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Strategies That Enhance Student Engagement in the Community College Learning Environment

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2018

Abstract

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MA, University of North Carolina at Chapel Hill, 2008

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

From 2012 to 2015, students' academic performance at a community college in North Carolina fell below North Carolina Community College System baseline benchmarks despite the institution's adoption of several student success initiatives. Building from the established correlation between student academic achievement and academic engagement and the importance of noncognitive competencies in moderating student academic engagement, this qualitative case study investigated the academic experiences of 7 students who were members of the Paying It Forward mentoring program to determine the types of support and resources that students needed to develop and hone intrinsic motivation, sense of belonging, and self-efficacy—the noncognitivenoncognitive competencies proven to most directly moderate academic engagement. The guiding frameworks included a student-engagement framework developed by the Chicago Consortium on School Research, the learner-centered curriculum framework, and the generalized internal/external model. The research questions focused on specific factors that facilitated students' development of intrinsic motivation, sense of belonging, and academic confidence. The findings identified relationships between student academic performance and academic engagement as moderated by these noncognitivenoncognitive competencies and supported previous research concerning the invaluable role of faculty in developing students' sense of belonging. A resulting professional development project may enable faculty to systematically bolster students' academic engagement and performance by directly supporting mastery of these noncognitivenoncognitive competencies. This project may contribute to social change through increased graduation and transfer rates, which would create opportunities for enhanced social capital.

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Dedication

Education, as the seed of social equity, demands a soil rich in nutrients and farmers experienced in cultivating a bountiful harvest. In such a copious and supportive environment, the system of education blossoms to provide for a variety of learning needs of increasingly diverse students. When sustained by a robust system of learning, students receive the support, encouragement, skills, and competencies needed to mature into and thrive as contributing global citizens. But as students and their learning needs transform, the process of education itself must likewise adapt or else education will lose its ability to inspire and empower students toward social mobility. To this end, this project is dedicated to the educators with the passion and desire to transform the process of education by doing the tough work to first transform themselves.

Acknowledgments

I am extremely blessed to have accomplished this great endeavor, and I am truly thankful to my Lord for calling me to and seeing me through this undertaking. I am also thankful for my dear family and friends who journeyed with me. Thank you, Caleb and Hannah, for being my daily inspiration. Your drive for excellence motivates me to be my best every day. Thank you, Chris, for your encouragement and support, which empowered me to complete my goal. Thank you, Mom and Dad, for cultivating in me the heart and passion for education and leadership. Thank you, Brenda, for opening the door.

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Section 1: The Problem

The Local Problem

At the local level, Small Rock Community College (a pseudonym for a community college located in North Carolina, hereafter abbreviated *SRCC*) continues to experience only marginal improvement in student academic performance despite the implementation of several successful student success initiatives. In fact, from Fall 2012 to Fall 2015, the academic performance measures that quantified students' academic achievement at SRCC, which included progression, course completion, retention, graduation, and transfer rates, fell below North Carolina Community College System (NCCCS)-mandated benchmarks for excellence across all performance measures and, in some cases, even dropped below baseline benchmarks. These academic performance trends are especially troublesome when one considers SRCC's minority male student population. For this student demographic, first-year progression rates declined from Fall 2012 to Fall 2015 to levels well below NCCCS baseline benchmarks, which coincided with lower grade point averages (GPAs), lower course completion rates, and lower graduation rates for the same academic years (NCCCS, 2016a). Data collected from the NCCCS Data on Demand portal for the 2012 – 2013, 2013 – 2014, and 2014 - 2015 academic years and data collected from the National Center for Education Statistics for the the 2012 – 2013, 2013 – 2014, and 2014 - 2015 provide evidence of the marginal improvement in student academic performance. Yet while student academic performance trends have deteriorated or remained marginally unaffected, students' participation in the college's student success initiatives have increased. In his recent report to the community

for 2015-2016, the SRCC president noted that among full-time equivalency (FTE) students, participation in the college's student success initiatives grew over 13% from 2014 to 2015. The president projected continued growth of 18% by the end of 2016. The absence of student success initiatives that tend to the noncognitivenoncognitive factors that affect student engagement, such as motivation, sense of belonging, and academic confidence, may be contributing to the depressed and unaffected trends in students' academic performance.

This local phenomenon surrounding student academic engagement and academic performance mirrors the disposition of higher education at the state and national level. Specifically, within the NCCCS, graduation and transfer rates have remained depressed. In 2010, the 6-year completion rate was 41% for those who entered in 2004 (Stancill, 2015), and by 2015, the graduation/transfer rate for the Fall 2012 cohort was 28.6%, with minority male students comprising a very small total of that percentage. In response to this decline, NCCCS established a new goal of 59% for students who enter in the fall to remain continuously enrolled, complete a credential, or transfer to a 4-year school (NCCCS, 2016a).

Retention, persistence, and graduation rates are not new topics of concern for colleges and universities, but the focus on student engagement as a contributing factor to students' performance in these areas is relatively fresh, specifically in terms of the noncognitive skills that moderate student engagement. In fact, as recent studies have found, student academic performance—measured by retention, persistence, and graduation rates—is a proxy for student academic engagement (Kahu, 2013). Thus, it

appears that the real dilemma facing institutional leaders has always been centered on student engagement. As community colleges uncover ways to fully engage their diverse student populations in the learning process, those institutions not only significantly and positively impact the academic achievement and social capital of students who attend community colleges, but also significantly and positively impact the potential academic achievement and social capital of these students as they matriculate and advance through 4-year institutions. In fact, as more students progress toward and attain bachelor's degrees via their successful matriculation through community colleges, more students gain access to greater social and economic equality afforded by associate's and then bachelor's degrees (Martin, Galentino, & Townsend, 2014; Price & Tovar, 2014).

Although community colleges in general have significantly improved their student body diversity by admitting more low-income, first-generation, single parent, and adult learners (American Association of Community Colleges, 2016) and by enrolling larger percentages of non-White students, students with varying levels of academic preparedness, and students with greater needs for academic support (Martin et al., 2014), many community colleges struggle to retain and graduate or transfer these nontraditional students. Further, some researchers have suspected that such extensive diversity among students attending community college contributes to the depressed retention and graduation rates that community colleges are experiencing (Babb, Browning, Womble, & Abdullat, 2014). Additionally, the easy enrollment process, a defining advantage of the community college system, affords many students access to higher education even though many may be underequipped to thrive in the higher education learning environment

(Kolodner, 2015). Recent data capturing the national performance trends of community colleges indicated that "only about 39% of students who enter the country's most accessible postsecondary institutions graduate within six years. A quarter of those who enroll in the fall don't come back in the spring" (Kolodner, 2015, para 1). Thus, it is not enough for community colleges to simply accept and enroll diverse student populations; these colleges must also engage their students in the learning process if these institutions are to effect significant improvements in retention, persistence, and graduation/transfer rates.

Figure 1 depicts trends in students' academic performance as it relates to student retention and compares SRCC's low retention rates for 2014 and 2015 (National Center for Education Statistics, 2016) to the state-mandated baseline benchmark of 54.1% (NCCCS, 2016a).

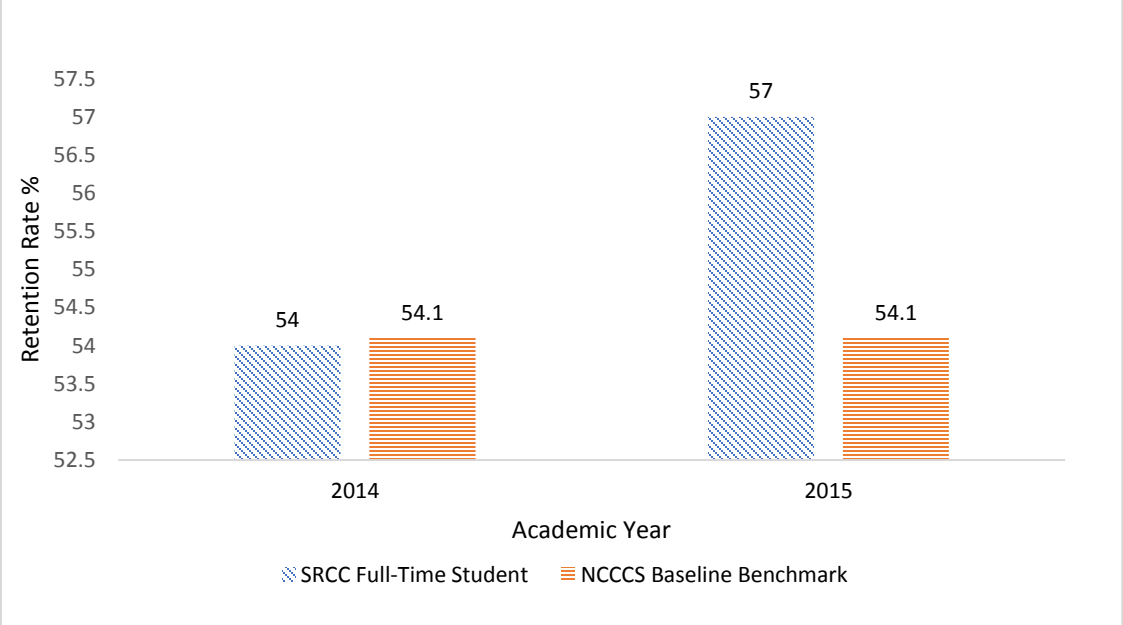

Figure 1. Comparison of SRCC retention rates with NCCCS baseline benchmarks. Data on SRCC retention rates and NCCCS baseline benchmark retention rates for first-time

full-time students for academic years 2014-2015 and 2015-2016 obtained from NCCCS Data on Demand.

Figure 2 depicts additional trends in students' academic performance as it relates to student progression and compares the steady decline of first-year students' academic progression from 2012 through 2014 to those declines in progression for minority male students at SRCC and against the state-mandated benchmarks for student progression (NCCCS, 2016a). These data are based on the percentage of first-time fall curriculum students attempting at least 12 hours within their first academic year who successfully complete those 12 hours with a grade of P, C, or better. As represented in Figure 2, there was a 9% decline from 2012 to 2014 for all students attempting at least 12 hours and passing those courses within their first academic year, and a 19% decline for minority male students in this same category. This data comparison further reveals diminished academic engagement among SRCC students, especially minority male students, as few students progressed into their second semester.

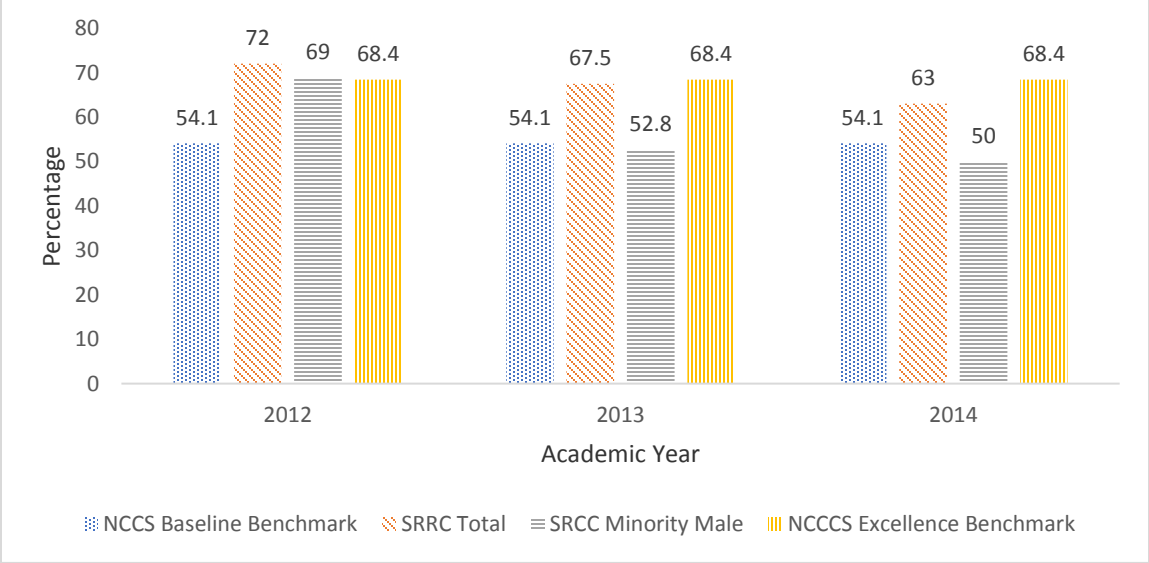

Figure 2. Comparison of first-year progression rates for total SRCC students and SRCC male minority students with NCCCS baseline and excellence benchmarks. Data obtained from NCCCS Data on Demand.

Additionally, performance data from SRCC's 2015 cohort (NCCCS, 2016b) suggested that the community college continued to fall below state-mandated baseline benchmarks for first-year progression among minority male students. Using the college's satisfactory academic progress (SAP) metric, which includes a minimum GPA of 2.0 and a minimum course completion rate of 67%, as an indicator of students' intent and ability to persist (Astin, 1993; Price & Tovar, 2014), only 32% of SRCC's minority male students in the 2015 cohort demonstrated the ability to graduate within 150% of normal time (NCCCS, 2016b).

Finally, although SRCC reported college transfer rates and curriculum completion rates much higher than the state-mandated baseline benchmarks—65.1% state mandated baseline for college transfer and 35.9% baseline for curriculum completion—the institution's college transfer rate and curriculum completion rate were significantly below the state-mandated benchmark for excellence—87.6% for college transfer and 51.9% for curriculum completion (NCCCS, 2016a). NCCCS defines college transfer as the percentage of students with an associate's degree or at least 30 articulated transfer credits or more credit hours who transfer to a 4-year university or college and earn a GPA of 2.25 or better after two consecutive semesters within the academic year at the transfer institution. NCCCS defines curriculum completion as graduation from a community college credential program before the sixth fall semester following a student's first semester or 150% of normal time. Figure 3 reflects the comparison between SRCC's transfer rate, the statewide baseline benchmark, and the statewide benchmark for

excellence. Figure 4 reflects the comparison of SRCC's curriculum completion rate as reported in 2016 for students attending the community college from 2014 to 2015 with the statewide baseline benchmark and the statewide benchmark for excellence.

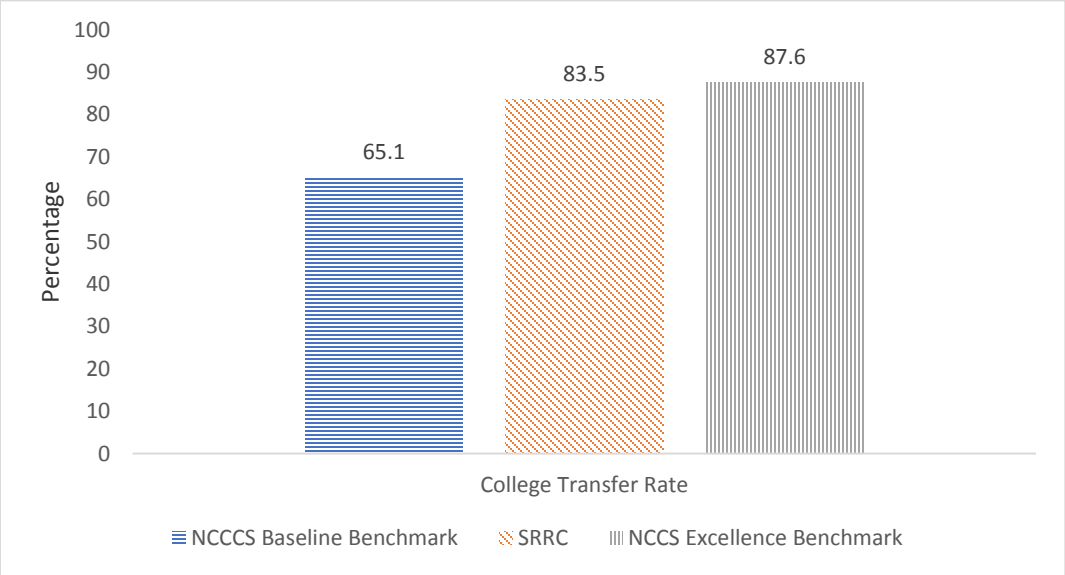

Figure 3. Comparison of 2014 SRCC college transfer rate with NCCCS baseline benchmark and NCCCS benchmark for excellence. Data taken from NCCCS Data on Demand.

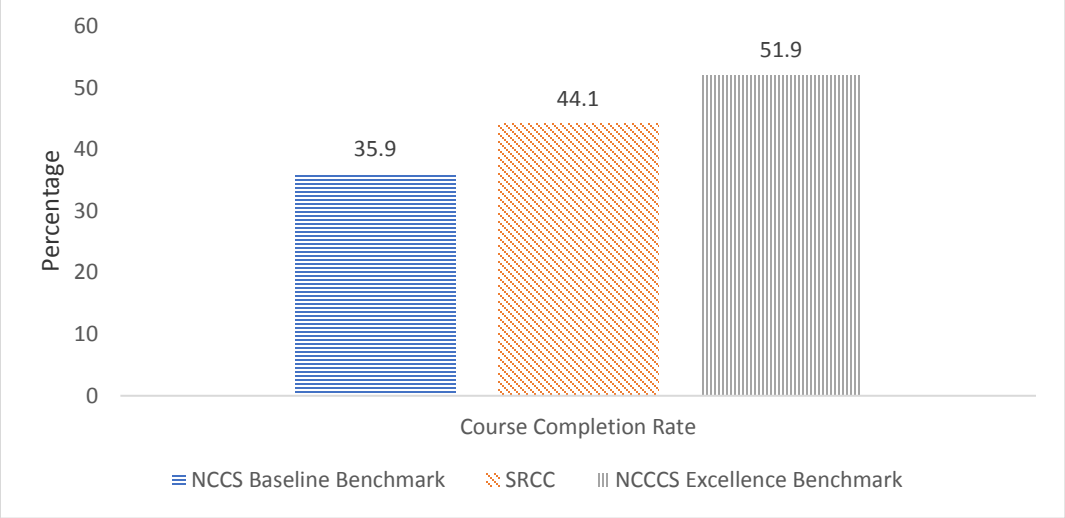

Figure 4. Comparison of 2014 SRCC course completion rate with NCCCS baseline benchmark and NCCCS benchmark for excellence. Data taken from NCCCS Data on Demand.

While the performance trends highlighted in Figure 1 through Figure 4 demonstrate declining and unaffected student academic performance across a variety of state-mandated performance metrics, these trends may speak to one consistent gap in practice at SRCC. Despite the several student success initiatives currently in place at SRCC, and despite the consistent, significant correlations prior research has uncovered between student academic performance and student academic engagement, none of these student success initiatives at SRCC has focused on developing in students the noncognitivenoncognitive factors of motivation, sense of belonging, and academic confidence that research indicates facilitate student academic engagement.

Rationale

A study conducted by the Community College Survey of Student Engagement (CCSSE) and National Survey of Student Engagement (NSSE) Institute examined best practices at 20 four-year colleges and universities with higher than predicted graduation rates (Kuh, Kinzie, Schuh, & Whitt, 2010) identified six prominent features of student engagement and persistence that institutional agents must be aware of when assessing strategies and tactics that enhance student engagement. Four of those features of student engagement—resolute focus on student learning; creating a special place for learning; students' incremental improvement toward master's; and shared responsibility of faculty, staff, and students for student learning—speak directly to the effectiveness of the noncognitivenoncognitive factors: student motivation, sense of belonging, and academic confidence (Babb et al., 2014; Musesu, 2014; Price & Tovar, 2014). But without such competencies, community college students—in particular, minority male students—

struggle to persist toward graduation and/or transfer. For example, it has been noted (Wood & Williams, 2013) that 11% of Black male students will leave community college after 1 academic year, with 48.9% leaving after 3 years and 83% leaving after 6 years, in each case without completing their desired degree.

Although recent research has identified significant relationships between students' academic performance and students' academic engagement (Booth et al., 2013; Conley, Kirsh, Dickson, & Bryant, 2014; Conley & French, 2014; D'Lima, Winsler, & Kitsantas, 2014; Ensign & Woods, 2014; Guiffrida, Lynch, Wall, & Abel, 2013; Hernandez, Schultz, Estrada, Woodcock, & Chance, 2013; Lawson & Lawson, 2013; Lopez, Nandagopal, Shavelson, Szu, & Penn, 2013; Nagaoka, Farrington, Roderick, Keyes, Johnson, & Beechum, 2013; Tinto, 1975; Wibrowski, Matthews, & Kitsantas, 2016; Zumbrunn, McKim, Buhs, & Hawley, 2014), and although recent research has found these noncognitive competencies to be extremely impactful antecedents for students' academic performance (Khine & Areepattamannil, 2016; Mega, Ronconi & DeBeni, 2013; O'Keeffe, 2014; Padgett, Keup, & Pascarella, 2013; Zumbrunn et al., 2014), as outlined in the report to the community for the 2015 – 2016 and the 2016 – 2017 academic years, institutional leaders at SRCC have only implemented student success initiatives that endeavor to improve the cognitive factors that affect student engagement: basic reading, speaking, writing, math, decision making, and critical thinking skills.

As part of a statewide response to the systematic deficiency of minority male students across all 58 community colleges, NCCCS administrators issued 3-year grants to 12 community colleges to design student success initiatives that would enhance minority

male student engagement and thereby strengthen these students' academic outcomes. At SRCC, the president elected to use portions of this funding to investigate minority male students' specific needs as they relate to the development and honing of the noncognitivenoncognitive skills that moderate student academic engagement and to use that insight to develop a mentoring program that includes mentor training for faculty and staff volunteers. However, recognizing that student engagement influences performance trends among all students, SRCC's president asked the Paying It Forward mentoring staff to widen the scope of their needs assessment to include all SRCC students (i.e., full-time and part-time degree-seeking as well as credential-seeking students.

Definition of Terms

The following terms are used throughout this project. The definitions provided are sourced from the literature review.

Metacognition refers to the inward aspect of thinking in terms of the student's ability to reason about his or her thinking and learning process (Livingston, 1997).

Cognition refers to the outward aspect of thinking in terms of the student's ability to reason about abstraction; ability to assimilate new information; and ability to accurately recall information from memory at a processing speed that coincides with the pace of the learning environment (Livingston, 1997).

Intrinsic motivation describes the effort that students devote to their academic pursuits in terms of their desire to work autonomously, to work toward competency, and to perform work that is related to their values and beliefs (Guiffrida et al., 2013; Lopez et al., 2013; Mega et al., 2013; Reid, Reynolds, & Perkins-Auman, 2014). All other sources

of motivation involve *extrinsic motivation*, meaning that students' efforts are stimulated by some external source (Guiffrida et al., 2013; Lopez et al., 2013; Mega et al., 2013; Reid et al., 2014).

