Sum of Scores:_____

3. Add up all the points and divide by 8.

   Grit Score _____

The maximum score on this scale is 5 (extremely gritty), and the lowest score on this scale is 1 (not at all gritty).

Resources

The Hope Scale

Positive Psychology Center at The University of Pennsylvania. *Adult Hope Scale.*
https://ppc.sas.upenn.edu/resources/questionnaires-researchers/adult-hope-scale

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry*, 13, 249-275.

Grit-S Scale

Duckworth, A.L, & Quinn, P.D. (2009). Development and validation of the Short Grit
Scale(GritS). *Journal of Personality Assessment*, 91, 166-174.

Duckworth, A.L., Peterson, C., Matthews, M.D., & Kelly, D.R. (2007). Grit: Perseverance and
passion for long-term goals. *Journal of Personality and Social Psychology*, 9, 1087-1101.

Additional Resources:

The Career Decision Self-Efficacy Scale is only available for purchase due to copyright
restrictions with the assessment. The recommendation is to use the link below to access the
CDSE-S, as the short form of the assessment. The assessment includes 25 questions.

- CDSE- short for purchase – includes online administration and data
  analysis https://www.mindgarden.com/career-decision-self-efficacy-scale/434-cdse-short-transform-survey-hosting.html