Sense of belonging describes students' social presence in the learning environment and their ability to form meaningful relationships with their instructors and make meaningful connections with the institution as a result of their perceived social presence (Bauer, 2014; Booth et al., 2013; Flemming, 2012; Hostetter & Busch, 2013; Jenkins-Guarieri, Horne, Wallis, Rings, & Vaughan, 2014; Morrow & Ackerman, 2012; O'Keeffe, 2014).

Academic confidence refers to the student's belief in his or her ability to not only engage in academic activities, but also successfully matriculate through college and enter into a corresponding career field (Bandura, 1986; Feldman & Kubota, 2015; Komarraju & Nadler, 2013).

Student engagement, as defined by CCSSE and NSSE, is understood as the behavioral, psychological, and sociocultural approaches that students assume when interacting with the learning environment (Ensign & Woods, 2014; Lawson & Lawson, 2013; Kahu, 2016; Khine & Areepattamannil, 2016; Nagaoka et al., 2013; Zumbrunn et al., 2014).

Academic achievement equates to students' satisfactory academic progress (SAP) minimum standards established by the state. Students with a 2.0 GPA and a 67% course completion rate meet SAP (NCCCS, 2016b).

Significance of the Study

This study produced several significant short-term and long-term outcomes that may significantly impact students attending SRCC, SRCC itself, and the state community college system as whole. Through an in-depth evaluative assessment of students' needs as they relate to the development of students' noncognitive competencies, this study uncovered critical insights about areas of support and resourcing for which the community college has thus far failed to provide. In the long-term, this study's tailored approach to students' needs may enable leadership to develop high-impact practices and policies that enable SRCC's students to perform better in the classroom with the motivation and confidence needed to persist from one semester to the next, which may ultimately lead to enhanced student achievement, student persistence, and student rates of transfer to 4-year institutions (Harper, 2014; Wood & Ireland, 2014; Wood & Newman, 2015). These long-term outcomes may also specifically address the depressed graduation and transfer rates experienced by minority male students, who report lack of engagement as a reason for abandoning their academic and career pursuits (Booth et al., 2013; McCormick, Kinzie, & Gonyea, 2013). As student performance improves, SRCC's performance measurements may likewise improve, bringing the college into closer alignment with state benchmarks of institutional success. Finally, in the long term, successful high-impact strategies that improve students' engagement may also lead to increased social capital for students, which has been noted to be a critical by-product of higher education degree attainment (Martin et al., 2014, Price & Tovar, 2014). According to a recent report from the National Student Clearinghouse (NSC), nearly half

(46%) of all students who completed a degree at a 4-year institution in 2013-2014 had enrolled at a 2-year institution at some point in the previous 10 years (The College Board, 2015). Because many students attending community colleges are students of color and are of low socioeconomic status, community colleges are uniquely positioned to positively contribute to social change by helping marginalized individuals attain greater social capital through the attainment of associate's and then bachelor's degrees.

Research Questions

The research questions explored students' perceptions of the noncognitive competencies that influence student engagement and the supports and resources they perceived as necessary to develop and hone these competencies. Although the institution previously attempted to gain such insight by conducting enrollment interviews with students participating in the Paying It Forward mentoring program, those survey questions only gathered general information concerning students' academic profile and students' expectations and desires regarding their mentee needs. Thus, to gain deeper insight about effective strategies as they relate to enhancing student engagement, the questions for this study probed students about the specific factors that facilitate students' development and honing of the noncognitive competencies that students need to engage in the learning environment and learning process.

1. Based on students' perceptions, what services and resources do SRCC students need to strengthen the noncognitive skills specific to motivation that facilitate student engagement in an active learning environment?

2. Based on students' perceptions, what services and resources do SRCC students need to strengthen the noncognitivenoncognitivenoncognitive skills specific to sense of belonging that facilitate student engagement in an active learning environment?
3. Based on students' perceptions, what services and resources do SRCC students need to strengthen the noncognitivenoncognitive skills specific to academic confidence that facilitate student engagement in an active learning environment?
4. What differences in services and resources do male students of color need to strengthen the noncognitivenoncognitive skills of motivation, sense of belonging, and academic confidence as compared to students from differing racial and ethnic backgrounds?

Review of the Literature

Conceptual Framework

This study investigated strategies that enhance student engagement in the community college learning environment through the lens of three interrelated conceptual frameworks: a student-engagement framework developed by the Chicago Consortium on School Research (CCSR), the general internal/external model, and the learner-centered conceptual framework (LCCF).

The CCSR provides a well-developed framework of the noncognitive factors that moderate students' engagement in the learning environment. The CCSR brought together hundreds of studies of the factors that influence academic success and identified

motivation, sense of belonging, and academic confidence as academic mindsets that moderate students' social skills, academic perseverance, and learning strategies—competencies that directly correspond to the attributes required to engage and perform in a learner-centered learning environment (Kahu, 2016; Khine & Areepattamannil, 2016; Lawson & Lawson, 2013; Nagaoka et al., 2013; Zumbrunn et al., 2014). Consequently, these most influential noncognitive factors identified by the CCSR—motivation, sense of belonging, and academic confidence—directed this investigation and drove the focus of the research questions.

Specific areas of motivation perceived to have significant impact on student engagement include self-awareness and autonomy, self-regulation, beliefs about competency (Guiffrida et al., 2013; Lopez et al., 2013; Mega et al., 2013; Reid et al., 2014), perceptions regarding effort and opportunity costs, as well as perceptions regarding the learning environment (Conley & French, 2014; D'Lima et al., 2014; Hernandez et al., 2013; Lopez et al., 2013; Nora & Crisp, 2007; Padgett et al., 2013). Specific areas of belonging perceived to have significant impact on student engagement include students' perceptions of their social presence, being validated and understood, and experiencing positive emotions associated with the learning process (Bauer, 2014; Booth et al., 2013; Flemming, 2012; Hostetter & Busch, 2013; Jenkins-Guarieri et al., 2014; Morrow & Ackerman, 2012; O'Keeffe, 2014). Specific areas of academic confidence perceived to have a significant impact on student engagement include self-confidence and hope (Bandura, 1986; Feldman & Kubota, 2015; Komarraju & Nadler, 2013). Although these noncognitive factors—motivation, sense of belonging, and

academic confidence—do not function in a linear fashion, investigating each factor in respect to the others provides the most logical means for gathering data concerning the complex operation of the noncognitive factors that moderate students' academic behavior (Kahu, 2013; O'Keeffe, 2014).

Student engagement also encompasses students' perceptions—their perceptions about themselves as learners, their perceptions about the value of learning, and their perceptions about the institutional environment and the supports offered by the institution to reinforce students' efforts toward learning and developing (McCormick et al., 2013). Arens and Moller's (2013) generalized internal/external model (GI/E) justifies the reciprocity between students' self-conceptions of their noncognitive skills and students' academic behavior, and it validates the study's emphasis on obtaining students' perspectives. Students' perceptions, which comprise students' attitudes toward learning, beliefs about themselves as learners, and expectations about the learning environment, moderate students' receptivity to learning and, in turn, their academic behavior (Bean & Eaton, 2000; McCormick et al., 2013; Wang, Han, & Yang, 2015). For example, nationally, three quarters of remedial math students eventually abandon their degree pursuits because they do not believe that they are smart enough to excel in math (Silva & White, 2013). These negative perceptions that undermine students' persistence can be ameliorated by the way that institutions respond to the noncognitive components of learning and through the types of supports and resources that institutions provide to their students (Booth et. al, 2013; McCormick et al., 2013; Nagaoka et al., 2013; Silva & White, 2013; Wood & Treland, 2014). Consequently, each research question in this

study addressed the resources and services needed to hone students' noncognitive skills by probing students' unique viewpoints. The learner-centered curriculum framework (LCCF) provides the context for investigating the interaction among these characteristics that define an active, learner-centered learning environment and the noncognitive factors that students must possess to succeed in this environment (Jessup-Anger, 2011; Padgett et al., 2013). As such, each research question involved students' perceptions about the vital noncognitive factors, specifically through the lens of an active, learner-centered learning environment.

The LCCF converges the complexities of the learning environment, the institution's role in the learning process, and the students' role in the learning process into seven interlocking constructs (Dolence, 2014):

- Learner populations
- Learner objectives
- Learning provider models
- Learning theory and methods
- Curriculum architecture
- Curriculum configuration
- Learner support services

As community college leaders consider their learner populations, which include students with increasingly diverse socioeconomic backgrounds and a wide variety of academic preparedness levels (Gershenfeld, 2014; Stebleton & Soria, 2014); the learner's objective (or motivation) for learning; and the model, theories and methods, and

curriculum architecture that shape the community college learning environment, then those leaders will be better positioned to configure curriculum and design support services that will develop in students the noncognitive competencies needed to keep them from disengaging from the learning environment (Bettinger, Boatman, & Long, 2013, Mangan, 2013) and abandoning their educational goals altogether.

The Broader Problem Surrounding Student Engagement

The review of literature includes studies that explored the impact of motivation, sense of belonging, and academic confidence on students' academic engagement, particularly in an active, learner-centered learning environment. Included in the literature search were studies that characterized the complexity of these noncognitive factors and studies that described the entangled relationship between students' mastery of these noncognitivenoncognitive competencies, their academic mindset, and their academic performance. Finally, the literature search involved the pursuit of an appropriate framework to explore the phenomenon of student engagement within the community college learning environment.

In the literature review, the focus was on the overall problem of student retention and graduation rates, specifically among community college students, and on the relationship between student academic performance and student academic engagement in an active learner-centered learning environment. Search terms included the following: *learner-centered learning*, *student engagement*, *motivation*, *sense of belonging*, *academic confidence*, *factors that influence academic performance trends*, and *students' perception of their academic performance*. I have organized the literature review by first providing

a description of the community college learning environment; then offering a characterization of the noncognitive competencies of motivation, sense of belonging, and academic confidence; and finally explaining the role that these competencies play in facilitating student academic engagement.

While community colleges in general have significantly improved their student body diversity by admitting more low-income, first-generation, single parent, and adult learners (American Association of Community Colleges, 2016), many institutions struggle to retain and graduate or transfer these non-traditional students. In fact, data from a 2015 study of trends in community college enrollment and completion data reported that only 57% of community college students graduated within the 6-year federal benchmark, also described as 150% of normal time. In response to these student performance trends and evidence that demonstrates significant relationships between students' academic success and students' academic engagement (Astin, 1993; Kuh, 2008; McCormick et al., 2013; Price & Tovar, 2014), higher education leaders have begun to explore the strategies that most directly enhance students' ability to make meaningful connections to the learning process and the learning environment. However, a review of literature reveals an exceptionally complex relationship between the active learning environment and the factors that moderate student engagement such as intrinsic motivation, sense of belonging, and academic confidence (Burkly, 2010; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008; Kuh et al., 2007; Kuh et al., 2008; McCormick et al., 2013; Pietarinen, Soini, & Phyalto, 2014), supporting a dynamic rendering of that relationship of engagement factors based on students' diversity (Kahu, 2013; O'Keeffe,

2014; Wang et al., 2015). Thus, as the emphasis on student engagement within higher education grows, determining best practices and identifying appropriate resources becomes of primary importance for community college leaders who endeavor to successfully retain and graduate or transfer students within prescribed benchmarks.

The Learner-Centered Learning Environment

The learner-centered paradigm involves an active educational environment that encourages students to engage with learning by connecting academic subject matter to their personal lives and thereby achieving greater self-awareness and academic knowledge (Jessup-Anger, 2011; Kogan & Laursen, 20140). The learning environment that fully employs students in this way embraces the following principles (O'Banion, 2009):

- Creating substantive change in individual learners.
- Engaging learners as full partners in the learning process, with learners assuming primary responsibility for their own choices.
- Offering as many options for learning as possible.
- Assisting learners in forming and participating in collaborative learning activities.
- Involving instructors as learning facilitators based on the needs of the learners.
- Defining success as occurring only when improved and expanded learning can be documented for learners.

Additional elements of the learner-centered environment include activities such as small group work, student presentation of problem-solving exercises, and whole-class discussions.

Finally, the NSSE identified five benchmarks of effective educational practices that detail for students and institutional leaders the types of behavior and interactions necessary to create a learner-centered learning experience (Ensign & Woods, 2014; Musesu, 2014):

- Work that is challenging and creative, for which there are high expectations for student performance.
- Learning that involves students in their education and that asks them to think about and apply what they are learning to different real-world problems.
- Faculty who, as mentors, model how to think about and solve career-specific problems; faculty who use the learning environment to model professionalism.
- Activities that extend learning beyond the classroom and that embrace cultural diversity.
- Faculty who, as mentors, help students to develop a sense of belonging and help students to solve problems involving external pressures that hinder learning.

This characterization of the learner-centered environment emphasizes not only the cognitive skills that students need to engage in learning activities, but also the noncognitivenoncognitive skills that students need to accomplish learning objectives. As outlined by the NSSE, students and institutional agents make decisions about ways to

marry the instruction of skill with the instruction of new content, thereby allowing students to assume some control over what they learn, how they learn it, and at what pace they learn it. Such collaboration, however, requires institutional agents to partner with students to acculturate students into the learning environment. When administrators, faculty, staff, and students demonstrate flexibility, demonstrate transparent compromise, and demonstrate a willingness to likewise be changed by their engagement with one another and the learning environment (Cornelius-White, 2007; McGowan & Partridge, 2014), the resulting personal involvement of both institutional agents and students in the learning process affords students an opportunity to make deep, meaningful connections with the prescribed course content and thereby obtain the type of long-term learning that leads to enhanced academic performance (Wimmer, 2013).

In short, learner-centered learning that facilitates this type of transformative development in students requires students to assume greater responsibility for their learning as they take on increasingly active roles in the learning process, and this type of learning requires students to be vulnerable and curious. For example, students who possess a strong motivation and drive, who possess a desire to achieve goals, who possess a belief in their own capacity for success, who possess the ability to reflect on their learning strategies, and who possess a willingness to persist in the face of obstacles likewise possess the skills to overcome purposefully designed academic hurdles to obtain the type of deep learning that leads to academic success (Conley & French, 2014; Kahu, 2015; Logan & Laursen, 2014; Mega et al., 2013; Nagaoka et al., 2013; Padgett et al., 2013).

Motivation and Student Engagement

Motivation has been determined to be the catalyst for student engagement within a learner-centered environment. In fact, data collected from a longitudinal study involving 48 colleges and universities found that students' participation in a hot cognitive learning environment corresponded to students' desire to mindfully seek out an active learning experience (Padgett et al., 2013). Therefore, when determining ways to enhance student engagement and thereby improve student persistence and student performance, it seems prudent to examine the factors that foster the type of motivation that students need to engage in the learner-centered environment. One approach to considering motivation relies upon self-determination theory (SDT; Deci & Ryan, 1991), which defines motivation in binary terms as either intrinsic or extrinsic and relates each of these terms to the student's psychological well-being. Intrinsic motivation—composed of *autonomy* (students choose to engage in learning as they perceive a connection to their interests and values), *competence* (students' confidence in and desire to test their abilities), and *relatedness* (students' need to form close relationships with others)—requires a high degree of self-awareness and psychological well-being, and as such is thought to be the type of motivation necessary for academic achievement and persistence (Guiffida, Lynch, Wall, & Able, 2013).

Additional research regarding motivation has further characterized intrinsic and extrinsic motivation in terms of an individual's goal orientation (D'Lima et al., 2014; Hernandez et al., 2013). Students who endeavor to do well and persist because they seek to outperform their peers and gain positive judgements of their mastery have *performance*

goal orientation and are thus extrinsically motivated. Students who have *performance-avoidance goal orientation* are also characterized as extrinsically motivated; however, these students are primarily motivated by not looking inferior to their peers while also not expending much effort for fear of failure. Only students who have *mastery goal orientation* possess intrinsic motivation. Students with *mastery goal orientation* set goals to increase their skills and competencies and to master and learn new materials. Within the community college setting, goal orientation and motivation can have significant impact on students' graduation and transfer rates. As noted by Wang et al. (2015), community college students in general have about 60% lower expectations of educational goal attainment than baccalaureate students at 4-year institutions. Moreover, students from low-income families and underrepresented minority groups comprise a significant portion of community colleges' student populations (Kolodner, 2015; Martin et al., 2014), and students tend to experience a "cooling-out process" whereby their educational goal orientation wanes. The ability that mastery-goal-oriented students have to set and achieve goals speaks to the importance of self-regulated learning as a crucial ingredient of intrinsic motivation (Wibrowski et al., 2016). As these students become self-reflective learners who readily and willingly adopt new learning approaches such as metacognitive and peer learning strategies (Lopex, Nandagopal, Shavelson, Szu, & Penn, 2013), they likewise improve their engagement in hot cognitive learning environments (Padgett et al., 2013).

Another way to define motivation and explore the impact of motivation on student engagement relates to students' self-awareness, personal commitments, and sacrifice. In

this framework, motivation is associated with individuals' identity development and the resulting ability to make psychological commitments as a result of their prior personal experiences exploring themselves (Perez, Crompley & Kaplan, 2014). Students with the *achieved individuals identify development* classification have had ample prior opportunities for self-exploration and are consequently capable of making psychological commitments to their academic pursuits. Students with *moratorium identity development* require more time to engage in meaningful personal exploration before committing to the pursuit of a degree and students with *diffuse identity development* need to have their anxiety from their lives removed in order to embark on meaningful exploration of their personal lives. Each of these identify development orientations describes how students reflect on the demands of the learning process and make decisions to either persist towards their learning goals or abandon their learning goals based on the perceived notion of the personal cost associated with those demands. For example, *achieved* students in pursuit of a college degree in a career field that aligns with their values is more likely to have a positive attitude regarding their competency and their ability to overcome the demands of the learning environment. *Achieved* students' perception of low personal cost conflicts with the feeling of high personal cost experienced by students with *moratorium* or *diffuse* identity development. For students with *moratorium* or *diffuse* identity development, the demands of the college classroom seem too high given their external anxieties or the limited time exploring themselves (Gonzalez-Moreno, 2012). Such impaired emotional intelligence likewise hinders students from assuming ownership of their learning as they progress towards their academic goals (Conley &

French, 2014) and diminishes their desire to achieve their academic goals (Hernandez et al., 2013). Worse of all, the impaired emotional intelligence causes students to doubt their belief in their capacity for success (Hernandez et al., 2013). Thus, without a clearly defined purpose, a clearly defined sense of self, many students struggle to make stable commitments to the academic goals to which they have committed and work autonomously towards those goals. In fact, research has found that students' negative emotions of frustration, shame, and anxiety can result in superficial approaches to learning and that students' negative emotions of anger and boredom most directly link detrimental student behavior such as avoiding tasks and avoiding meaningful engagement (Booth et al., 2013; Mega et al., 2013; Trigwell, Ellis, & Han, 2012). Conversely, students' positive emotions of hope and pride-encourage students to engage in the learning process. Strategies that enable students to understand course expectations and their individual learning process can foster these positive emotions, thereby enhancing students' motivation (Lopez et al. 2013).

Sense of Belonging and Student Engagement

Sense of belonging describes students' personal connection to the learning environment. Particularly, students' relationship with their peers and institutional agents as well as students' social presence within those relationships have the most significant impact on students' sense of belonging. Students' motivation—their internal desire to pursue their educational goals—positively influences the type of personal relationships they engage in within the learning environment. Social presence refers to the degree to which a student feels his or her *real* self to be present in mediated communications

(Hostetter & Busch, 2013). When students feel socially connected to the learning environment in real ways, they are more likely to dedicate more effort to assignments, which in turn causes them to perform better. O'Keeffe (2014) explored the various relationships students have with others in the learning environment and the impact of those relationships on students' academic performance and persistence. For example, students who attended college to establish relationships with peers had lower GPA's than students who attended college solely to establish relationships with instructors. On the other hand, students' meaningful relationships with faculty seemed a critical component of students' ability to develop a sense of belonging with their institution. Meaningful relationships with peers also appeared to positively impact students intention to persist (Morrow & Ackerman, 2012). However, the study found that those relationships with peers must be a by-product of academic achievement (study groups for example), not the primary purpose for attending college, for those relationships to have the same positive impact as students' meaningful relationships with faculty.

Although current research on the noncognitive factors of student engagement only allows for inferences about the correlation between student emotional intelligence and student academic engagement and performance (Wang, Wilhite, Wyatt, Young, & Bloemker, 2012), the insight gleaned from these studies can be useful in refining the way administrators, faculty, and staff approach interactions with students and the type of experiences institutional agents design to cultivate engaging, meaningful learning. Students' depictions of a supportive learning experiences were characterized by students' perceptions of instructors who made investments in students; instructors who set a tone of

social support by ensuring all students were equally included in learning activities; instructors who respected students; and instructors who were available, flexible, and approachable (Flemming, 2012; Jenkins-Guarnieri et al., 2014). Additionally, other studies that examined the impact of validation in bolstering student engagement found that faculty, staff and administrators who showed a sincere desire to teach students and a sincere desire to foster in students self-confidence as a learner, who were approachable, and who treated students equally by providing the same opportunities and guidance lead to feelings of validation among non-traditional students, such as first generation students and students of color (Barnett, 2011; Bauer, 2014; Booth, 2013). As a result of instructors' support, validation, and encouragement (Hostetter & Busch, 2013; Wood, Hilton, & Hicks, 2014), students tended to report greater belonging, greater academic confidence, increased academic engagement, and greater social capital (Bauer, 2014; Tovar, 2014), which then lead to reports of higher academic confidence and higher engagement in the classroom. Finally, it is important to note that in many cases, the type of positive and meaningful interactions with faculty, as described by students, happened outside the classroom (Lundber, 2014). Thus, supportive learning environments that are the by-product of productive faculty-student relationships play a critical role in facilitating the emotional and psychological competencies that enhance student engagement (Zumbrunn et al., 2014).

Students' Self-Concept That Moderates Student Engagement

As mentioned in the above analysis regarding sense of belonging, students' self-concept as a competent learner also moderates their ability to engage in the learning

environment (Bandura, 1986). The academic academic confidence, or the confidence students have for learning (Komarraju & Nadler, 2013), consists equally of hope and expectation (Feldman & Kubota, 2015). As students' plan for goals and purposefully pursue them based on a reciprocity-derived sense of successful agency (Feldman & Kubota, 2015), their persistence and effort increases, which in turn leads to a higher GPA (Bandura, 1986; Feldman & Kubota, 2015; Garza, Bain, & Kupczynski, 2014; Komarraju & Dial, 2014; Komarraju & Nadler, 2013). This multidimensional construct of academic confidence illuminates the intersection between academic confidence and motivation respectively academic confidence and sense of belonging.

In both cases, students' academic confidence acts as a predictor of motivation and sense of belonging. Students with increased academic confidence tend to take greater responsibility for learning and tend to display greater self-control and work ethic while striving towards their educational goals (Komarraju & Nadler, 2013; Pajares, 1996; Zimmerman & Kitsantas, 2005). These behaviors, which characterize students as possessing high academic confidence, serve as the catalysts for those behaviors associated with intrinsic motivation. Students with intrinsic motivation value autonomy and thus require the self-confidence to take greater responsibility for learning. Students with intrinsic motivation also value mastery and thus require the self-regulation and self-evaluative skills to constantly improve. Further, students with increased academic confidence tend to feel relevant in the learning environment and their identity as a capable learner becomes congruent with the academic identity of the institution (Komarraju & Dial, 2014; Oysterman & Destin, 2010). The positive emotions reported

by students with high academic confidence not only corresponds to students positive perceptions of the learning environment but also corresponds to decreased perceptions about educational barriers that thwart the attainment of their academic goals (Gloria, Castellanos, Lopez, & Rosales, 2005). Bean's Student Attrition Model (1981), which focused on non-traditional students, formalizes the relationship between students' academic confidence and students' sense of belonging and remains relevant when considering factors that influence students' persistence and academic performance. More important to this study, Bean's model has been recently used to emphasize the correlation between academic confidence and sense of belonging and their resulting impact on community college students' engagement (Davidson & Wilson, 2016).

But just as students' positive self-concepts positively enhance students' academic engagement, students' negative self-concepts negatively influence students' ability to participate in the learning process. As a result of their investigation of Marsh's (1986) original internal/external (I/E) frame of reference model, which found correlations between students' self-concepts in math and language class and their actual academic achievement in those classes, Arens and Moller (2016) produced a generalized internal/external model (GI/E) that expanded this traditional correlation beyond the classroom to include students' academic environment. Earlier studies conducted by Owston, York, and Murtha (2013) and Kearney and Perkins (2011) supports Arens and Moller's GI/E framework and specifically identified students' perception of learning supports and policies and students' active involvement in crafting the learning environment as environmental factors that influence students' perception of the learning

environment. Thus, in recognizing the invaluable role students' self-concepts play in bolstering their academic engagement, this study seeks to investigate strategizes for enhancing student engagement by probing students to ascertain their individual needs based on their perception of themselves as learners within the RCC learning environment. Further, by giving students a voice to describe their needs, this study affords students a truly collaborative role in shaping the student success resources and policies developed by RCC leadership.

Implications

The retention, persistence, and graduation dilemma that this study responds to is not merely an issue plaguing this particular community college. Rather, this dilemma is a concern that higher education as a whole must wrestle with and resolve. With a college degree comes access to higher wages, improved living conditions, and the appropriation of social justice and equity (Brennan & Naidoo, 2008). My study directly responds to this educational and social dilemma by seeking to identify the supports and resources students contend they need to develop and hone the noncognitive factors that moderate academic engagement. Specifically, when seeking to enhance student engagement by understanding how to motivate students, how to foster their connection with the college, and how to enhance their academic confidence, the students themselves must be queried and these finding must be used to inform and transform institutional agents' approach to educating students. Yet the review of literature and my discussions with campus administrative leaders indicated that such an approach to improving student success has not been taken. Additionally, when tending to the issue of student engagement and the

impact on student retention and graduation, higher education leaders need to be more cognizant to develop in themselves the competencies that enable them to appropriately tend to the unique and varied differences that students bring to the learning environment. Students come to college not only with different ethnic and racial backgrounds, but also with different language backgrounds, geopolitical orientations, faiths, and educational experiences (Smith, 2009). Although institutional agents are well versed in developing and honing in their students' critical thinking skills, academic development skills, and leadership skills needed to engage in the dynamic global workforce to which colleges and universities aspire to send their graduates, administrators, faculty, and staff may need to expand upon these traditional competencies to better meet the needs of their students. As community colleges uncover ways to fully engage their diverse student populations in the learning process, those institutions not only significantly impact the academic achievement and social capital of students who attend community colleges, but these institutions also significantly impact the potential academic achievement and social capital of these students as they matriculate and advance through four-year institutions. In fact, as more students progress towards and attain the Bachelor's degree via their successful matriculation through community colleges, more students gain access to greater social and economic equality afforded by the Associates and then Bachelor's degree.

Consequently, the results of this study not only uncovered the perceptions of students as it relates to the areas of unmet needs in developing in students the noncognitive competencies that moderate student engagement, but the results also formed

the framework on which the professional development curriculum was grounded. Finally, as is the goal of the state-sponsored grant, the study created a replicable process by which other community colleges can efficiently and effectively assess and respond to their students' unique needs and thereby enhance student engagement across the state.

Summary

In the first section of this project study, I described how the transforming characterization of the higher education environment likewise requires a transformation of students—most notably for students to assume more responsibility for their learning and to engage in their learning in more meaningful ways. Yet students may not arrive at college with the academic skills and noncognitive competencies needed to thrive in this more dynamic and demanding atmosphere. As such, administrators, faculty, and staff may need to develop an awareness not only of ways to foster students' academic development, leadership development, and critical thinking skills but also ways to foster in students the competencies that lead to the development of intrinsic motivation, a sense of belonging and enhanced academic confidence—noncognitive competencies that moderate students' academic engagement. Exploring students' needs as it relates to the development of these competencies is a necessary response to addressing student persistence and retention for several reasons. While the literature review demonstrates the critical role these noncognitive competencies play in moderating students' academic engagement, there is a consensus among educators and researchers that more must be done to determine the most effective and efficient ways to cultivate these competencies in students.

In the second section, I will explain why the qualitative case study design offers the most effective means of investigating perceptions about engagement. I will also describe the methods for selecting participants, collecting and analyzing the data, the results of the data, and the methods I took to ensure credibility and accuracy in my data collection and data analysis.

Section 2: The Methodology

Research Design and Approach

A qualitative case study design was used to investigate the various challenges and hurdles that students at SRCC experience as they endeavor to engage in the learning environment. The qualitative methodology derived most logically from the research problem and research questions and the frameworks that inform the investigation of student engagement. First, a qualitative case study design supported the GI/E framework, which emphasizes the student's perspective and the need for collaboration with the student when institutional agents endeavor to provide student support initiatives that effectively respond to students' unique academic needs. A qualitative design also supported the investigation of the noncognitive competencies that mitigate student engagement through the CCSR framework because qualitative research seeks to build understanding by analyzing a social phenomenon—in this case, student engagement in the learning environment—at its most basic level, which is the student and the student's academic performance (Merriam, 2009).

Of the various qualitative designs, critical case study offered the most efficient means of investigating the social phenomenon of student engagement because of its ability to strategically identify cases. Using this design, I explored the phenomenon within its real-life context to capture the diverse experiences of SRCC students, which were not readily evident, and to classify key themes that describe students' ownership of the noncognitive factors that moderate student engagement in the learning process (Bogdan & Biklen, 2007; Creswell, 2012; Flyberrg, 2010; Yin, 2008).

Critical case study was also the most logical design because it emphasized discovery, insight, and interpretation of students' experiences (Merriam, 2009), activities that provided SRCC leadership with the knowledge needed to design student success initiatives that appropriately respond to students' development and mastery of the noncognitivenoncognitive factors that moderate academic engagement. The data gathered from student interviews produced insight about student engagement through previously unexplored sources of information—the students themselves.

Finally, the tradition of qualitative case study supported using this approach for my investigation of the supports and resources that students needed to develop and hone the vital noncognitive competencies that moderate student engagement. The emphasis on the social aspect of the educational phenomenon dates back to Waller's foundational *Sociology of Teaching* (1961), which "relied upon in-depth interviews, life histories, participant observation, case records, diaries, letters, and other personal documents to describe the social world of teachers and their students" (Bogdan & Biklen, 2007, p. 33). Although qualitative studies did not gain footing within education until the 1960s, when federal agencies realized how little they knew about why schools for children were struggling and became interested in investigating students' experiences in school, today researchers and policy makers recognize the need for the type of context-dependent knowledge and experience that case studies provide. Only through experience with cases can leaders within education move from a rudimentary understanding of the phenomenon to the level of expertise required for programming and policy making (Flyberrg, 2010).

Although other qualitative designs, such as ethnography and narrative, might also appear to be options for effectively probing the research problem in response to the research questions, these designs would have created significant difficulties when gathering data in the field, and these designs would have clouded my vision of the identified research problem. First, this study needed to be bounded by time and location because I was only granted limited access to participants, and both ethnography and narrative studies require a lot of time immersed in the field interacting with participants in a variety of settings. Additionally, an ethnographic design would invariably have shifted the focus of the study toward the impact of students' cultural intersectionality on their development of the noncognitive competencies that moderate student engagement, and a narrative design would have limited the focus of the study by excluding faculty members' perceptions of students' deficiencies and needs in the learning environment (Creswell, 2009). Thus, the critical case study design offered the best approach given the type of data that I sought to gather and the field limitations that I had to navigate.

Likewise, a quantitative design would not have been appropriate to address the research problem. At this early stage of in the inquiry process, there was not yet enough insight about student engagement and the noncognitive competencies that moderate engagement to develop and test a hypothesis, to look at cause-and-effect relationships, or to make predictions about best practices and best policies that might enhance student engagement at SRCC (Lodico, Spaulding, & Voegtle, 2010). However, after gaining sufficient understanding about students' needs related to the noncognitive competencies

that moderate engagement, a quantitative design could be useful in uncovering which approaches have the most positive impact in terms of enhancing students' engagement and academic success.

Participants

As this study used the critical case study method to investigate the phenomenon of students' needs related to the noncognitive competencies that moderate their engagement, this study used purposeful sampling. Because the average case does not provide the richest source of information, and because I needed to obtain the greatest possible amount of information given my limited access to the field, I only selected participants who, through their voluntary engagement in SRCC's Paying It Forward mentoring program, expressed an earnest desire to receive resources and supports designed to improve their performance in the classroom. I also limited my focus to participants in the mentoring program because I expected that these students might be more willing to share their experiences about their learning and to comment on their needs as learners through the type of rich, in-depth details required of a qualitative case study. However, students with documented learning disabilities were not included in this study.

Additionally, because this was a critical case study, choosing fewer cases afforded me more time with each participant to delve deeply into the participant's understanding of the noncognitive competencies that moderate student engagement and the types of supports and resources that they perceived would most likely enable them to develop and hone those competencies. As such, I interviewed seven students who were formally

enrolled as mentees in the mentoring program, and each interview lasted approximately 50 to 60 minutes. While I did not formally capture data concerning students' ethnicity, gender, or age, I did continue to solicit for participants to ensure that I included minority male participants, students of varying ages, and a balanced representation of male- and female-identified students. This process of selecting participants ensured that I gathered data from diverse student perspectives. Finally, although my sample size was smaller than I planned, the repetitive responses to interview questions provided by the seven participants I did interview confirmed that I achieved saturation.

Student 1 was finishing his semester at SRCC after recently graduating from high school. He was anticipating earning a 2.3 GPA based on two Cs and one B. Student 1 hoped to transfer to a 4-year institution after obtaining his associate's degree.

Student 2 was also finishing his first semester when interviewed and had also recently graduated from high school. His anticipated GPA was not as good as he wanted, but he felt confident that in the semesters to come, he would earn higher end-of-course grades. Student 2 was focused on launching his career in computer science by transferring to a 4-year institution and obtaining a bachelor's degree in computer science.

Student 3 was a recently returning student who took a break to work and reassess his future goals. As the youngest of four children, Student 3 had witnessed his siblings' financial struggles from not having obtained higher education degrees, and he was committed to completing his associate's degree and obtaining a salaried position in computer science. Student 3 had a 2.1 GPA when interviewed.

Student 4 was an older student who had entered SRCC several years after graduating from high school. She was balancing the internal demands of her academic responsibilities with the external demands of raising young children. Student 4 explicitly described her desire for financial stability and a comfortable lifestyle as her motivation for obtaining an advanced degree and securing a salaried position. Student 4 had a 3.64 GPA.

Student 5 was an older and experienced student who had also spent several years away from school before pursuing her associate's degree. She was completing her final semester at SRCC when interviewed and had been accepted to a local 4-year college. Student 5 was also a parent of young children. Student 5 had a 3.7 GPA.

Student 6 was a younger student who had matriculated to SCRR directly from high school. He was also in the high school/community college dual enrollment program during his senior year of high school. At the time of the interview, Student 6 was in his final semester before obtaining his associate's degree with a 3.94 GPA. His plan was to transfer to a 4-year college.

Student 7 was an older student who began her higher education after her children became adults. Student 7 was in her last semester of degree attainment and did not anticipate transferring to a 4-year college for the bachelor's degree. Student 7 had a 2.5 GPA.

My access to and relationship with participants came as a result of my work with SRCC as an educational consultant. Since October 2017, I had been working with the Paying It Forward program administrator, helping with the design and implementation of

the college's mentoring program. In this capacity, I had provided training to faculty and staff who volunteered to serve as mentors in the program. Additionally, I had led five program sessions that included faculty, staff, and students, and I had attended a day-long offsite conference with several mentees. Thus, in my role as consultant, I had developed familiar working relationships with various institutional agents, including the vice president for student development, as well as with the students who participated in the study. To ensure that my previously established professional relationships with mentees did not compel any of them to volunteer for the study, I sent all initial correspondence about the study to the mentees through the mentoring program administrator. Finally, mentees who did participate in the study were reminded that my involvement with the mentoring program was simply advisory, with no one reporting to me or me reporting to anyone in SRCC leadership.

Data Collection

For my inquiry concerning students' needs related to academic engagement, I used data from student interviews. Interviews with students allowed me access to details about students' perceptions concerning themselves as learners that could not be gathered from other sources or observed. Although I was not able to "observe feelings, thoughts, and intentions" or "observe behaviors that took place at some previous point in time" (Patton, 2002, pp. 340-341), I could ask probing and reflective questions that enabled respondents to provide me with the type of subjective information needed to understand the complexity of the phenomena being studied (Merriam, 2009).

Student interviews used the semistructured interview format to gather subjective details from students that would explain in more detail the role of motivation, sense of belonging, and academic confidence in moderating their engagement in the learning environment. While I had structured interview questions based on the various frameworks that informed this study, I also used student data gathered by the SRCC mentoring program staff during student admissions interviews to guide the questions I asked during my interviews with students. The student data gathered by SRCC mentoring program staff during their admissions interviews with students included information about students' major or program of study, current GPA, number of credit hours completed at SRCC, number of semesters attending SRCC, number of years away from school, and academic, career, and personal goals, as well as the type of mentoring services they were seeking (i.e., academic counseling, mentoring/coaching, tutoring, study skills, class scheduling assistance, financial aid assistance, career counseling, personal counseling, transfer information, college visits, or cultural activities).

Additionally, the flexibility of the semistructured style enabled me to affect the conversational tone needed to alleviate any tension that arose from discussing potentially controversial and sensitive topics. The flexibility of the semistructured format also permitted me to engage in the discovery process by adjusting the interview questions in response to my understanding of the experiences being narrated by the student. Finally, the semistructured format allowed me to leverage the closeness I had developed with students while participating as a mentor in the Paying It Forward mentoring program. As such, students were more willing to make themselves vulnerable during the interview and

respond to questions with details about their difficulties and failures and the emotions they experienced as a result of those struggles.

At the outset of the study, I provided a brief informational overview to student participants so that they were fully aware of the purpose and scope of my investigation. To protect the students engaged in the study, I followed Walden University's Institutional Review Board (IRB) standards for informed consent and confidentiality. There are three fundamental components of informed consent—voluntariness, comprehension, and disclosure. These components ensured that participants are not influenced by the researcher to engage in the study; that participants possess the mental fortitude to understand the information about the study presented to them by the researcher; and that participants receive adequate information about the purpose of the study, the conditions of participation, potential risks of the study, and potential compensation for the study, as well as contact information for the researcher. To attend to these components of informed consent, participants received a brief explanation of the study during a mentoring program session. Those students who desired to participate in the study provided their individual contact information for a one-on-one phone call wherein I provided specific details about the scope of the study, the intention of the study, and the process of the interview.

As confidentiality relates to student participants, at the informational session, I had all students sign the consent form to either accept or decline the invitation to participate in the study. Again, having all attendees sign and submit the consent form at the conclusion of the information session provided an initial level of confidentiality

protection. I also removed students' names from the interview notes, created fictitious names for the student participants, and secured the coded participant list at my residence away from the field. Additionally, I respected the time required of participants by limiting my interviews to 60 minutes and conducted all interviews via phone at times that were convenient for the participants.

The interviews were conducted during the first few weeks of the Spring 2018 semester. I chose this time of year because I wanted students to have fresh memories of their learning experience from the fall semester to draw upon during the interview. Student interviews were audio recorded using the Google audio application and saved to my cloud storage. Each interview audio recording was stored as a separate file, with the fictitious student name used as the file name. These audio files were then transcribed and uploaded to NVivo qualitative coding software for analysis. I maintained confidentiality of the data from collection to storage because both my laptop and OneDrive cloud computing required a user password to access the stored information.

Finally, I used Evernote to record my reflective thoughts associated with each interview. This reflective diary allowed me to keep track of my personal history and interests related to the study, my thoughts and biases related to my interactions with students during the interview process, and challenges I experienced while conducting interviews, all of which may have influenced my perceptions of the data gathered. Before each new interview, I reviewed my research notes to improve upon the data collection process.

Data Analysis

I used NVivo qualitative coding software to analyze the data gathered from student interviews because this tool enabled me to examine the transcripts through a variety of coding lenses. To ensure a thorough analysis of students' interview responses, data were coded using typological and open coding techniques. The data were first coded using typological coding techniques. Instead of a hierarchical arrangement of codes wherein codes are subsidiary to one another, typological coding techniques emphasizes the ways in which the category codes relate to one another. As the literature review suggests, the noncognitive competencies that moderate student academic engagement are highly inter-connected and significantly influenced by the learning environment. Therefore, it was essential to assess data using coding techniques that preserved these relationships. I also used open coding techniques to allow the data to speak to me independent of any preconceived analytical lens. By using opening coding techniques, I ensured that I did not neglect to identify important trends simply because those trends were not captured by distinct categories I devised.

The main typological coding categories used to analyze student interview responses corresponded to the frameworks that ground this study—CCSR framework and LCCF. From the CCSR framework I derived the main coding categories: *intrinsic motivation*, *sense of belonging*, and *academic confidence*. Using the literature review, I developed sub-codes for motivation: *self-determination*, *goal orientation*, and *identity development*. From the LCCF I derived the coding categories that define the learner and the learning environment: *learner objective*; *learning provided modules*; and *learning*

theory, method, and architecture. The codes from the LCCF enabled me to explore the inter-relatedness of the learner, the noncognitive competencies that influence student engagement, and the learning environment (Given, 2008). Codes relating to *race/ethnicity* and *gender* were also used to determine differences in needs based on these demographics. The General Internal/External framework dictated the differing theoretical lens used to analyze the data (Arens & Mollers, 2013). Participants' interview responses were coded first through the subjective (internal) perspective and again through the objective (external) perspective. While the data analysis from the internal perspective assessed students' reflections about motivation, sense of belonging, and academic confidence from their subjective vantage, the data analysis from the objective perspective assessed students' reflections in light of the varying the theories concerning motivation, sense of belonging, and academic confidence presented in the literature review. Through open coding techniques, I identified the additional codes, *good teacher* and *bad teacher*, which were related to the codes *instrinsic motivation* and *sense of belonging*. The data analysis process map in Figure 5 illustrates the relationship between the study's theoretical framework and the codes and subcodes used, the differentiated analytical perspectives used, and the relationship among those codes.

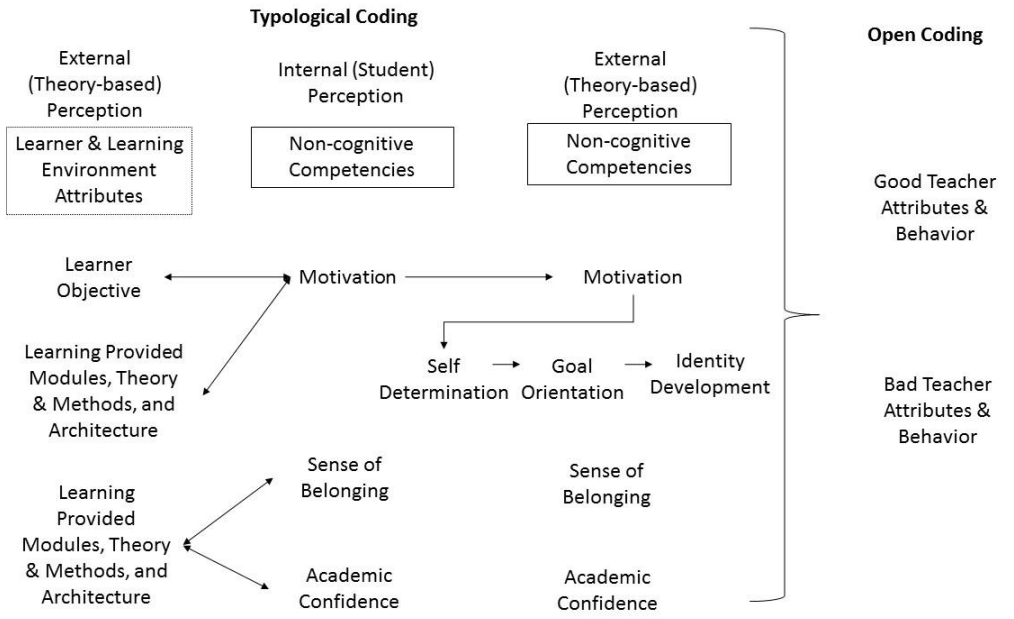

Figure 5. Data analysis process map. Relationship between the frameworks and the codes and subcodes, the differentiated analytical perspectives, and the relationship among those codes.

Findings

Analysis of the interview responses revealed that most participants were highly motivated, well-connected to the learning environment, and fairly confident. As such, even after stimulating participants' thoughts with probing questions about previous academic hurdles and challenges, when specifically asked about resources needed to develop these noncognitive competencies, most participants subjectively reported needing little support in developing these competencies. However, when weighing their responses against the objective findings detailed in the literature review, several potential supports and resources were identified for students outside the study who are not academically thriving. Table 1 summarizes the relationship between the identified codes and the research questions that guided this study.

Table 1

Relationship Between Research Codes and Research Questions

Research codes	Research questions		
	RQ1	RQ2	RQ3
Motivation			
Self-determination	x		
Goal orientation	x		
Identity development	x		
Sense of belonging			
Validation	x	x	
Relationships	x	x	
Academic confidence	x	x	x
Learner objective	x		
Learning provided modules, theory & methods, and architecture	x	x	x
Good teacher	x	x	x
Supportive		x	x
Engaging		x	x
Provide career guidance	x		

The participants' interview responses provided herafter develop in detail the relationships between the identified codes and the research questions that have been outlined in Table 1.

Supports Students Need to Develop Intrinsic Motivation

Participants' responses were initially assessed through the primary code of *intrinsic motivation* using the general internal/subjective lens. When asked what services and resources SRCC students needed to strengthen the noncognitive skills specific to motivation, students' responses directly corresponded to their GPA and their academic confidence. Not only was each student in good academic standing, but each student also felt confident in his or her ability to accomplish his or her educational goals. Consequently, most participants found the institution to have provided them the support they needed to be motivated and therefore struggled to articulate ways they could be further assisted. This initial analysis of students' direct responses to the interview questions reflected the inter-relatedness of the CCSR and the LCCF frameworks from the students' internalized perspective.

Student 1 was finishing his first semester at SRCC when he was interviewed and anticipated earning a 2.3 GPA (based on two C's and one B). Although these projected grades indicated that Student 1 was making adequate academic progress, Student 1 felt that he could improve his grades. He readily described how he had gotten help before for math in high school—a subject that he feels is not his strength—and how he would use that strategy to be successful at SRCC:

> I went to tutoring and the math teacher helped me. We worked together, and I ended up doing good in the class...In ninth and tenth grade, teachers sought me out, but then by eleventh and twelfth grade, I went to them on my own when I needed help. The learning and knowledge I got from the tutor made me feel more confident in class. And then in class I could help others and then answer more questions.

As a student at SRCC, Student 1 said he still struggles with math, but his confidence enables him to persevere: "With math, I may not like coming to class, but I have to keep a positive mindset that I can pass whatever the obstacle." When asked about the supports he needed, he stated that he could think of nothing, but he did state that "it's on the students' side to get up and get help" if they feel they cannot do the work.

Student 2 was also finishing his first semester when interviewed, and although he expressed that his grades were not as good as he had hoped, he also anticipated earning above a 2.0 GPA. A highly confident student who believes that his "support comes from within," Student 2 was taking seven classes for his first semester at SRCC with the goal of completing his Associates in Science degree in one academic year. With a focus on launching his career in computer science as quickly as possible, Student 2's greatest motivational need was "if Paying it Forward had more access to internships, then people could find what they are passionate about."

Student 3, a recently returning student with a 2.1 GPA, was focused on not missing opportunities that could help him obtain the job that would afford him a comfortable and independent lifestyle. The youngest of four siblings, Student 3 stated

that much of his motivation came from his older brothers. The lifestyles of the brothers still living at home motivated him to do well at SRCC because he wanted to eventually live on his one. The brother in college motivated Student 3 to do well because he looked up to him. Student 3 commented that "if he (his brother in college) can do it, I could do it too." Student 3 had 2 years away from the classroom and had recently returned to SRCC as a full-time student. While his goal was to obtain a 3.0 GPA, Student 3 was motivated to acquire the skills he will need to do well in the work force: "Before I started college, I worked at other jobs and I got to see what it's like to work, so my motivation to improve is because I know I might need it (meaning academic skills and knowledge) in real life. " Further, because Student 3 admitted that he was not afraid of failure, he was confident to seek whatever help he needed to improve: "There is nothing wrong with asking. The worse possible case is rejection, but you have to get used to it because rejection is part of life. But if you don't ask, you'll miss an opportunity." With such an intense focus on career readiness, when asked what supports he needed, Student 3 answered that he wished the community college would offer "more job fairs and tours to other companies to help students get jobs after graduation."

Student 4 was a full-time student with a 3.64 GPA, and she was just two semesters away from graduation when interviewed. She was an older student with young children and balances these external demands with her academic goals. Although Student 4 jokingly commented, "I don't think I'm motivated by much," she said she was "very inspired to take care of herself and to be a reliable parent." Student 4's self-awareness contributed to her confidence as a student and her belief in her ability to

accomplish her career goals: “I think my aspirations have helped me to work with other and work more indepentently… [but] because I do have three jobs and a son, it's just hard scheduling stuff.” So, when asked what supports students needed to improve their motivation, Student 4 suggested that the community college “provide more access to online courses” to help busy but dedicated students like her.

Student 5 is an older student with academic confidence that came from the wisdom of prior failures: “The confidence comes from, ironically, failure...if you can take situations, bad or good, and take something away from it and learn from it, then you're better than you were yesterday.” Although she has young children at home, she has leveraged her confidence and motivation to earn a 3.7 GPA. Student 5 was approaching her final semester before graduation when interviewed, and speaking from this wisdom, she recommended “helping students to see or create their own structure” so that they can successfully manage the schedule demands, homework demands, and external life demands that make attending college difficult.

Student 6 had a 3.94 GPA approaching his final semester before graduation, and like the other participants, Student 6's confidence as a student comes from his belief that hard work pays off and that hard work is the only way to accomplish a goal. When faced with academic challenges, Student 6 described how he took it upon himself to find other students in the class who remind him of (himself) and meet up with those students outside of class to student, and we get in some really benefical study time. This confidence in his ability to leverage available resources to ensure his academic success focused Student 6's commentary on the quality and quantity of resources the institution

provides for students. As such, Student 6 wanted the "leadership to prioritize student learning over the financial costs of the CC."

Student 7's comments concerning needed supports to improve her motivation were more descriptive. As an older student with two adult children, Student 7 had the most time away from formal schooling than the other participants, but unlike Student 4 and Student 5 who are also mothers, Student 7 did not have the same external demands of child care, so she could devote herself completely to her academic pursuits. When interviewed in early January, Student 7 had earned a 2.5 GPA and was just about to begin her final semester at SRCC. Throughout the interview as Student 7 reflected on her previous semesters, she described many times how she was told often told by friends and family that she was too old to be successful in school: "There's a lot of people that told me when I was young, 'You're not going to succeed. You can't learn anything.'" Although Student Student 7's continued pursuit of her educational goals demonstrated her ability to push beyond those negative comments, she did indicate that she struggled to stay motivated and confident. As revealed by her self-assessment, Student 7 did not view herself as a strong learner: "It's hard for me 'cause sometimes I don't understand what I'm doing. So if I don't understand it, I need a bit more time because then I get overwhelmed sometimes, or my anxiety comes up." But her inate desire to accomplish her goals enabled her to move beyond her self-identified academic weaknesses: "I have difficulty learning, I'm not the smartest kid or student, but I try to push myself so I can be that (smart student), and so I can accomplish something as say, 'Hey, I did it.'" With these learning experiences in mind, when asked what supports would have helped sustain her

motivation, Student 7 suggest "that more people just say, 'Hey, come on. Let's do this'" because "I felt like I was worth something."

When students' responses to the interview questions concerning motivation were then re-examined from an external perspective using the subcodes identified from the literature review: *self-determination theory*, *goal orientation*, and *identity development theory*, deeper insights about the types of supports students need in developing their intrinsic motivation did arise.

For example, when assessing participants' motivation through the subcode, *self-determination theory*, it became clear that intrinsically motivated students had a high sense of self-awareness about spaces and processes for working towards their academic goals, and they were capable of relating their learning to their life goals. When Student 7 really needed to focus on learning and meet deadlines she said she liked to work in a quiet area, and when she got overwhelmed, she said, "It's my faith in the Lord...He gives me strength that I need to keep goings...so I say ok, I need to just stand back, get up, walk away, and come back." For Student 7, doing well in her classes was related to career advancement. She had 15 years of customer service experience and was pursing an Associates in Office Administration degree with the goal of moving on to the Bachelors of Science in Business Administration: "I want to get to the end goal, which is my degree and my course certificate." Student 4 was similarly motivated by the connections she was able to make between the classroom and her career aspirations: "Everything I do in school connects to what I wanna do in the future, [and] I think my aspirations have helped me to work independently."

Student 5's ability to work towards her goals came from the structure she built for herself: "You have some kind of organization system...or you're going to miss something eventually." A big part of that structure came from being on campus—"Being in the environment helped me to stay focused on academic things"—and similar to Student 7, Student 5's belief in God "helped to keep [her] mind clear." For Student 3, the process for staying motivated centered on refocusing himself and reaching out for help: "When I'm bored or I don't understand, I try to use other ways to connect with the material, [and] I've been better about getting help [in writing]," which he described as his weakest skill.

As Student 6 was driven by his desire to understand, he was comfortable seeking the resources he needs to accomplish his learning goals. In the first semester at SRCC, Student 6 told how he had planned out all his courses towards degree attainment to ensure the process would be smooth. When dealing with hurdles Student 6 said, "I try to find resources that will help...I find other students who remind me of myself...and we get in some really beneficial study time." Student 1 was likewise motivated by a desire to understand, and through that understanding, prepare himself for the future. When reflecting on his courses in English and Composition, Student 1 said, "my motivation is to improve because I know I might need in real life...like for interviews and for resumes." Because of that desire for self-improvement, Student 1 said, "I'm willing to restart (after a failure) and deal with frustration because it's part of what you need to do to get to where you want to be." Although Student 1 said he liked having people behind him to help him out and encourage him, in the end, he said, "I also have my own back to keep going."

These varied depictions of motivation as understood through the self-determination subcode suggests that institutional agents would be prudent in providing the following supports to students who appear to be struggling to remain motivated:

- Help students develop awareness about how they best learn;
- Help students identify what negative emotions interfere with their learning;
- Help students learn strategies to work through these negative emotions;
- Help students find meaningful connections to their course content.

Further, since these varied depictions of motivation reveals that there is no one-size-fits-all solution, institutional agents will need to find personalize the guidance offered to students in developing their self-awareness about spaces and processes for working towards their academic goals, and they are capable of relating their learning to their life goals.

When assessing participants' motivation through the *goal orientation* subcode, it became clear that highly motivated students were driven by either their desire for personal mastery or a desire to work at a level of distinction to reap the benefits of such academic accomplishment.

Student 2 and Student 5's performance-centered goals when compared to the others participants' self-improvement goals reinforced previous findings that suggest both goal orientations—performance and mastery—are equally suitable for shorter-term goals like degree attainment. For example, Student 2's motivation is salary-based—"I much rather not go to college...but I know getting a college degree can put in the top percentile of salary and wages." Student 5's motivation was grade-based and related to feelings of

failure versus feelings of success. To describe the source of this motivation, Student 5 related an experience where these feelings motivated her to excel in the course:

> After a few bad grades, the instructor told me that I would probably end up with a C at best in his course. I'm not a C student...I worked to do better...I decided to do whatever to be that only A when he passed back assignments...it felt so good to hear that in the entire class there was only two A's for the assignment, and I had gotten one of them.

Conversely, Student 3, Student 1 and Student 6 were motivated by their desire to gain as much understanding to be ready for future challenges. When discussing his English and Composition class, Student 3 simply said, "I want to work at it (writing) so I can improve." Student 6 said, "One of the things that's driven me to do as well as I can in my classes is so that I can have a better understanding of the world and the people around me...[also] I like to do well because those grades are my validation." Student 1 he said, "I want to work hard now so that I can be settled down in the future."

Regardless of mastery or performance goal orientation, it is clear that these participants had high expectations for themselves. As prior research notes, these self-imposed expectations source the energy that sustains both performance and mastery goal-oriented learners as these students persist towards goal accomplishment. Thus, as both performance and mastery goal-oriented participants' responses reveals, the specific GPA was not the driver of the motivation, but rather the driver was the self-validation that the participants received from accomplishing the goal they had devised for themselves. Finally, it is essential to note the implicit role of personal values in developing each

participants' goals. Not only were the students' academic goals informed by their values, but also the students are well aware of the connection between their values and their goals.

Realizing the inherent personalization of goals and the diverse values that influence those goals suggests that institutional agents would be prudent in providing the following goal-oriented supports to students who appear to be struggling to remain motivated:

- Help students determine what they want to accomplish;
- Help students understand how those goals are rooted in their values.

Finally, when assessing participants' motivation through the *identity development* subcode, it became clear that highly motivated students have well-informed understanding of their values. This self-awareness not only informs the goals and expectations students' develop form themselves, but this self-awareness also equips them to weigh the costs and benefits of learning and in turn make-commitments to their learning goals.

Student 7 noted throughout the interview that her Christian faith sustains her, encourages her, and enables her to remain committed to her education: "I don't know what my path is...but I will do whatever path He wants for me." Also, when asked what makes the struggle of learning worthwhile, Student 7 commented that she "enjoyed being a role model to her [older] children."

Student 4's motivation came from her clear perspective about her dream job: "My dream job is to speak in front of millions of people and travel and just have all this

freedom." Student 4 said it's also important "to take care of my family...make a lot of money...and do what she loves." When faced with learning hurdles that she needed to overcome, Student 4 told herself, "what I am doing right now puts me on track" for that future she wants for herself.

Student 2's pursuit of a degree to obtain a competitive salary position motivated him to take seven courses in his first semester at SRCC so he could graduate and transfer to a four-year institution within one year. Student 2's value of the life style afforded salary workers inspired the advice he gave to a classmate:

> I had a friend who was struggling in a class...it was an easy class—boring but easy ... he just didn't want to do the work ... I encouraged him not to drop out because I know without a degree it's hard to get a liveable salary.

Student 6 had a lot of ambition, and he enjoyed engaging in experiences that facilitate his growth as a person:

> The more I feed that ambition, the greater I tend to dream, and even if I don't really reach up to everywhery I'm going, I guarantee that I'll reach a point higher than where I started in the first place.

Student 3's motivation came from his passion for computer science and his prior work experience. When he was in high school, he took a computer science elective and really enjoyed it. But Student 3's willingness to work hard comes from his work force experience and his desire to return to the workforce ready to perform: "When I worked at other jobs before I started college, I got to see what it's like to work, so my motivation is to improve so I can get the job I want."

As with the other characteristics that constitute motivation, well-developed personal values were unique to each individual and therefore diverse among all students. Thus, if institutional agents would be prudent in providing the following supports to assist students develop greater self-awareness of the personal values that influence their motivation:

- Help students explore what is meaningful to them;
- Help students understand where their existing values and desires come from;
- Help students assess what experiences are worth the cost for obtaining their desires/living out their values.

Supports and Resources Students Need to Develop Sense of Belonging

Participants' responses were also assessed through the primary code *sense of belonging* using the general internal lens of the students' perspective and the general external lens using the subcodes *validation* and *relationships*.

Student 7's greatest struggle was her academic confidence. As an older student with about twenty years away from the learning environment, Student 7 frequently mentioned how family and friends doubted her ability to succeed as a student, and Student 7 even doubted her natural intellect. Consequently, for Student 7, belonging was equated to support and encouragement: "My confidence wasn't there before, but now you meet people and get to know people, and I like that I can get to know different age groups because then you could learn from different ages." Student 7 also experienced that same encouragement from some of her teachers, and she noted that those positive interactions made her feel less afraid to engage in class:

> At first I was afraid of interacting with teachers because I didn't want, "oh, that's a stupid question" and sometimes instructors get uptight like, "oh, you're budding me." ... but I did have teachers who believed in me and told me I could do it ... I felt like I could succeed.

As a senior at SRCC at the time of the interview, Student 7 was committed to giving that same encouragement to new students: "Right now I wanna be that person to help somebody else. So I'm glad I'm doing work study in admissions because they (new students) don't know coming in anything, and I wanna be there." Based on Student 7's struggle to gain confidence in herself as a student, when asked directly what supports SRCC could provide to help foster students' sense of belonging, she recommended a student support team: "A peer welcoming team…Students need to be welcomed when they walk through the front door and throughout the semester, making sure they are ok and doing well." This need for validation and encouragement in developing a sense of belonging directly correspondes to previous research findings outlined in the literature review.

Student 4's greatest obstacle was the teacher. She described herself as very confident, and her interview responses indicated that she was very self-aware as a learner and very academically motivated. When asked about her social presence on campus, Student 4 replied, "I definitely don't care what strangers think about me." Also, because she was an older student with young children, Student 4 indicated that she did not have a lot of time for on campus social activities. Thus, Student 4's comments about her sense of belonging primarily focused on her experiences in the classroom and her relationships

with faculty and peers, which aligns with previous findings discussed in the literature review that students' social connection to the institution significantly impacts the effort they dedicate to learning. Students who are more connected to the learning environment via relationships with teachers and peers dedicate more effort to learning. When asked what facilitated her sense of belonging, Student 4's stated that her greatest source of connection in the classroom came from "one teacher who incorporated a lot of [learning] games" and from this same teacher who did not demean his students when they asked questions:

> He welcomes any questions, and I think that really helped the environment. He wouldn't say anything mean. He would just explain it like there was a child. It helped all the students." Student 4 contrasted the welcoming behavior of this teacher to another teacher who "hated it when any student asked questions.

Such adverse responses to students' questions frustrated Student 4 and the other students and negatively impacted them emotionally: "It got to the point where me and the other girls...I've seen them cry in class. I cried in the class." Thus, when asked what SRCC could to help student feel like they belonged, Student 4 recommended that "teachers answer students' questions in a respectful and encouraging way." As with Student 7, Student 4's response further emphasized the importance of *validation* that students receive from their instructors.

Student 2's responses also emphasized the importance of relationships in building a strong sense of belonging. A first semester student when interviewed, Student 2 described himself as timid. Although highly motivated and very confident in his

abilities, Student 2 commented that he did not have a lot of friends at the end of this first semester:

> I don't have a lot of peer relationships. It's a personal problem for me since I'm timid. I never go out of the way to ask people for their social media or phone number. I get a lot of anxiety.

Student 2 also had difficulty connecting with teachers even though he feels student-teacher relationships are essential to student success: "Relationships between students and teacher are the biggest part. Clearly, you'd do something for a friend, but for a stranger less likely." Student 2 implicitly described the struggle to connect with teachers when he mentioned an experience in an online class:

> She [the teacher] didn't have office hours where we could meet her...she replied extremely late to emails so it was hard to get an answer out of her...she wasn't explaining material as well as she thought she was...after being fed up with the teacher, I lost interest [in the class].

As a result of these past experiences, when asked what supports SRCC could provide to facilitate students' connection to the learning environment, Student 2 recommended "more group work just so you can integrate more relationships between students...so they (students) become more familiar with each other." Although Student 2's recommendation did not directly respond to his struggles with the online course, his recommendation for group work does reinforce findings from previous research concerning the role of peers in developing an individual student's sense of belonging. Although peer relationships were not found to be a primary purpose for

attending an institution, prior research cited in the literature review did find that peer relationships were a useful measure for determining students' academic motivation, and as students' desire to work with one another in pursuit of their academic goals increased so too did their academic achievement, and with increased academic achievement comes increased academic confidence.

Student 6 also recommended that the institution do more to help students get to know one another. For Student 6, people were the resources he looked to when he needed support with the academic demands, so he frequently discussed his efforts to meet up with other students and teachers to gain that assistance. For example, Student 6 sought out mentorship outside the classroom from his biology teacher—"I did come to her just to have conversations with her about career-based stuff and her ideas on what I wanted to do"—and that mentoring relationship continued after the course ended. But with peers, as Student 6 described it, students help in determining which group of peers will be willing and available to connect for study groups:

> At SRCC there's three types of students...the students who plan to transfer...let's say they are normally younger students my age 18, 19, 20, and they're generally the most involved section on campus. They're the ones most interested in wanting to meet up and wanting to succeed academically because they're focused on getting out.

Student 5 also felt that a close relationship with her instructor helps her remain motivated. During the interview, Student 5 referred to herself as an introvert, and described her process of connecting to the campus as "getting my feet wet." But

overcoming herself—her personality—to seek help from instructors outside the class was critical to sustaining her motivation. When asked what helped her to feel connected to the learning environment at SRCC, Student 5 said:

> probably the biggest thing to help is attending office hours of all of my instructors and talking to them. They always give me the extra advice...Here recently, before I started (this semester) I sat down with an instructor and they were explaining to me, okay, if you wanna do thin, you wanna take this class, this instructor may be good for you.

When asked what supports SRCC could provide students to bolster students' sense of belonging, Student 5 said that students need to be encouraged to "meet with their instructors before and throughout the semester. Student 5's emphasis on instructor availability reaffirms previous findings that instructors' physical presence was just as influential to developing in students a sense of belonging as instructors' emotional and psychological presence.

Student 1 and Student 3, two very career focused students, implicitly identified career readiness as their biggest challenge. With a mindset focused on the future, Student 1 and Student 3 were concerned more with their sense of belonging in the work force than in the classroom or on campus. Perhaps this focus on their desired career and their confidence in their ability to accomplish their career goals positively influenced their engagement with the institution. For example, when asked about his emotional connection to SRCC and his perspective on his peers and teachers, Student 1 simply stated, "It's a nice environment...it's easy to talk to peers...cool teachers." Student 1's

positive connection with his peers and teachers after just one semester at SRCC stemed from his ability to support his individual efforts to advance his career goals. Regarding his teachers, Student 1 commented that "they give help and guide me in the right direction about classes and my career." Regarding his peers Student 1 stated, "I've met a lot of cool people...my English teacher had students introduce themselves and many people had the same interests so I talked with those who want to do the same thing."

Student 3 also felt most connected to those who helped him connect to his career interests. Student 3 said he felt validated as a student when "teachers help you find universities in your field. They know I'm into computer science and anything they hear about computer science, they let me know." Student 3 also believed that being connected to the institution was the student's responsibility: "Students need to find areas where they can be themselves. Like work in the library if you're quiet or join the science club if you like science...as [students] talk to people they hear about different clubs." Thus, when asked what supports SRCC could provide students to help students develop a sense of belonging, both Student 1 and Student 3 suggested the institution offer more hands-on opportunities for students to explore their interests and improve the advertising of existing practical opportunities.

These varied depictions of validation and of relationship building suggest that institutional agents would be prudent in providing the following supports to students who appear to be struggling to make meaningful connections to the institution:

- Help students navigate the newness of the college experience by providing a peer support network;

- Help students make connections with peers for academic support;
- Help students make connections with faculty for academic and career support;
- Help students with conflict resolution tactics;
- Help students find existing outlets for their career and personal interests;
- Provide more variety of student interest outlets.

Supports and Resources Students Need to Develop Academic Confidence

Assessing participants' responses using the code *academic confidence* confirmed the previously mentioned relationships between motivation, sense of belonging, and academic confidence. For example, Student 2 and Student 1 appeared to be academically confident because of their extreme ability to work autonomously. Student 2 commented that "the support (he needs) comes from within" while Student 1 commented that it is up to him to keep "a positive mindset about his ability to pass whatever the obstacle. For Student 3, Student 5, and Student 6, their academic confidence came from their clearly identified goals and ardent desire to accomplish those goals. Student 3 articulated his confidence through his willingness to ask for help regardless how dump the question may seem because getting information moves Student 3 closer to his career goals: "If you don't ask, you miss opportunities." Student 6 articulated his confidence through his willingness to seek peer support in accomplishing his mastery goals, and Student 5's implicitly articulated the root of her confidence through her previous success in accomplishing her academic performance goals. Like Student 6, Student 7 connected her increased academic confidence to her increased sense of belonging. As

described above in findings concerning sense of belonging, when Student 7 formed relationships with peers and faculty who believed in her academic abilities, she likewise believed in herself. Student 4's academic self-confidence resides in her achieved identity. During the interview, Student 4 described an experience wherein she "stayed up for about 26 hours straight learning [to build a website]…and because I definitely saw it as something that would really help me in my future...I like business." Thus, as the participants' responses suggested, as students felt equipped to work independently towards their academic goals and when they had a clear understanding of their goals, they operated with confidence in the learning environment. Further, as Student 6 and 7's responses indicated, as students' sense of belonging increased so does their confidence in themselves as learners.

Differences in Supports and Resources Needed by Male Students of Color

There were two male students of color who participated in this study. Their responses to the interview questions did not reveal any distinction in need as a result of ethnicity or race. Rather, as it was among all seven participants, the responses of the male students of color revealed high levels of intrinsic motivation, sense of belonging, and academic confidence. Consequently, it can be inferred that ethnicity and race may not uniquely influence the general supports students need to develop and hone the noncognitive competences that moderate student academic engagement.

Supports and Resources Provided by the Learning Environment

Student interview responses were also analyzed using codes associated with the Learner-Centered Curriculum Framework to understand how the *learners' objective* and

the learners' response to the institution (*learning provided modules* and *learnig theory & methods*) influenced students' motivation, sense of belonging, and academic confidence.

As noted earlier in the findings**,** each participants' *learning objective* can be understood by assessing his or her values and goals. Thus, there appears to be no universal motivation moderating students' academic engagement. Consequently, it can be inferred that institutional agents will need to have a well-informed understanding of their students' goals and values to develop supports and resources that will positively enhance their academic motivation.

Learning modules that appeared most influential in developing students noncognitive competencies were those wherein students found meaningful connects between their goals and the course curriculum. For example, Student 1 and Student 3 both felt that their English and Composition course were helping them develop the communication skills needed to advance in their intended careers, and Student 6 commented that he was pleased with the human understanding he was gaining through his humanities classes. As these students found their academic pursuits beneficial in accomplishing their their personal goals, these students became more committed to their work.

Participants' motivation, sense of belonging, and academic confidence was also stimulated by *learning theories and methods* that involved games, team work, and hands-on application and by learning that validates the students' knowledge building process. Student 3, Student 4, Student 6, and Student 7 each emphasized the positive role of interactive learning and collaborative learning in bolstering their noncognitive

competencies. Finally, all students addressed teacher interaction with students as an aspect of learning that either bolstered their motivation, sense of belonging, and academic confidence or diminished it. Student 3, Student 4, Student 5, Student 6, and Student 7 shared experiences wherein their relationship with faculty enhanced their motivation, sense of belonging, and academic confidence. Student 2, Student 4, and Student 7 shared experiences wherein their relationship with a teacher undermined their motivation, sense of belonging, and academic confidence.

The analysis of data through the LCCF codes suggested that the classroom offers many opportunities for supporting students' development and mastery of motivation, sense of belonging, and academic confidence. Further, the analysis of data through the LCCF codes highlighted the vital role teachers play in students' development and mastery of these noncognitive competencies.

Open Coding Findings

Open coding analysis of students' interview responses provided insight regarding the influence teachers have on students' development of the non-cogntive competencies that moderate academic engagement. Students' descriptions of the behaviors and mindset of a "good teacher" corresponded to students' reflections concerning the supports and resources that enable them to be intrinsically motivated, feel a strong sense of belonging, and be academically confident.

- Supportive:

- "They understood I was going through a difficult time. They've helped extended some assignments here and there and tried to help me out." (Student 5 discussing sense of belonging)
- "... they help me and guide me in the right direction." (Student 1 discussing sense of belonging)
- "They need to help the student, doesn't matter how old they are, who they are, what they look like." (Student 7 discussing academic confidence)
- "When a student would ask a really dumb question, he wouldn't say anything mean. He would just explain it like there was a child." (Student 4 discussing academic confidence)

- Engaging:
  - "I like that it's not a boring lecture. Get out there and do some games and interact." (Student 7 discussing motivation)
  - "He would incorporate games." (Student 4 discussing sense of belonging)
- Providing career counseling:
  - "She acted like a mentor to me. I did come to her just to have conversations with her about career-based stuff and her ideas on what I wanted do." (Student 6 discussing sense of belonging)
  - "... teachers who help you to find universities in your field...and let me know about stuff [in my field]." (Student 3 discussing motivation)

Participants described a "bad teacher" in the following ways:

- Insensitive:

    - “A student said something very offensive, although I don't think he realized it was wrong, and he shut that student down by yelling at him and kicking him out of class.” (Student 6 discussing sense of belonging)
    - “Sometimes instructors get uptight like ‘oh, you're bugging me.’" (Student 7 discussing sense of belonging)
- Unapproachable:
    - “[It was an online course and] the teacher didn't have office hours where we could meet her...she replied extremely late to emails so it was hard to get an answer out of her.” (Student 2 discussing sense of belonging)
- Professionally unaware:
    - “She wasn't explaining the material as well as she thought she was.” (Student 2)
    - “... it was just the teacher talking, lecturing all the time, and he hated it when any student asked any questions...” (Student 4 discussing sense of belonging)

As these characteristics were given during participants' discussion about their ability to remain motivated, connected to the learning environment, and strive towards their academic goals with confidence, SRCC leadership would be prudent to ensure the faculty reflect on these comments and adopt these behaviors and attitudes when trying to support their students' academic engagement.

Accounting for Accuracy and Credibility

Accounting for credibility in the planning phase of the study ensured that my results were accurate and offered a dependable characterization of the phenomenon. Before the study began, I ensured that my interview questions were clear and did not provoke anxiety or discomfort (Laureate Education, Inc., 2012) by having my questions vetted by a more experienced researcher and by testing those questions on at least two college students from other institutions. During the interview, I asked student participants to share stories that elaborated and corroborated answers to previous questions, and after the interview I enabled participants to review their interview transcripts before I coded and analyzed the data. In addition to low-level member-checking with participants, I solicited the mentoring program administrator for peer debriefing to ensure that the data labels I decide upon were a result of a logical reasoning path. Also during the interview phase, I continued to use my reflective diary to record in detail the decisions I made during data analysis (Houghton, Casey, Shaw, & Murphy, 2013). This diary along with NVivo's record of my decisions allowed me to demonstrate the dependability of my analysis and findings.

Finally, I used theory triangulation in the analysis phase to validate my interpretion of the data. Theory triangulation brings together experts from differing disciplines to develop a convergence of understanding on a given topic (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neille, 2014). In this study, I used the various perspectives of experts from the fields of medicine, education, and business as presented in the literature review to develop a universal theory-laden frame from which I assessed

students' interview responses concerning their needs related to motivation, sense of belonging, and academic confidence and the impact of those needs on their academic engagement (Guion, Diehl, & McDonald, 2011). From this codified frame, students' responses were determined to either subscribe to or divert from the established norms (Ma & Norwich, 2007). While I did not actually speak to experts in the varying fields fields of medicine, education, and business as is formally required for theory triangulation, by using the definitions constructed through experts' prior research to create the codes for my data analysis, I did accomplish the spirit and intent of theory triangulation.

Section 3: The Project

Introduction

As a result of the research and analysis of findings, I created a faculty development program that prepares faculty to be mentors with the attributes, skills, and mindset to not only provide one-on-one mentoring to students, but also transform classrooms into group mentoring spaces. As adaptive mentors, faculty will be armed to collectively cultivate a consistent campus culture wherein mentorship becomes a natural part of the learning environment of the institution from the moment that students arrive on campus to the moment they depart. Then, within a culture of responsive mentorship, all students at SRCC will receive the leadership and guidance they need to develop and hone the noncognitive competencies that influence student academic engagement. By situating best-practices in effective mentor-mentee relationships within a complex adaptive systems theoretical approach to mentoring, this professional development program identifies the attributes, skills, and knowledge that mentors need to positively and productively mentor students in one-on-one and group settings. Additionally, this professional development empowers faculty to move beyond the micro- and macro-level hurdles that undermine their efforts to effectively guide their mentees.

Further, this professional development leverages best practices from prior research findings to provide the support that faculty need in a format and style that do not place an undo drain on their free time but do encourage participation in the culture change, which is an essential desired outcome of the training. The training modules are presented in 16 minimodules to be completed over the course of the academic year. Each

module follows the same format so that faculty members can construct a routine, recurring schedule for completing the assignments that has the following components: the delivery of training content related to adaptive mentoring; opportunities for online journaling that allow faculty to individually consider their process of becoming adaptive mentors; and online discussions that allow faculty to analyze, evaluate, revise, and create new pedagogical practices and mindsets aligned with adaptive mentoring. The hybrid format for each module, which maximizes off-campus, autonomous work and asynchronous communication among peers, also allows faculty members to compete assignments at the time and in the space most beneficial to their overall success with the program. The scenario-based training that serves as each module's summative assessment provides faculty members a relevant way to synthesize and demonstrate their mastery of training objectives.

Rationale

As revealed by prior scholarly research and reinforced by the findings of this study, learning in a learner-centered environment requires students to possess intrinsic motivation, which involves self-regulation, autonomy, an established set of goals, a well-developed sense of sense of self, a positive sense of self as a learner, and a positive connection to the learning environment. While all of the students in the study possessed these attributes and were meeting the institution's academic requirements for graduation and transfer, many of their responses referenced teachers' influence on their sense of belonging, academic confidence, and, in turn, their intrinsic motivation. It is also important to note that the students who participated in the study may not represent the

typical student attending SRCC, in that the study participants were selected because of their voluntary involvement in the college's Paying It Forward mentoring program—involvement that readily speaks to these students' heightened intrinsic motivation and to the institution's ability to provide resources and supports to help develop these students' sense of belonging and academic confidence.

Although SRCC has made significant headway in creating services to support students' engagement in the learner-centered learning environment (Wood et al., 2014) through its *Paying It Forward* mentoring program, as discussed in this study's findings, many students cannot take full advantage of these services because of competing external commitments such as family and dependent responsibilities and work responsibilities. Specifically, these external commitments currently hinder students' participation in the *Paying It Forward* mentoring program and thereby limit the overall reach and impact of the initiative across the community college. For example, at the time of the study, there were only 10 active student members in the mentoring program, approximately .06% of the total student body for Fall 2017. Thus, regardless of the best-practices implemented by the community college, if students are unable to participate in the program, then students will not profit from the initiative (Gershenfeld, 2014). Therefore, understanding ways to broaden the reach of SRCC's mentoring initiative becomes of primary concern for administrators seeking to leverage the benefits of mentoring to enhance student engagement.

A professional development program focused on adaptive mentoring strategies and techniques that enables SRCC faculty to employ two types of strategies

simultaneously— group and one-on-one mentoring—effectively addresses a variety of students' mentoring needs and preferences (Price & Tovar, 2014). With a faculty trained as adaptive mentors, the classroom can become a space for group mentoring opportunities (DuBois, Portillo, Rhodes, Silversthorn, & Valentine, 2011; Kuperminc & Thomason, 2013) while one-on-one faculty/student interactions such as office hours become opportunities for individualized mentoring (Deutsch, Reitz-Krueger, Henneberger, Ehrlich, & Lawrence, 2016). This approach to mentoring not only responds to students' specific comments about spaces and interactions wherein they experienced positive interactions with faculty, but also removes the time and location barriers that limit students' interactions with faculty mentors.

Mentors can play an invaluable role in creating the supporting learning experiences that facilitate students' engagement in the learning environment. In fact, the preponderance of research concerning faculty-student mentoring relationships reveals a direct correlation between effective educational leadership and quality learning environments (Leithwood, Louis, Anderson, & Wahlstorm, 2004). Effective faculty-student mentoring relationships have been associated with improved academic performance—especially for students requiring academic remediation—increased student responsibility for the learning process, and improved goal setting (Bettinger et al., 2013). Additionally, research has identified correlations between faculty-student mentoring relationships and student self-confidence, student self-esteem (Zumbrunn et al., 2014), student sense of identity, motivation, and self-regulation (McArthur, 2005; Shunk & Mullen, 2013; Zumbrunn et al., 2014), especially in first-generation college students

(Stebleton & Soria, 2014). Yet one central issue related to mentoring that has plagued higher education is the need for a solid understanding of what mentoring means and how it should be performed.

Using a hybrid delivery method of online learning and face-to-face scenario based training for the professional development alleviates many issues that plague faculty members' ability to learn new pedagogical approaches. The online portion of the professional development course addresses barriers related to time (when the training can be accomplished), location (where the training can be accomplished), and scale (how many faculty members can be engaged in the training at one time; Cook & Steinert, 2013). Additionally, the online discussions and the face-to-face scenario based trainings enable faculty to develop interdisciplinary communities of practice. The fostering of learning communities among faculty plays a significant role in faculty members' commitment to learning and in their quality of learning (Paskevicius & Bortolin, 2016; Schmid, Gillian-Daniel, Kraemer, & Kueppers, 2016**).**

Review of the Literature

Student mentoring has been the focus of considerable research as higher education leaders have sought strategies and best practices to support students in their transition into and matriculation through higher education (Bauer, 2014; Defreitas & Bravo, 2012; Devos, 2004; Grant & Ghee, 2015; Hinsdale, 2011; Jacobi, 1991; Menges, 2016; Nora & Crips, 2007; Price & Tovar, 2014; Santos & Reigados, 2004; Schmidt & Faber, 2016). However, a review of literature regarding mentoring can quickly become overwhelming for administrators endeavoring to devise an evidence-based mentoring

program that meets the dynamic and complex needs of their student population. While researchers have demonstrated uniform characteristics of effective mentoring programs and mentoring interactions that consistently result in positive correlations between effective mentor-student relationships and student performance (Bettinger et al., 2013; Campbell & Campbell, 1997; Cohen, 2003; Dawson, 2014; Martin et al., 2014; Nora & Crisp, 2007), the review of literature also uncovered a variety of attributes, skills, and knowledge required of mentors to foster positive and productive mentoring interactions (Cohen, 2003; Deutsch et al., 2016; Gershenfeld, 2014; ; Jacobi, 1991; Lundber, 2014; McArthur, 2005; Price & Tovar, 2014).

Additionally, the review of literature concerning the educational development of faculty intimates further complications in leaders' ability to leverage the benefits of mentoring to support students' academic success. While higher education faculty members are groomed to be subject-matter experts in their fields of study, these educators may not be groomed for the complex and demanding role of mentorship, in that their years of professional development in graduate school primarily focus on developing content mastery (Barlow & Antoniou, 2007; Boroch, 2010; Brownwell & Tanner, 2012; Jones, 2008; Severs, 2017).

In response to the breadth and depth of prior research and inquiry into mentorship and the ability of faculty members to assume the role of mentor, this literature review had two aims: first, to synthesize concepts and best practices about mentoring to produce a concise understanding of mentoring attributes, skills, and knowledge and offer a theoretical lens for cultivating these aspects of mentoring in faculty; and second, to

synthesize findings and insights about the value of professional development in transforming higher education faculty members into effective mentors. This literature review was primarily conducted using keyword searches in online educational databases. The main databases included ERIC and Academic Search Complete. Search terms included *faculty professional development*, *faculty education development*, *mentoring*, *complex adaptive systems*, *adaptive mentoring*, and *students of color mentoring*. Resources were also discovered by reviewing the reference sections of articles that directly related to mentoring attributes, skills, and knowledge and the adaptive nature of the mentoring process. Finally, of note in conducting this literature review, I found that the vast majority of articles related to mentoring attributes, skills, and knowledge and the mentoring process investigated professional mentoring relationships, not faculty-student mentoring relationships. Several articles relating to professional development and a tool for educational development investigated the teaching ability of faculty in the medical field, both in the classroom and in the residency environment. When I examined these studies through the lens of my 5 years of higher education teaching experience, they logically applied to my specific mentoring scenario.

Approaches to Effective Mentoring

Although there is no one-size-fits-all solution for effective mentoring, there are several common approaches to mentoring that have empowered mentees toward goal accomplishment. Regarding traditional academic support, mentoring programs do well to help students develop and maintain motivation and morale to persist (Bettinger et al., 2013; Campbell & Campbell, 1997; Cohen, 2003; Martin et al., 2014), help students

with goal setting, and provide students with academic subject knowledge support (Dawson, 2014; Nora & Crisp, 2007). Mentoring programs also do well to help students manage external demands such as debt, finances, and child care, all of which can cause students to drop out if they become unmanageable (Martin et al., 2014). Finally, mentoring programs should effectively address students' unique needs as mentors guide them through the transition into college culture (Price & Tovar, 2014), provide career coaching (Cohen, 2003; Gershenfeld, 2014; Martin et al., 2014), and facilitate their development of academic confidence (Martin et al., 2014).

In addition to formal mentoring programs, one-on-one mentoring approaches have provided mentees needed supports and resources. Through intimate interaction with mentors, mentees gain confidence in themselves as scholars and professionals (Lundber, 2014) and learn how to make the difficult transition into the higher education learning environment (Price & Tovar, 2014). Further, one-on-one mentoring that happens through academic advising provides mentees with constructive criticism and guidance and enables them to make steady progress toward graduation requirements (McArthur, 2005). Finally, mentees can develop emotional intelligence and mature interpersonal skills as those characteristics are modeled by mentors (Deutsch et al., 2016).

When viewed through the guiding frameworks of the study—the CCSR framework and LCCF—and the results of the study, both formal mentoring programs and one-on-mentoring approaches have the potential to provide students with the supports and resources they need to develop and hone the noncognitive competencies of motivation, sense of belonging, and academic confidence. In fact, each benefit described

in the research concerning mentoring was also mentioned by a study participant as a valued support. For example, student interview responses described faculty members' support with goal setting, constructive criticism, and academic and career coaching as helpful in honing motivation, sense of belonging, and academic confidence. However, as also revealed by students' interview responses, while the supports that students needed were categorically similar, the manner of delivery varied. Therefore, to effectively support students in their development of the noncognitive competencies that moderate student academic engagement through mentorship—whether formally or informally—faculty members must be adept and versatile mentors.

The Attributes, Skills, and Knowledge of Effective Mentoring

A review of literature spanning 40 years (Crisp & Cruz, 2009; Robert, 2000) revealed a central, prevailing tenet about mentoring: that mentoring relationships are personal and reciprocal (Crisp & Cruz, 2009). Such a definition emphasizes the interpersonal competences of faculty (Cohen, 2003) and places the onus on faculty to initiate and foster effective faculty-student mentoring relationships. Consequently, the emotional intelligence that faculty bring to their student mentoring relationships provides them with the necessary interpersonal awareness to aptly assess the motivational orientation of each student and offer the appropriate support to encourage students' learning (Komarraju, 2013). For example, extrinsically motivated students who are less self-assured and self-sufficient in a course may value the faculty member's ability to be supportive and encouraging, whereas intrinsically motivated students who have higher academic confidence about their ability to succeed in the class may value the faculty

member's professionalism and professional knowledge. Additionally, students who perceive their mentors to be readily accessible and caring experience enhanced academic confidence and improved academic achievement (Defreitas & Bravo, 2012).

The emphasis on interpersonal competencies that facilitate positive and productive mentoring relationships appear in traditional as well as more contemporary depictions of mentoring. In Jacobi's (1991) seminal work, mentors are described as counselors, nurturers, and motivators. Later research contributed to this definition by defining mentoring through the constructs of psychological and emotional support, support for setting goals and choosing a career path, academic subject knowledge support, and specification of a role model (Nora & Crisp, 2007). More contemporary research has outlined the interpersonal competencies of mentoring as the abilities to foster open communication, trust, and mutual respect; to inspire passion within others; to cultivate caring relationships with others; and to work collaboratively with others (Eller, Lev, & Feurer, 2014).

Contemporary mentoring research identifies mentors' ability to foster trust as an essential attribute for positive and productive mentoring, for it is in the security of a trusting relationship that mentees become willing to learn from the mentoring process (Hudson, 2016; Schatz-Oppenheimer, 2016). The personal qualities that enable mentors to foster trust include integrity and concern, assertiveness and leadership, flexibility, tolerance, teamwork capabilities, facility in forming and maintaining interpersonal relations, and the ability to motivate mentees. Professional skills that enable mentors to foster trust include the ability to identify the difficulties of their mentees, familiarity with

a mentor's professional boundaries, the development of reflective skills with respect to mentoring activities, the ability to organize and structure mentoring activities, and adherence to professional ethics. Practice-based know-how needed to build trusting relationships includes the ability to analyze and interpret classroom phenomena and respond according to appropriate theory and practice; the ability to acknowledge, accept, and understand differences among mentors and mentees; and the ability to cultivate a safe environment for mentees. Finally, in cultivating honest two-way conversation that is a by-product of trust, mentors need to be willing to share weaknesses as well as strengths, and expectations and learning need to be collectively cultivated.

Cultural competency is another interpersonal competency required to produce positive and productive mentoring relationships. While there is much uncertainty about the role of ethnic and gender matching in fostering mentor-mentee relationships (Campbell & Campbell, 1997; Santos & Reigadas, 2004-2005; Menges, 2016), mentors' awareness of mentees' cultural background has been found to directly impact the quality of the mentoring relationship. Such responsive mentorship (Hinsdale, 2015) embraces to the fullest extent the reciprocity that both mentor and mentee can achieve through an effective mentoring relationship. For example, when both faculty and student share personality traits like openness to experiences that involve intellectual curiosity, creativity, imagination, open-mindedness, and attentiveness to emotions, mentor and mentee inevitably spend more time together.

Yet faculty can only truly engage in responsive mentoring if they are willing to re-examine their participation in upholding the unwritten cultural norms and values that

restrict all students from attaining full access into the academic community and if they are willing to deliberately oppose and unmask those barriers. Specifically, current research urges faculty to mentor students of color with an open mindset that welcomes not only the physical and social differences that minority students bring to the academic community, but also that welcomes the knowledge minority students bring and the ideas they wish to explore (Hinsdale, 2015). As faculty become willing to step outside the norms of academic culture and likewise expose themselves as outsiders, then faculty become better equipped to accept the mystery of their diverse students. However, if faculty abstain from this transformative approach to mentoring, then those faculty run the risk of pushing students away from the academic community instead of encouraging them to persist. Consequently, it may be necessary to provide faculty/staff mentors training in these areas so they do not inadvertently undermine effectiveness of the institution's mentoring efforts.

Potential Hurdles to Effective Mentoring

The focus on faculty members' interpersonal competencies when defining mentoring brings to the surface the need for faculty to mindfully mitigate mechanisms inherent to academia that create unintended power differentials (Devos, 2004) between the faculty members and students. While some researchers contend that equal relationships are never truly possible, at a minimum, faculty members must remain alert to their ability to write over the identity of students during the mentoring process, however unintentional such identity regulation may be (Manathunga, 2007). Likewise, the dual nature of faculty as coach and evaluator also puts pressure on the mentor-mentee

relationship and can inadvertently tarnish the development of trust and collaboration needed for students to engage in the learning environment (Jones & Goble, 2012). However, when power differentials are mitigated such that students perceive mentors as accessible and caring, students report improved academic confidence and enhanced academic engagement (Defreitas & Bravo, 2012).

Ethnic and racial miss-matching among mentors and mentees may also diminish the potential for intimacy that is required to foster personal and reciprocal relationships. A multi-site case study (McCoy, Winkle-Wagner, & Luedkle, 2015) that explored Bonilla-Silva's (2015) colorblind racism framework found that White faculty of varying age ranges from 32-69 thought they were treating students of color the same as other students but were actually found to be making concessions and excuses for students of color. This same study also found that White faculty wrongly equated the pursuit of higher education to the process of cultural assimilation for students of color thereby implying an unwritten expectation that students of color must willingly abandon their first culture before being welcomed into the culture of academia. Thus, although White faculty endeavor to be fair and impartial in their interactions with students of color, such behavior and mindset inadvertently impairs the intended reciprocity of the faculty-student mentoring relationship.

Ethnic and racial miss-matching between mentor and mentee may also undermine the development of trusting mentoring relationships if mentors are unaware of their role in helping mentees build social capital and navigate the often-hidden demands of higher education. For example, faculty acting as role models or subject knowledge experts may

need to include coaching that intentionally reveals the hidden curriculum of the academy (White & Khan, 2013), which Smith (2009) defines as the unwritten and unspoken norms, values, and rule of the "educational game that govern the behaviors and interactions among faculty, academic professionals, and students" (p.3). In order for faculty in ethnically miss-matched mentoring relationships with students of color to establish and nurture open communication, those faculty may need to specifically address potential ignorance of and resistance to academic discourse. Since meaning and language are intricately connected, students who possess a differing cultural discourse will be at a disadvantage when trying to make deep, personal connections with course content. Therefore, if mentors do not help students of color become fluent in academic discourse mentors fail to provide the support students of color may need to develop academic identities, which cultivate a sense of belonging and self-confidence. Further, faculty may need to help students of color build social capital through contacts with faculty, academic professionals, and other students. Challenges negotiating differing cultural discourses indicate yet another aspect of minority student mentorship that expands the bounds of traditional mentoring approaches (White & Lowenthal, 2011).

Creating an Effective Mentorship Curriculum

The variety of attributes, skills, and knowledge required of the mentor and the varying activities and modes of relationship building the mentor engages in with the mentee speaks to the dynamics and complexity of mentoring. Thus, for faculty to be well equipped to perform as mentors, they must receive appropriate training that not only enables them to develop the required attributes, skills, and knowledge, but they must also

receive training that enables them to develop the right mindset about mentoring. Viewing the demands of mentoring through the lens of Complex Adaptive Systems (CAS) theory provides the most thorough approach to understanding the complex and dynamic nature of effective mentoring (van Ginkel, Oolbekkink, Meijer, & Verloop, 2016; Hargreaves & Fuller, 2012; Langdon, 2017).

When applied to the system of mentoring, CAS theory allows for the separate consideration of each micro and macro-element of the total mentoring system by recognizing that the sum of each part of the mentoring system is different than the whole. At the macro level, the interdependent elements of the mentoring system include the mentor's cultural background, the mentee's cultural background, and the organizational culture wherein their relationship and interactions exist. At the micro level, the interdependent elements include the uniqueness of the individual mentor and mentee. Yet, when these elements come together, the result of their interaction should consistently produce a supportive mentoring relationship that encourages inquiry and engagement within the mentee. By understanding the non-linear interdependency of each element, faculty can then begin to appropriately assess connections between each element of the mentoring system to find ways to make changes that will more likely lead to positive and productive mentor-mentee interaction.

Although the review of literature only uncovered applications of CAS in professional mentoring scenarios, the attributes of those mentoring systems mirror faculty-student mentoring relationships thereby allowing for a logical extension of CAS mentoring concepts beyond any one particular mentoring scenario. For example,

Langdon's concept of adaptive mentoring and the components of adaptive mentoring was used to provide a framework for empowering seasoned faculty to respond to the complexities of mentoring new faculty (Langdon, 2017). In this framework of adaptive mentoring, positive and productive results came only as mentors learned to develop a synthesized perspective of themselves as both experts and learners. On one hand, mentors must see themselves as experts with important knowledge to pass along; yet, simultaneously, mentors must see themselves as learners who likewise stand to grow from the mentoring interaction. Through self-reflection and a willingness to question routines and practices and develop new knowledge, adaptive mentors progressively cultivate the required mentoring attributes and skills that facilitate trusting, empowering, and informing relationships with their mentees (Hargreaves & Fullen, 2012; Langdon, 2017). Through this lens, the characteristics of adaptive mentoring require mentors to look inward by engaging with their prior conceptions of how the world of mentoring works; to look theoretically by developing a deep foundation of factual knowledge that is understood within conceptual frameworks of mentoring; and to look outwardly by inquiring into and assessing mentoring practice to gain an awareness of the uncertainties and contexts that influence mentoring. (Langdon, 2017). By looking inward, mentors respond to the complexity of mentoring in a CAS by first ensuring that they possess the right perspective about mentoring. Then with the correct lens, mentors ensure that he or she possess the required factual knowledge the mentee seeks through the mentoring relationship. Finally, recognizing and planning for the certainty of uncertainties, mentors remain committed to constant personal growth to ensure they remain in a position of

support to mentees. While these components appear prescriptive because they mandate specific behaviors of the mentor, these components are flexible enough to respond to a variety of mentor-mentee scenarios.

Another application of CAS to the mentoring process focuses on the dynamic, moment-to-moment nature of the mentoring process and the mentoring relationship. As the mentor rightly reads the specific context or environment, the mentor becomes empowered to provide the support expected and needed by the mentee. This concept of adaptive mentoring requires mentors to attune themselves to the emotional state and emotional capabilities of the mentee; to adapt to the mentees capacity for reflection; to build tasks that match the mentees competency level and build progressively from there; and to align mentoring support with mentee's expectations (van Ginkel et al., 2016). These four behaviors represent major category headings for a variety of adaptive behaviors demonstrated by mentors endeavoring to respond to the perceived needs of their mentees given a specific context and environment. As with Langdon's framework of adaptive mentoring, these categories offer both structure and fluidity when considering the process for producing positive and productive mentoring relationships.

While the application of CAS theory to mentoring is broadly accepted by mentors as an effective means for considering the mentors behavior in response to a multifaceted, ever-changing mentoring scenario, the review of literature resoundingly speaks to the difficulties mentors had in adopting and enacting adaptive mentoring behaviors. In each study that explored the application of CAS theory to mentoring, mentors commented on the challenges they experienced as they endeavored to adapt to the complex and dynamic

interplay of the micro and macro-elements of mentoring. In Langdon's qualitative study, his participants "voiced difficulty in achieving the conceptual shift to viewing themselves as learners" (Langdon, 2017, p. 539) and that engaging in the self-reflection required of mentors to transform their mentoring practice was problematic. In their discussion van Ginkel et al. 2016) reference similar struggles among mentors: mentors struggled to respect the voice of mentees' cultural perspective; mentors lack the versatility to respond moment-by-moment to mentees' needs; and mentors lack a bifocal concept of themselves as learners and experts. As faculty develop an open-mindedness to learning new ways of thinking about themselves and their mentee and as faculty learn new ways of interacting with their mentees, faculty as mentors create a culture of inquiry that promotes engagement, critical thinking, and problem solving provide (van Ginkel et. al, 2016).

Mentorship Training as Professional Development

The defining job requirement for the higher education faculty member is the mastery of his/her field as demonstrated by the attainment of an advanced degree. Yet this learning and training required to become a subject matter expert does not prepare faculty members to become effective educators. In fact, graduate school is more likely to produce teachers with instructor-centered practices and mindsets (Barlow & Antoniou, 2007; Boroch, 2010; Brownwell & Tanner, 2012; Jones, 2008; Severs 2017). Such acharchaic and profitable pedagogical tendencies, which exist at particularly high frequencies among faculty members teaching STEM courses (Lattuca, Bergom, & Knight, 2014; Lindblom-Ylanne, Trigwell, Nevgi, & Ashwin, 2006; Lueddeke, 2003; Nelson-Laird, Hu, Kuh, & Schwarz, 2008; Prosser & Trigwell, 1999; Trigwell, 2002),

have been identified as a contributing cause for the achievement gap between first-generation, low-SES students of color and their more privledged peers (Ridgeway, Ligocki, Horn, Szegller, & Breitenberger, 2017). The repercussions of faculty members' ineffective teaching practices potentially have the greatest impact within community colleges—institutions that not only accept many developmental students (Severs, 2017) but that also employ many adjunct faculty members who receive little educational development support because of their part-time, non-salaried teaching status (Schmidt, 2012). Yet, prior research suggests that educational development initiaves have been successful in improving faculty members' effectiveness in teaching students.

Whether happening on campus or off campus, much evidence touts the success of educational development initatives targeted at improving higher education faculty members' student-centered pedagogical practices. On campus professional development initiatives have become so profitable that many colleges and universities have developed teaching and learning centers that stress student-centered strategies (Hahn & Lester, 2012; Jiandani, Bogman, Shah, Prabhu, & Taksmande, 2016; Lieberman, 2018). These centers use evidenced-based best practices to offer new approaches to teaching, to help faculty engage in self-reflection about the impact of their biases and privledges on teaching, to provide faculty members witih new solutions for connecting students to learning content, and to help faculty learn to build communities of practice. (Lattuca et al., 2014; Ridgeway et al., 2017; Schmidt, 2017). Studies on the success of off-campus professional development initiatives offered by the National Effective Teaching Institute (NETI) found faculty members' teaching to be positively influenced by what they learned

in the three-day seminar. For example, faculty who attended these seminars reported replacing instructor-centered practices with student centered practices (Felder & Brent, 2010; Felder, Brent, & Price, 2011).

Regardless of where training takes place, effective professional development concerning educational practices has two common criteria: professional development supported by an institutional climate that values and rewards effective teaching and professional development that cultivates communities of learning wherein faculty members can explore new practices and adopt new mindsets (Cox, 2004; Honan, Westmoreland, & Tew, 2013; Paskevicius & Bortolin, 2016). As described by the literature, an institutional climate that values and rewards effective teaching employs a systematic, substantial, and effective faculty development plan. The plan is systematic in that it outlines the intended development and growth of the faculty much like colleges and universities craft for students through the student's course of study. The plan is substantial in that it is longterm. In several studies wherein faculty members received training to develop attributes and mindsets that coincide with the dynamic and complex characteristics of adaptive mentorship, researchers concluded that only after a year's commitment to professional development did mentors' personal theory and practice about mentoring change (Deutsch et al., 2017; Langdon, 2017; McQuillin, Straight, & Saeki, 2015; Schatz-Oppenheimer, 2016; van Ginkel et al., 2016).

Finally, the professional development plan is effective because it addresses faculty members' needs in meaningful and relevant ways (Jiandani et al., 2016). For decades, online learning has been celebrated as an effective medium for facilitating

faculty development (Dyrbe, Cumyn, Day, & Heflin, 2009; Steinert et al., 2002; Paskevicius & Bortolin, 2016). Not only does online learning allow learners to pick the time and place for learning to happen, which mitigates the physical stress of learning, but online learning also allows learners to reflect on their past experiences and worldviews in an isolated space when building new knowledge (Rovai, 2003), which thereby mitigates the social stigma of learning (Watson, 2008). The constructivist approach that online learning supports also encourages the growth mindset that faculty need as they make the difficult transformation into adaptive mentors. In an online learning environment where learners' progress remains private, learners can retake assessments as many times as needed without anyone knowing about their failures until they successfully accomplish unit objectives (Dweck & Legget, 1998).

Faculty learning communities also play a central role the success of the professional development. Learning communities enable faculty members across all disciplines to leverage their collective experiences to consider and refine their pedagogical approaches. Effective learning communities are cultivated through frequent and ongoing seminars and through discussions that foster a rapport of openness are required. Learning through experiential exercises also facilitates the construction of learning communities while also providing safety for learners, especially when learning objectives requires students to take risks and engage in self-reflection (Blum & Bergsch, 2009). Collaborative scenario-based learning allows learners with limited experience to explore complex dynamic situations through activities that meet them in their comfort zone and enables them to leverage their current shared experiences to understand the

relevancy of new ideas. As a result of such active, personal engagement with abstract topics, students report deeper emotional and intellectual levels of growth (Voss, 2013). Further, simulation learning mirrors the non-linear nature of learning when instructional topics include human relationships. As learners behave and speak in the simulated environment, they hone the competencies needed to meet performance goals in the future (Hopwood et al., 2014; Hsu, Chang, & Hseih, 2015). Thus, simulation training specifically related to mentoring enables faculty to adopt and employ the attributes of an adaptive mentor well before they experience the complexities and dynamism of mentoring diverse students in and out of the classroom.

Project Description

In response to the noncognitive competencies that moderate student academic engagement and the challenges faculty face in guiding students in the development and mastery of these competencies, this professional development program will equip educators with the mindset, strategies, and tactics to master the complex and dynamic forces that influence the mentoring process. Through the year-long faculty development training, faculty members at SRCC will probe the "how" and "why" questions that problematize the mentoring process to become empowered and encouraged in their efforts to cultivate the competencies students' need to enhance their academic engagement and academic performance. The individualized and collaborative training and the scenario-based learning proposed in this professional development program will accomplish the following learning objectives:

- Remember that mentorship is inherent to impactful teaching;

- Understand what it means to be a mentor (the roles and responsibilities);
- Understand how effective mentoring positively influences student academic engagement;
- Learn about adaptive mentoring as an extension of complex adaptive systems;
- Understand why adaptive mentoring mindset, strategies, and tactics are essential to positive mentoring experiences for faculty and students;
- Understand why mentors need to be learners as well;
- Learn how to be reflective mentors and how to chart a personal plan for self-improvement;
- Learn about the role of emotional intelligence in supporting adaptive mentoring strategies and tactics;
- Learn how to improve emotional intelligence and why it must be an on-going quest;
- Learn how to leverage emotional intelligence to analyze and evaluate mentees' needs and abilities;
- Learn about the role of cultural-competency in supporting adaptive mentoring strategies and tactics;
- Learn how to improve cultural competency and why it must be an on-going quest;
- Learn how to leverage cultural competency to create an inclusive mentoring experience;

- Understand the power dynamics that undermine the mentoring relationship between faculty and students;
- Learning strategies that minimize the power differential inherent to faculty-student mentoring relationships.

Appendix A outlines the comprehensive plan for accomplishing these program objectives. Figure A1 (See Appendix A) maps the desired adaptive mentoring skills, mindset, and knowledge to specific program training topics. Figure A2 (See Appendix A) illustrates the learning strategy used to guide mastery of the desired adaptive mentoring skills, mindset, and knowledge.

The individualized training portion of the professional development will be delivered online. The online delivery of information enables faculty members to build their understanding of the concepts related to mentoring, adaptive mentoring, emotional intelligence, and cultural competency in a non-threatening learning environment. As faculty engage with new information to build new knowledge schemas about mentoring, the relationship between mentoring and student engagement, the process of mentoring, and themselves as mentors in solidute, faculty become more confident and more successful in responding in the moment as they encounter complex interactions with students. The individualized online portion of the professional development will also allow a space for faculty to privately journal their thoughts and concerns about being an adaptive mentor and chart their personal growth as they develop their proficiency as adaptive mentors.

The collaborative portion of the professional development training will be delivered online and in live small-group format. The online discussion forum feature will facilitate timely collaborative dialogue that will allow members to analyze, evaluate, revise, and create new pedagogical practices as they share and reflect upon their experiences putting in to practice the strategies and tactics of adaptive mentoring both in the classroom and in one-on-one interactions with students. Live small-group scenario training will also allow faculty members to collaboratively grow as adaptive mentors as the work together to put theory into practice and transform new mindsets and behaviors into second-nature responses. Immersing faculty in a variety of simulated mentor-mentee experiences allows faculty to broaden their exposure to situations and allows them a safe space to try new skills and thought processes and to hone skills and thought process for more agile and rapid productive responses.

Resources & Supports

To oversee faculty members' engagement in the online learning and the face-to-face scenario training, this professional development program requires the support of a training facilitator. Leveraging his or her expertise as an adaptive mentor, the training facilitator would be a resource for individual faculty when navigating the online knowledge building training. The training facilitator would also oversee and moderate the online discussion forum and the scenario training to assist faculty in their collective acquisition of adaptive mentoring mindsets, strategies, and tactics. Since adaptive mentoring theory and practices have never before been implemented at SRCC, there would be an initial need to out-source this part-time position. My familiarity with SRCC

faculty, staff, and students and my knowledge of adaptive mentoring theory and strategies makes me the ideal facilitator in this initial year of the professional development program. Consulting as the program facilitator also helps me to build my professional expertise for future contract opportunities. However, once a faculty member demonstrates expertise as an adaptive mentor, the work of the facilitator could be an extra paid position for a full-time faculty member or an added duty of a part-time faculty member that would earn him or her full-time hours. With regards to the online instruction modules, online journaling, and online discussion forums, these elements of the professional development can all be supported by SRCC's existing course management system, Moodle. As SRCC faculty are already familiar with the layout and features of Moodle, using this learning platform to deliver the professional development will remove unnecessary barriers that inadvertently arise when using new technology for learning new content.

Potential Barriers

The success of this professional development project also requires a mindset change among faculty members. As noted in the literature review, adaptive mentoring requires a commitment among mentors to constantly reflect, assess, and transform. While some faculty may feel their role as educator is fixed because of their acquired subject-matter expertise, the emphasis on adaptive mentoring necessitates that faculty remain in a constant state of learning. Other faculty may express displeasure with the added professional demands required of this year-long training plan. While faculty may recognize the importance of professional development in enhancing student achievement,

there is a gap between the recognized importance of faculty development and a commitment by faculty and institutions to engage in faculty development (McKee, Johnson, Ritchie, & Tew, 2013). In fact, in the 2010 "Exploring Faculty Development Activities in the Southern Region," 85% of chief academic officers reported that only 20% of their faculty used available time to participate in faculty development activities, and 94% of chief academic officers reported that 20% of the faculty used funds designated for faculty development to improve their credentials (McKee et al., 2013).

Potential Solutions

To encourage faculty buy-in of the program, I would encourage SRCC leadership to employ Kotter's (1996) change management principles. When faculty members see a greater need beyond that of self-protection, then they will be more inclined to authentically engage in the change process (Webster, 2015). Thus it can be concluded that, in terms of educational change management, leaders must rely upon data gathered from a complex and versatile system of assessment to bring about the awareness that creates the urgency for change on campus. When data is presented in clear, accurate, and visually stimulating ways, the information transmitted can be very impactful on academic decision makers (Middaugh, 2007). First, as a way of stimulating a sense of urgency for change among faculty members, I recommend holding a kick-off session to review with them the purpose and findings of this study to include the literature supporting the benefits of adaptive mentoring regarding students' academic engagement. Those faculty who express a passionate interest in the endeavor will be asked to join the leadership team of the program. Other faculty will be placed within groups to work alongside

program leaders to develop personal goals for the professional development. Then institutional leaders must devise a way to publicize frequently all the small accomplishments that faculty members make as the adopt and employ adaptive mentoring strategies and tactics. Finally, institutionally leaders must be open to potential policy changes that might need to occur to support faculty members' new way of interacting with students.

Project Evaluation Plan

The success of the professional development program will be assessed based on two criteria: the ability of the year-long training to transform faculty into adaptive mentors and the impact of the resulting culture change on students' development of the noncognitive competencies that moderate academic engagement. To evaluate the success of the professional development training in transforming faculty into adaptive mentors, I will use both a formative and summative assessment strategy. To evaluate the impact of the resulting culture change in positively impacting students' development of the noncognitive competencies that moderate academic engagement, I will use an outcomes-based assessment strategy.

Formative assessments evaluate learning as learning happens and provide a real-time analysis of the learner's interaction with learning objectives. Formative assessments identify how much and to what degree the learner has mastered learning objectives, and formative assessments identify what struggles, misconceptions, and gaps the learner may have. Short content quizzes imbedded in the online presentation of unit objectives are ideal in capturing this type of learning information. In the online learning portion of the

adaptive mentor training, each overarching learning objective will be broken down into smaller subcomponents. These short content quizzes will proceed and follow the instruction of each sub-objective to help faculty members focus on and recall important concepts, quickly move new knowledge into working memory, and identify places of misconception or confusion before moving forward (Theal & Franklin, 2010). These content quizzes will be administered and graded using the LMS text functionality. Faculty members will receive immediate feedback on their performance of these quizzes and will be required to pass the quiz with an 80% before moving to the next unit.

Formative assessment data will also be collected via a required online journal entry at the completion of the learning unit. As each faculty member masters an overarching learning objective, he or she will be required to journal about the specific learning experience: what new knowledge was acquired; how that knowledge has informed the mindset; what learning struggles were experienced; what misconceptions were overcome; and what questions remain. The facilitator will manually grade the journals using a rubric that aligns to the afore mentioned objectives of the journal assignment (see Figure A5 in Appendix A). Unlike the grading criteria for the content quizzes that focuses on accuracy, the grading criteria for the journals will focus on completion and depth of reflection. The formative assessment results from the content quizzes and journals will be available to the faculty member via the gradebook and assignment feedback feature of the institution's LMS. The facilitator will use the LMS's assignment feedback feature to provide necessary comments and responses to the journal entries.

Summative assessments evaluate learning after learning has happened and provides a macro-analysis of the learner's newly acquired expertise of the new knowledge and the learner's proficiency in applying that knowledge to think critically and solve problems. The collaborative interactions during online discussion forums and face-to-face experiential exercises will allow faculty members to demonstrate their growing aptitude as an adaptive mentor. The online discussion forums will assess faculty members' growing aptitude through their responses to open-ended questions that require a well-defended stance. To adequately defend their ideas, faculty member must synthesize and organize newly acquired knowledge and apply that knowledge correctly to the prompt. Unlike experiential exercises that mimic the real-life dynamics of adaptive mentoring experiences, online discussion forums allow faculty members time to reflect on what adaptive mentoring strategies and tactics might work best and allow faculty an opportunity to revise their response based on peer input. During the collaborative scenario-based assessments, faculty members gain feedback about their proficiency as an adaptive mentor as they must respond to the complexity and dynamics of mentoring interactions with students. With both the online discussion forums and the face-to-face scenarios, assessment data concerning faculty members' maturation as adaptive mentors will be gathered objectively by the training facilitator and assessed by the training facilitator using a prescribed performance rubric (see Figure A6 in Appendix A). The facilitator will grade the online discussion forum using the LMS discussion forum grading feature and provide feedback via the LMS gradebook. The facilitator will video record the scenario training sessions, make evaluations from the recording, and provide

feedback using the LMS gradebook and assignment feedback tool. This objective data will also be shared confidentially with designated institutional leadership. Additionally, subjective summative data will be collected through online post-scenario faculty self-assessment questionnaire (see Figure A7 in Appendix A). The questionnaire will be solely evaluated based on completion as the objective of this summative self-reflection is for the faculty to chart their personal growth and to provide subjective feedback concerning the program's effectiveness.

Outcome-based assessments evaluate the accomplishment of pre-determined goals or desired outcomes. Because this professional development plan responds to the institutional problem of student academic engagement, the overarching goal focuses on students' academic engagement. Further, since the literature review and my research findings prove that the noncognitive competencies of intrinsic motivation, sense of belonging, and academic confidence moderate student academic engagement, the more specific goal of the professional development program focuses on faculty members' ability to leverage adaptive mentoring strategies and tactics to facilitate opportunities and experiences wherein students can develop and hone these competencies. Thus, an addendum to the current campus climate survey that queries students' perceptions of such opportunities, experiences, and encouragements provides an efficient and effective means for assessing the project's success in addressing the initial research problem (see Appendix A). Assessment data gathered from the campus climate survey will be shared with all institutional stakeholders to include students, staff, faculty, and administrators to support discussions about the effectiveness of the professional development plan. This

data will also be reported publicly in keeping with the release procedures for the campus climate survey.

Project Implications

At the local level, this professional development plan can significantly improve the academic performance and persistence rates of many students. Mentoring programs have routinely demonstrated the ability to facilitate students' develop and mastery of the academic skills and emotional and psychological competencies that substantially enhance their achievement, persistence, and transfer rate to four-year institutions (Wood & Newman 2015; Wood & Ireland, 2014; Harper 2014). As faculty become better equipped to meet the mentoring needs of their students, students are then better able to build the skills required to excel in the classroom. As student performance improves, SRCC's performance measurements likewise improve, bringing the community college into closer alignment with the federal benchmarks of institutional success.

On a national scale, this professional development plan can significantly improve faculty members' ability to meet the needs of their diverse students and thereby improve the academic success of their students. Such correlating benefits to students—particularly first-generation, low SES students of color--can potentially have a significant positive impact on students' quality of life Census data and data compiled by the Bureau of Labor and Statistics have long since demonstrated the correlation between education attainment and income earning. Most recent census data indicate that an individual 25 years and older with a Bachelor's degree earns about $22,430 more than his or her counterpart with a high school diploma or equivalent and $16,013 more than his or her

counterpart with an Associate's degree or some college experience. Additionally, based on this earning data, an individual 25 years and older with a high school diploma or equivalent will spend about 47% of his or her income on rent, and individuals with an Associate's degree or some college experience spend about 37% of his or her income on rent. Thus, degree attainment significantly impacts an individual's income earning and quality of life (Census, 2015; Bureau of Labor and Statistics, 2018). Yet African-Americans and Hispanics, the lowest wage earners in the country (Bureau of Labor and Statistics, 2018), are those who have the most difficulty in obtaining a Bachelor's degree (Martin et al., 2014), and are also those who are more likely to abandon their academic pursuits (Khline & Areepattaamannil, 2016; Silva & White, 2013).

But faculty development initiatives that improve students' academic performance at the community college (Ridgeway et al., 2017; Schmidt, 2018; Severs, 2017) can directly support individual's ability improve their income earning and quality of life by supporting students' efforts to obtain an Associate's degree and ability to persist towards to completion of the Bachelor's degree. According to a recent report from the National Student Clearinghouse (NSC), nearly half (46%) of all students who completed a degree at a four-year institution in 2013-14 had enrolled at a two-year institution at some point in the previous 10 years (The College Board, 2015). Since many students attending community colleges are students of color and from low-socio-economic status, community colleges are uniquely positioned to positively contribute to social change by helping marginalized individuals attain greater social capital through the attainment of the Associates and then Bachelor’s degree.

Section 4: Reflections and Conclusions

Project Strengths and Limitations

The project responds to the identified problem by working within the construct of the given system of teaching and learning. For example, there is no extra time demanded of students, as mentoring experiences happen both inside and outside the classroom; after they complete the professional development program, there is no extra time demanded of faculty; after an initial training cycle, there is no extra financial demand because onsite faculty become program trainers; and the curriculum is delivered using existing soft and hardware infrastructure. Grounding the professional development curriculum in the complex adaptive system theoretical framework serves as another project strength. First, this framework provides a comprehensive lens that captures the complexity and dynamic aspects of adaptive mentoring simultaneously. This lens then provides the perspective needed to develop training objectives that fully address the requirements of adaptive mentoring. Finally, with these clearly defined training objectives devised through the CAS lens, the specific curriculum content can be developed in a methodological and cohesive manner.

Other project merits include leveraging the power of experiential learning and the convenience and comfort of CBT. As discussed in the literature review, when mentors have felt that their training was meaningful, they have been more willing to persist as mentors (Deutsch et al., 2017; McQuillin et al., 2015), and the whole-person learning stimulated by scenario-based training stimulates creates poignancy that will mentally and emotionally draw faculty into the professional development (Blum & Bergsch,

2009; Hopwood, Rooney, Boud, & Kelly, 2014; Hsu et al., 2015). Likewise, the convenience and comfort of CBT for online content delivery and mentor self-reflection will allow faculty to participate in the bulk of the learning at a time that fits their schedule while also enabling them to choose a safe space in which to wrestle with the personal growth demanded by the curriculum (Dweck & Legget, 1998; Rovai, 2003; Watson, 2008).

Unfortunately, there are several logistical hurdles that will make this project challenging to execute. About a year will be needed to develop all of the project modules, discussion questions, and scenarios. Additionally, it will take some time to cultivate faculty support regarding the merits of adaptive mentoring and the need for training, and then with their buy-in, it will take time to develop in faculty the adaptive mentoring skills needed to respond emotionally and psychologically to a variety of student mentoring scenarios (Middaugh, 2007; Webster, 2015). Finally, creating a valid and reliable evaluative tool represents a significant challenge. The plan is to use a campus climate survey to measure the effectiveness of the faculty development program in bolstering student engagement, but these added questions to the survey must be carefully crafted so that the questions inform students about adaptive mentoring without influencing students' perspective and responses.

Recommendations for Alternative Approaches

The project responds to the student engagement problem by creating an immersion experience for students. With the institution's culture saturated with adaptive mentoring attitudes and behaviors, students who are not yet intrinsically motivated and

who do not yet have enhanced academic confidence may have opportunities to develop those competencies whenever they are on campus. I chose this perspective on resolving the problem because it aligns with the way that students in the study indicated that they learned these competences. All of the students who identified themselves as highly motivated, self-confident learners with a strong sense of belonging indicated that they developed these competencies over time through intimate interactions with family members or through other intimate relationships. However, it is possible to introduce students to these competencies during freshman orientation.

Freshman orientation is a required course for all students in their first year at SRCC. Thus, redesigning freshman orientation to include the development of these noncognitive competencies as course objectives would afford all students the opportunity to at least be exposed to these vital areas that impact academic engagement. Addressing the problem of student engagement in the freshman orientation class reduces the strain placed on the institution's faculty by placing the burden of mentorship solely on those who teach freshman orientation. However, this approach also reduces the scope and duration of learning for students if they are only mentored in their development of these noncognitivenoncognitive competencies while in the semester-long freshman orientation course.

Putting greater emphasis on the existing Pay It Forward mentoring program could also be an approach to resolving the problem of student academic engagement. In fact, the mentoring program was designed to address the problem of student academic engagement by offering students support through weekly meetings and field trips.

However, this approach to bolstering student engagement is limited by its reach. Although students can attend sessions and events without a formal commitment to the program, as the study results indicate, many students have competing external demands that constrain the time they have to participate in after-class activities. Further, the supports that students receive in developing the essential noncognitive competencies do not extend beyond students' interaction with those faculty members in the program. As with the freshman orientation course, this approach potentially offers immediate benefits, but neither approach can sustain the long-term support that students need to develop their intrinsic motivation, sense of belonging, and academic confidence.

Alternative Definitions of the Problem and Alternative Solutions to the Local Problem

The problem of student academic performance does not lend itself to a simple solution. The factors that positively and negatively influence student academic performance are varied and complex. While this study and the resulting project address the problem of student academic performance by focusing on the noncognitivenoncognitive competencies that have been found to moderate student academic engagement, there are several other viable perspectives that could be taken when analyzing institutional data about student academic performance. For example, SRCC's stagnant academic performance measures from Fall 2012 to Fall 2015, despite its growth of student success initiatives, could be an indication of ineffective teaching practices. Analyzing faculty members' performance in relation to students' academic achievement would put more emphasis on a solution rooted in improving faculty

members' pedagogy. Yet inadvertently placing blame on faculty members by criticizing their pedagogy might create a negative work environment wherein faculty would be less likely to work with institutional leaders toward a solution. Conversely, students' stagnant academic performance could also be a factor of students' proficiency level upon entering the institution. Focusing on students' prior proficiency as the problem would put more emphasis on the institution's entrance requirements. However, because SRCC, like all North Carolina community colleges, prides itself on offering open access to higher education, institutional leaders might be less inclined to define the problem of student academic performance in terms of entrance requirements.

Scholarship, Project Development and Evaluation, and Leadership and Change

During the course of my research and project development, I matured as a researcher and a professional, and although my professional classroom experience was essential to the project's development, this research experience has given me greater wisdom as a teacher. As a researcher, I became more proficient at uncovering research problems. Specifically, I now understand more fully that the research problem is rooted in descriptive data and that without ample data, it is impossible to develop an adequate problem statement. This emphasis on descriptive data also enhances accuracy and depth regarding the scope and direction of research. I also learned how to choose an appropriate research method based on the identified problem and the questions that drive the hypothesis. Finally, I learned how access to the field significantly impacts the quality of data gathered. As such, I had to learn how to market my proposal to institutional

leaders to gain access to conduct the student interviews I needed for this qualitative study.

Reflection on Importance of the Work

Student academic performance has long been the focus of leaders at all levels of education, but recently, as the literature review demonstrates, the conversation has matured to consider the role of noncognitive factors that influence how the brain learns. As the psychology of learning takes center stage, the recognized importance of mentoring relationships in bolstering these noncognitive competences will influence the solutions that institutional leaders seek. For example, at the community college level, the NCCCS issued 3-year grants to 12 of its 58 community colleges and holds system-wide conferences throughout the year to find ways to improve student academic engagement through mentoring efforts. At the secondary level, Wake County, the largest county within North Carolina with 171 schools, identified in its *Strategic Plan: Vison 2020* responsive and adaptive teaching as one of its four strategies for providing effective learning to the diverse students within the county (Wake County Public School System, 2015). Thus, as education leaders at all levels seek ways to transform faculty into mentors, they could find their solution in the comprehensiveness of this adaptive mentoring faculty development.

Implications, Applications, and Directions for Future Research

Given the increased demand for faculty at all levels of education to adopt mentoring relationships with students, this project has widespread application. However, before the faculty development program can have the desired national impact, it must be

tested and vetted. Specifically, the curriculum must be researched to determine its effectiveness in transforming faculty into adaptive mentors, and the immersive mentoring approach must be researched to determine its effectiveness in developing the noncognitivenoncognitive competencies that moderate student academic engagement. Ideally, SRCC will adopt this this project and allow me continued onsite access to implement and test the faculty development curriculum.

Conclusion

Education, as the seed of social equity, demands a soil rich in nutrients and leaders experienced in cultivating a bountiful harvest. In such a supportive environment, the system of education blossoms to provide for a variety of learning needs of increasingly diverse students. When sustained by a robust system of learning, students receive the skills and competencies needed to mature into and thrive as contributing global citizens. However, as students and their learning needs transform, the process of education itself must likewise adapt or else education will lose its ability to inspire and empower students toward social mobility. This adaptive mentoring faculty development program will equip teachers to respond to the complex and dynamic learning scenarios created by the diversity of students' needs. For it is in each faculty member's ability to cultivate within students the skills to succeed that the seed of education grows.

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Appendix A: The Project

Complex Adaptive Mentoring Professional Development

The professional development project has three levels of conceptualization. The operational level of the project is driven by the overall project outcome: the development of adaptive mentoring skills and mindsets needed to respond to the complex adaptive system of mentoring and mentee relationships. In Figure A1, the development of these required skills and mindsets is organized so that the mentor's maturation logically progresses from a fundamental recognition of mentoring as a natural extension of teaching to an understanding of education as a complex adaptive system to the creative application of the key adaptive mentoring skills and mindsets to assist students in the mastery of the con-cognitive compete. ncies that moderate student academic engagement.

Training Topic	Phase of Adaptive Mentoring Development
Discovering the intersection of Mentoring and Teaching	Remember that mentorship is inherently to impactful teaching; (start with why)
Adaptive Mentoring as a Response to Leading Diverse Students	Learn about adaptive mentoring as an extension of complex adaptive systems and understand what it means to be an adaptive mentor;
The Positive Impact of Adaptive Mentoring on Student Engagement	Understand how adaptive mentoring positively influences student academic engagement;
Adopting Adaptive Mentoring Mindsets, Strategies, and Tactics	Understand why adaptive mentoring mindset, strategies, and tactics are essential to positive mentoring experiences for faculty and students and using that mindset and skills to help students master the essential non-cognitive competencies;
Mentors are Learners too!	Understand why mentors need to be learners as well;
Mentors Need a Plan for Personal Growth too!	Learn how to be reflective mentors and how to chart a personal plan for self-improvement;
Being an Emotionally Intelligent Mentor	Learn about the role of emotional intelligence in supporting adaptive mentoring strategies and tactics;
The Constant Quest to Improve EQ	Learn how to improve emotional intelligence and why it must be an on-going quest;
Meeting Mentees' Needs by Leveraging EQ	Learn how to leverage emotional intelligence to analyze and evaluate mentees' needs and abilities;
Being a Culturally Competent Adaptive Mentor	Learn about the role of cultural-competency in supporting adaptive mentoring strategies and tactics;
The Constant Quest for Cultural Competency	Learn how to improve cultural competency and why it must be an on-going quest;
Cultural Competency and Inclusive Mentoring	Learn how to leverage cultural competency to create an inclusive mentoring experience;

Figure A1. Professional development training topics and their corresponding skills.

Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001) directs the pedagogical approach for building strategic level of the project: the cognitive mastery of the adaptive mentoring mindsets and skills. Grounding the strategies of the professional development program in the learning outcomes of Bloom's Revised Taxonomy ensures that the new concepts and behaviors identified in each phase of the adaptive mentoring developmental process outlined in Figure A2 becomes fixed in the mentor's cognitive schema. Figure A2 correspondess each phase of cognitive development process to the teaching strategies.

Cognitive Development	Project Strategies	Assessment Tools
Remember Retrieve relevant knowledge from long-term memory.	Online content delivery; online journals; online discussion forums; scenario-based training.	Unit quizzes, online journal rubric, discussion response rubric, scenario response rubric, post-scenario self-assessment.
Understand Construct meaning from instructional messages, including oral, written, and graphic communication.	Online content delivery; online journals; online discussion forums; scenario-based training.	Unit quizzes, online journal rubric, discussion response rubric, scenario response rubric, post-scenario self-assessment.
Apply Carry out or use a procedure in a given situation.	Online discussion forums; scenario-based training.	Online journal rubric, discussion response rubric, scenario response rubric, post-scenario self-assessment.
Analyze Break material into constituent parts and determine how parts relate to one another and to an overall structure of purpose.	Online discussion forums; scenario-based training.	Online journal, discussion response rubric, scenario response rubric, post-scenario self-assessment.
Evaluate Make judgments based on criteria and standards.	Scenario-based training.	Scenario response rubric, post-scenario self-assessment.
Create Put elements together to form a coherent whole; reorganize into a new pattern or structure.	Scenario-based training.	Scenario response rubric, post-scenario self-assessment.

*Figure A*2. Strategic map of the professional development cognitive schema.

Finally, the Understanding by Design (UBD) framework (Wiggins & McTighe, 2005) provides the tactical structure for building each unit's curriculum. UBD emphasizes thinking backwards—focusing on the desired outcomes—to develop the appropriate learning tactics. In this case, the phases of adaptive mentoring development (Figure A1) that are accomplished as mentors move through the phases of cognitive development (Figure A2) represent the desired outcomes of the project. Figure A3 and Figure A4 demonstrate the process for building curriculum that uses the UBD framework and is informed by Bloom's cognitive process to develop mature adaptive mentors.

Title of Unit	The Positive Impact of Adaptive Mentoring on Student Engagement
Identify Desired Results (Stage 1) • Faculty will learn about the many ways adaptive mentoring strategies and mindsets can be used to positively impact interactions with diverse mentors to assist mentors in the development of the non-cognitive competencies that moderate student engagement; • Faculty will recognize adaptive mentoring strategies and mindsets at work in; • Faculty will analyze scenarios to compare adaptive mentoring strategies to fixed mentoring strategies; • Faculty will evaluate the effect of adaptive mentoring strategies on student academic engagement through scenario.	
Phase of Adaptive Mentor Development Understand how effective mentoring positively influences student academic engagement.	
Understandings	**Essential Questions**
Engaged mentees work autonomously and confidently with an accurate perception of their effort, with the ability to regulate distracting negative emotions, with a hope in their ability to accomplish challenging tasks, and with a sense of belonging and connectedness to the learning community. Noncognitive competencies such as intrinsic motivation, sense of belonging, and self-efficacy positively impact student academic engagement; Mentors in the learner-centered learning environment are at varying degrees of mastering these noncognitive competencies; These non-cognitive competencies are usually developed through positive interactions in mentoring relations; Teachers in a learner-centered learning environment are no longer "the sage on stage" but "the guide on the side." Mentoring relationships are complex and dynamic, so mentors need a variety of skills and an adaptive mindset to effectively guide mentors in the development of the vital non-cognitive competencies.	What does the learning environment look like? • What skills needed to succeed? • Why do some fail to thrive? How do students develop the skills needed to thrive in the learner-centered learning environment? How can the mentor positively impact the students' development of the non-cognitive skills that moderate students' academic engagement? Who can be an effective adaptive mentor? Will adaptive mentoring experiences really help students improve their academic engagement?
Related Misconceptions Being a mentor is a natural talent—you either have it or you don't. Students' intelligence and ability is fixed.	
Knowledge Mentors will know…	**Skills** Mentors will be able to…
…why non-cognitive competencies are important to student academic engagement; …adaptive mentoring strategies and mindsets; …the many ways adaptive mentoring strategies and mindsets can be used to positively impact interactions with diverse mentors to assist mentors in the development of the non-cognitive competencies that moderate student engagement.	…recognize adaptive mentoring strategies and mindsets at work in; …analyze scenarios to compare adaptive mentoring strategies to fixed mentoring strategies; …evaluate the effect of adaptive mentoring strategies on student academic engagement through scenario.

Figure A3. UBD format for aligning unit objectives and outcomes to build lesson tactics for Stage 1.

Assessment Evidence (Stage 2)	
Performance Task Description	
Goals	1. Can describe and explain adaptive mentoring skills and mindsets; 2. Can describe the non-cognitive competencies and explain their impact student academic engagement 3. Can demonstrate perspective by seeing the ways adaptive mentoring positively impacts student development of non-cognitive competencies 4. Can recognize when adaptive mentoring skills and mindsets are being used to positively impact the mentoring relationship; 5. Can demonstrate perspective by correctly analyzing and evaluating scenarios when adaptive mentoring can be used; 6. Can demonstrate self-knowledge about current abilities as an adaptive mentor.
Product/Performance Aligned to Goals	1. Unit quizzes; online journal, online discussion response, scenario response, post-scenario self-assessment. 2. Unit quizzes; online journal, online discussion response, scenario response, post-scenario self-assessment. 3. Online journal, online discussion response, scenario response, post-scenario self-assessment. 4. Online discussion response, scenario response, post-scenario self-assessment. 5. Scenario response, post-scenario self-assessment. 6. Online journal, post-scenario self-assessment.
Learning Plan (Stage 3)	
Where have they been? Where are your mentors headed? How will you make sure the mentors know where they are going?	Mentors **have learned** about the natural extension of teaching to mentoring, and mentors **have been introduced to** the concept of adaptive mentoring as an effective response to the complex and dynamic process of mentoring. Mentors **will learn** about the positive impact of adaptive mentoring on student academic engagement.
How will you hook mentors at the beginning of the unit?	Video montage of graduating students who give credit to their teachers.
What events will help mentors experience and explore the big idea and questions in the unit?	Small modules of content delivery followed by reflective journaling; collaborative discussion of ideas stimulated by questions at all levels of higher order thinking; practical application of ideas and skills in scenarios.
How will you equip them with needed skills and knowledge?	Mentors will have 24-hour access to online content; mentors will be able to access prior units and previous discussions.
How will you cause mentors to reflect and rethink? How will you guide them in rehearsing, revising, and refining their work?	Online journals and post-scenario self-assessment stimulate reflection; Repeating unit quizzes and a-synchronous online discussion forums enables mentors to rethink, revise, and refine their knowledge and application of adaptive mentoring skills and mindsets.
How will you tailor and otherwise personalize the learning plan to optimize the engagement and effectiveness of ALL mentors, without compromising the goals of the unit?	The online learning platform allows mentors to engage in the majority of the professional development at a convenient time and in a preferred location. Also, online discussion forum question will be open-ended and will encourage Socratic Seminar style engagement among mentors.
How will you organize and sequence the learning activities to optimize the engagement and achievement of ALL mentors?	Each unit adheres to the same organization and sequence: 1. Online content delivery with required unit quizzes; • Outline module objectives; • Definition of key terms and ideas; • Examples of real-word application; • Exercises for application; 2. Online discussion forum (initial post and two responses minimum) 3. Face-to-face experiential exercise; 4. Online summative reflective journal.

Figure A4. UBD format for aligning unit objectives and outcomes to build lesson tactics for Stages 2 and 3.

The following lesson plan, "The Positive Impact of Adaptive Mentoring on Student Engagement," demonstrates how the curriculum theory outlined in Figure A1 leads to the practical delivery of course objectives.

THE POSITIVE IMPACT OF ADAPTIVE MENTORING ON STUDENT ENGAGEMENT

THE SITUATION

Roxanna Russel is a student in your morning section. At week six of the semester, you notice a negative trend in her attendance: she is usually absent two of five days each week. Although she is attentive in class—meaning she is not on her cell phone, sleeping, doing other classwork, or talking to other students—she struggles to do well on assignments because she has major gaps in her understanding of course objectives. She also has two missing quiz grades because she was absent on the days you administered the quizzes. It is not quite midterms, but by this pattern and your experience, you can tell that Roxanna is on her way to failing the course.

As you reflect on this scenario, you may be wondering:

- ***Why do some students fail to thrive?***
- ***What skills do students need to succeed?***
- ***How do students develop the non-cognitive competencies that moderate student academic engagement?***
- ***How can adaptive mentoring positively impact students' development of the vital non-cognitive competencies?***

Knowledge you will learn to answer these questions:

- ✓ The importance of non-cognitive competencies to student academic engagement;
- ✓ Adaptive mentoring strategies and mindsets;
- ✓ The many ways adaptive mentoring strategies and mindsets can be used to positively impact interactions with diverse mentors to assist mentors in the development of the non-cognitive competencies that moderate student engagement.

Skills you will learn to respond to these questions:

- ✓ Recognize adaptive mentoring strategies and mindsets at work in;
- ✓ Analyze scenarios to compare adaptive mentoring strategies to fixed mentoring strategies;
- ✓ Evaluate the effect of adaptive mentoring strategies on student academic engagement through scenario.

LESSON 1: WHY DO SOME STUDENTS FAIL TO THRIVE?

Learning Objective: Analyze the characteristics of the learner-centered learning environment

The learner-centered paradigm describes the active educational environment that encourages students to engage with learning by connecting academic subject matter to their personal lives and thereby achieve greater self-awareness and academic knowledge.

Learner-centered principles:

- Creates substantive change in individual learners;
- Engages learners as full partners in the learning process with learnings assuming primary responsibility for their own choices;
- Offers as many options for learning as possible;
- Assists learners to form and participate in collaborative learning activities;
- Involves instructors as learning facilitators for the needs of the learners;
- Defines success only when improved and expanded learning can be documented for learners.

LESSON 1: WHY DO SOME STUDENTS FAIL TO THRIVE?

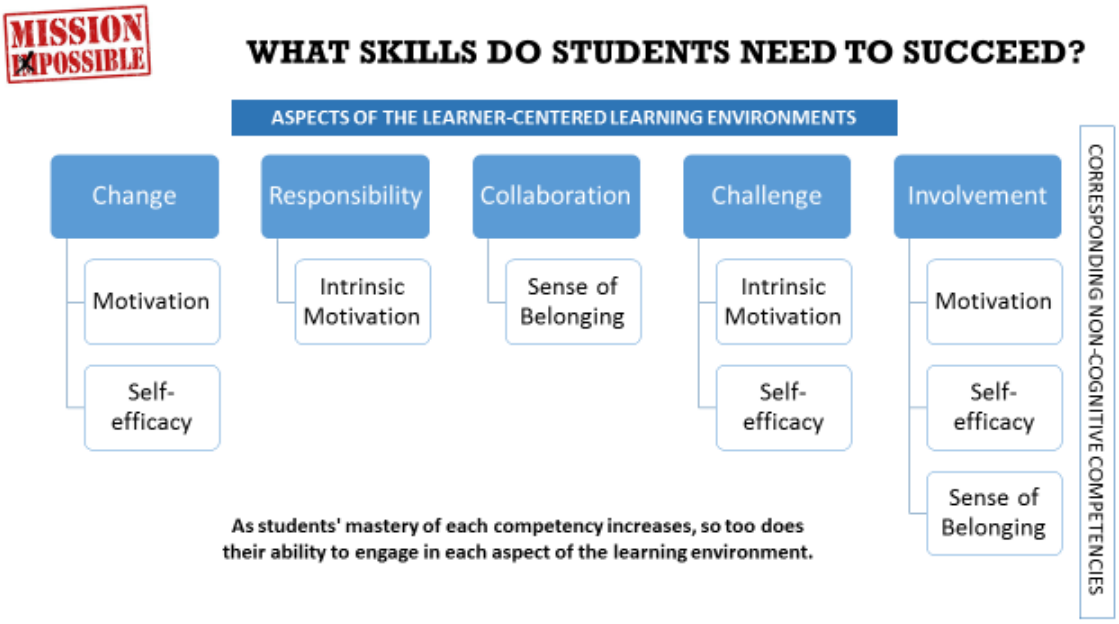
Educational practices that detail they type of behavior and interactions necessary to create a learner-centered learning experience:

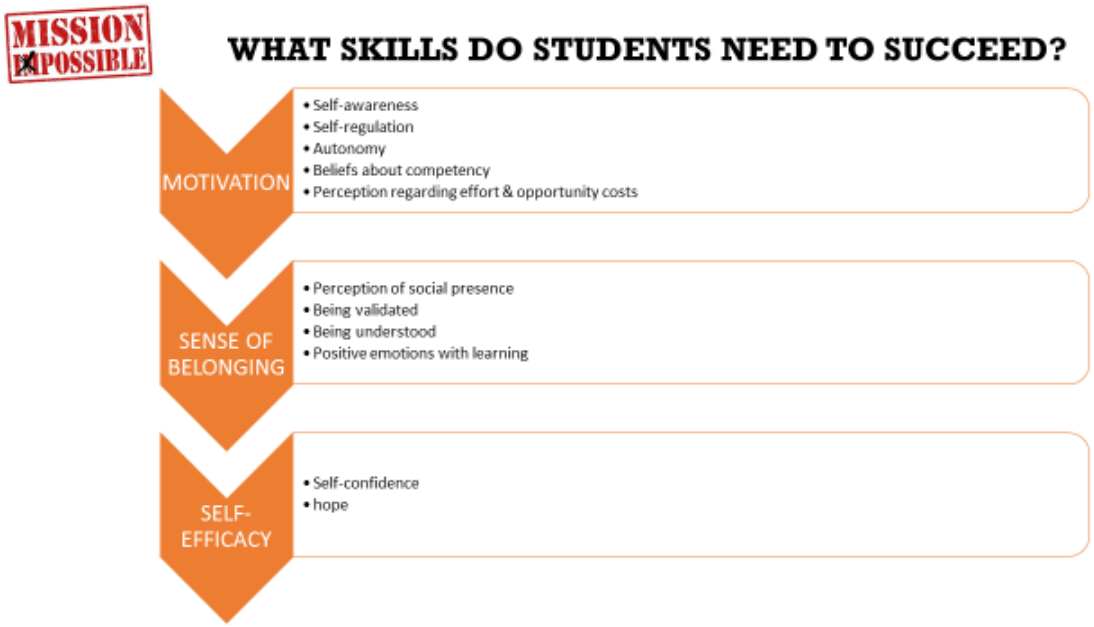
- Work that is challenging and creative for which there are high expectations for student performance;
- Learning that involves students in their education and that asks them to think about and apply what they are learning to different, real-world problems;
- Faculty, as mentors, model how to think about and solve career specific problems;
- Activities that extend learning beyond the classroom and that embrace cultural diversity;
- Faculty, as mentors, help students develop a sense of belonging and help students problem solve about external pressures hindering learning.

LESSON 2: WHAT SKILLS DO STUDENTS NEED TO SUCCEED

Learning Objective: Understand the role of non-cognitive competencies in moderating student academic engagement

The learner-centered learning environment emphasizes the mastery of specific non-cognitive skills for learning to happen, and student engagement--the extent to which students participate in the learner-centered learning process—is moderated by students mastery of these competencies


MISSION POSSIBLE
WHAT SKILLS DO STUDENTS NEED TO SUCCEED?
ASPECTS OF THE LEARNER-CENTERED LEARNING ENVIRONMENTS
Change
Motivation
Self-efficacy
Responsibility
Intrinsic Motivation
Collaboration
Sense of Belonging
Challenge
Intrinsic Motivation
Self-efficacy
Involvement
Motivation
Self-efficacy
Sense of Belonging
CORRESPONDING NON-COGNITIVE COMPETENCIES
As students' mastery of each competency increases, so too does their ability to engage in each aspect of the learning environment.


MISSION POSSIBLE
WHAT SKILLS DO STUDENTS NEED TO SUCCEED?
MOTIVATION
• Self-awareness
• Self-regulation
• Autonomy
• Beliefs about competency
• Perception regarding effort & opportunity costs
SENSE OF BELONGING
• Perception of social presence
• Being validated
• Being understood
• Positive emotions with learning
SELF-EFFICACY
• Self-confidence
• hope

WHAT SKILLS DO STUDENTS NEED TO SUCCEED?

Motivation has been determined to be the catalyst for student engagement within a learner-centered environment. In fact, data collected from a longitudinal study involving 48 colleges and universities found that students' participation in a hot cognitive learning environment correlated to students' desire to mindfully seek out an active learning experience.

THE MULTI-DIMINSIONS OF MOTIVATION

INTRINSIC	EXTRINSIC
Internally Driven	Externally Driven
Mastery Goal Oriented	Performance Goal Oriented
Achieved Self-Awareness	Low Self-Awareness

WHAT SKILLS DO STUDENTS NEED TO SUCCEED?

Motivation has been determined to be the catalyst for student engagement within a learner-centered environment. In fact, data collected from a longitudinal study involving 48 colleges and universities found that students' participation in a hot cognitive learning environment correlated to students' desire to mindfully seek out an active learning experience.

INTRINSIC MOTIVATION

Internal Drive defined as:

- Autonomy—students choose to engage in the learning as they perceive a connection to their interests and values;
- Competency—students confidence in and desire to test their abilities;
- Relatedness—students need to form close relationships with others

Mastery Goal Orientation defined as students who set goals to increase their skills and competencies and to master and learn new materials

Achieved Self-Awareness defined as students who can make commitments to their academic pursuits because they have had ample prior opportunities for self-exploration

WHAT SKILLS DO STUDENTS NEED TO SUCCEED?

INTRINSIC MOTIVATION

Within the community college setting, goal orientation and motivation can have significant impact on students' graduation and transfer rates.

CC students have 60% lower goal attainment than their peers at 4yr college.

CC students from low-income families and underrepresented minority groups also have lower goal attainment than their CC peers.

But as students become self-reflective learners who readily and willingly adopt new learning approaches, they likewise improve their academic engagement.

WHAT SKILLS DO STUDENTS NEED TO SUCCEED?

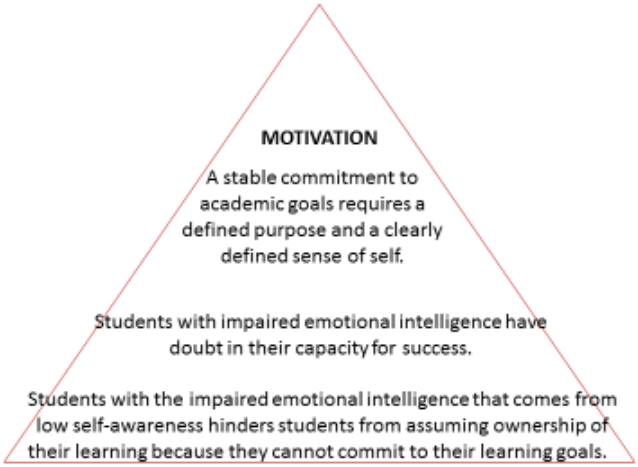
EXTRINSIC MOTIVATION

External Drive defined as

Performance Goal Orientation defined as either seeking affirmation based on outperforming peers or seeking acceptance by not expending much effort for fear of failure.

Low Self-awareness defined as students with limited ability to make commitments to learning because they need more time to engage in meaningful personal exploration or because they need to have anxiety in their lives removed to engage in meaningful personal exploration.

WHAT SKILLS DO STUDENTS NEED TO SUCCEED?



WHAT SKILLS DO STUDENTS NEED TO SUCCEED?

Sense of belonging describes students' personal connection to the learning environment to include their relationship with peers and institutional agents. Social belonging also describes students' social presence within those relationship.

SENSE OF BELONGING

...positively influences the type of personal relationships students engage in within the learning environment and the degree of social presence those relationships afford students.

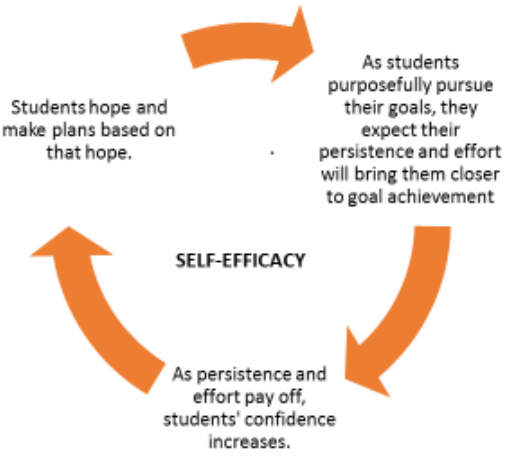
When students feel socially connected to the learning environment in real ways, those students are more likely to dedicate more effort to assignment.

Students' motivation & their internal desire to pursue their educational goals...

MISSION POSSIBLE

WHAT SKILLS DO STUDENTS NEED TO SUCCEED?

Self-efficacy describes the academic confidence students have for learning, and this confidence equally consists of hope and expectation.



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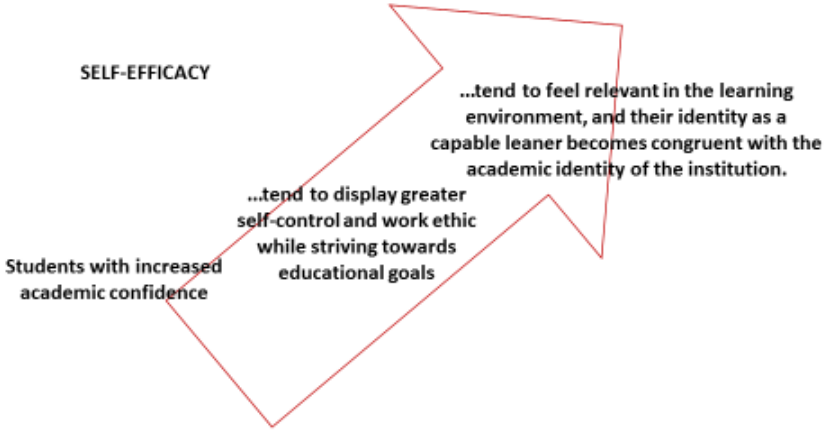
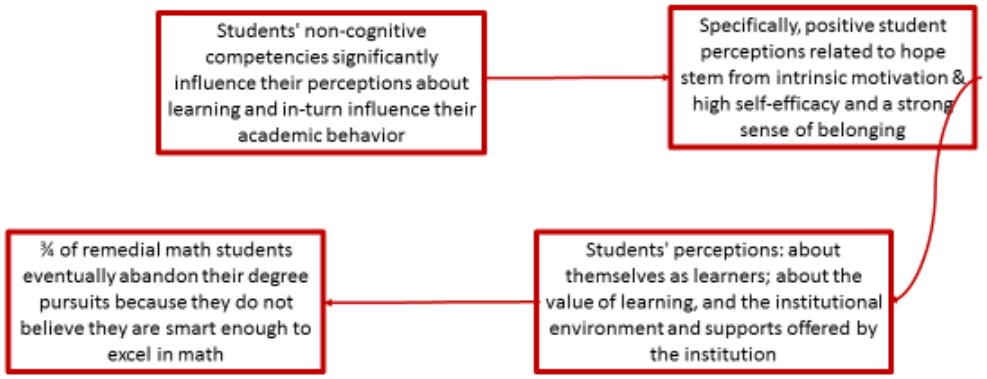
WHAT SKILLS DO STUDENTS NEED TO SUCCEED?



WHAT SKILLS DO STUDENTS NEED TO SUCCEED?

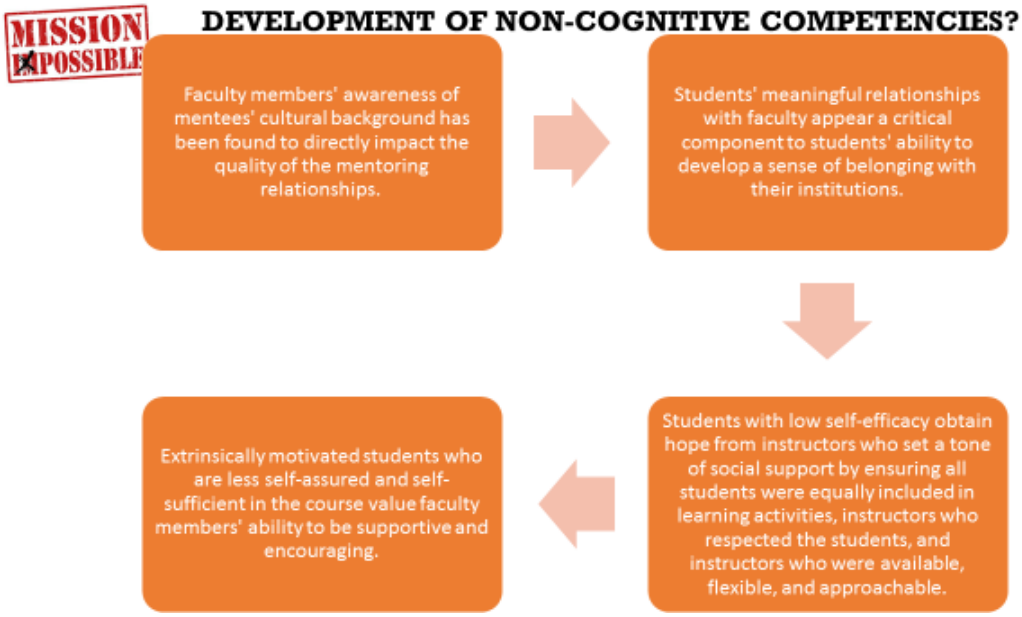


LESSON 4: HOW CAN THE ADAPTIVE MENTOR POSITIVELY IMPACT STUDENTS' DEVELOPMENT OF NON-COGNITIVE COMPETENCIES?

Learning Objective: Become familiar with the type of mentoring relationship that facilitates students development of non-cognitive competencies.

Research indicates that the non-cognitive competencies that moderate student academic engagement are developed as the by-product of student-faculty relationships that are characterized by open communication, trust, and mutual respect.

HOW CAN THE ADAPTIVE MENTOR POSITIVELY IMPACT STUDENTS' DEVELOPMENT OF NON-COGNITIVE COMPETENCIES?



DISUCSSION FORUM QUESTIONS

Respond to each question at the conclusion of the corresponding lesson. After you make your initial post, be sure to reply to at least two of your peers' posts.

Lesson 1: When you think about students who struggle to engage in the learning environment and learning activities, what seems to be their biggest hurdle?

Lesson 2: Reflect on your top performing students, what learner characteristics/attributes seem to enable them to fully engage in your classroom learning experience? As you answer this question, be sure to note specific learner characteristics/attributes and explain what specific learning activities students apply them.

Lesson 3: What tactics and strategies have you tried before to engage students who do not have good performance marks? Evaluate the success of your efforts—what worked and why...what didn't work and why not?

Lesson 4: Based on what you learned about adaptive mentoring, in what ways are you already adapting to meet the needs of your students? How do you need to grow to become more adaptive?

SCENARIO

Respond to each question at the conclusion of the corresponding lesson. After you make your initial post, be sure to reply to at least two of your peers' posts.

Now that we know a bit more about learner-centered learning, about the role of non-cognitive competencies in moderating student academic engagement, and about the positive impact of faculty on developing those competencies, let's return to the scenario with Roxanna to see if we can help her get back on track.

Directions: Watch each video response:

1. Reflect on the scenario and the characterization of Roxanna. What non-cognitive competencies does she seem to be lacking and how does the absence of those competencies impact her academic engagement?
2. For each video, what instructor tactics seem to be most effective in bolstering Roxanna's non-cognitive competencies?
3. Which of the responses seems to be the least effective? How do you evaluate that response as less effective/not effective?

END OF UNIT JOURNAL REFLECTION

Respond to the reflection question(s) at the conclusion of the unit. This is time for you to reflect on what you have learned, how you have responded to the discussion forum questions, and how you have performed in the scenario training. Be honest with yourself, really contemplate what you have learned, and challenge yourself to grow!

What is a concept or perspective related to non-cognitive competencies or adaptive mentoring that challenges your current pedagogical approach?

What is one step you can take to begin re-considering this concept or perspective and implementing it into your teaching style?

Criteria	Unsatisfactory-Beginning	Developing	Accomplished	Exemplary	Total
Content Reflection	**0-34 points**	**35-39 points**	**40-44 points**	**45-50 points**	**/**30
	Reflection lacks critical thinking. Superficial connections are made with key unit concepts and theories.	Reflection demonstrates limited critical thinking in applying, analyzing, and/or evaluating key unit concepts and theories. Minimal connections made through explanations, inferences, and/or examples.	Reflection demonstrates some degree of critical thinking in applying, analyzing, and/or evaluating key unit concepts and theories. Connections made through explanations, inferences, and/or examples.	Reflection demonstrates a high degree of critical thinking in applying, analyzing, and evaluating key unit concepts and theories. Insightful and relevant connections made through contextual explanations, inferences, and examples.	
Personal Growth	**0-13 points**	**14-15 points**	**16-17 points**	**18-20 points**	**/**20
	Conveys inadequate evidence of reflection on new knowledge acquired, how that knowledge has informed the mindset, the learning struggles experienced as a result of new knowledge, and misconceptions overcame. Personal growth and awareness are not evident and/or demonstrates a neutral experience with negligible personal impact. Lacks enough inferences, examples, personal insights and challenges, and/or questions that remain.	Conveys limited evidence of reflection on new knowledge acquired, how that knowledge has informed the mindset, the learning struggles experienced as a result of new knowledge, and misconceptions overcame. Demonstrates less than adequate personal growth and awareness through few or simplistic inferences made, examples, insights, and/or challenges that are not well developed. Minimal thought questions that remain.	Conveys evidence of reflection on new knowledge acquired, how that knowledge has informed the mindset, the learning struggles experienced as a result of new knowledge, and misconceptions overcame. Demonstrates satisfactory personal growth and awareness through some inferences made, examples, insights, and challenges. Some thought of questions that remain.	Conveys strong evidence of reflection on new knowledge acquired, how that knowledge has informed the mindset, the learning struggles experienced as a result of new knowledge, and misconceptions overcame. Demonstrates significant personal growth and awareness of deeper meaning through inferences made, examples, well developed insights, and substantial depth in perceptions and challenges. Synthesizes current experience into meaningful and reflective questions that remain.	
				TOTAL POINTS (sum of 2 Criteria)	**/50**

Figure A5. Evaluation rubric for online journal assignment.

Criteria	Unsatisfactory-Beginning	Developing	Accomplished	Exemplary	Total
Initial Post	**0-34 points**	**35-39 points**	**40-44 points**	**45-50 points**	**/**30
	Are not made in timely fashion, if at all. Are superficial, lacking in analysis or critique. Contribute few novel ideas, connections, or applications. Limited or no connections made to program content and no specific examples or real-world application provided.	Are usually, but not always, made in a timely fashion. Are generally accurate, but the information delivered is limited in the scope and depth of dealing with course content. Connections made are unclear and established with minimal/superficial specific examples or real-world application.	Are made in a timely fashion, giving others an opportunity to respond. Are thoughtful and analyze the content or question asked. Make connections to the course content and/or other experiences.	Are made in a timely fashion, giving others an opportunity to respond. Are very thoughtful by responding to the question asked by synthesizing and organizing newly acquired knowledge and applying that knowledge thoroughly and correctly. Make meaningful connections to the program content and/or other experiences by referencing specific examples and making real-world application	
Response to Peers	**0-13 points**	**14-15 points**	**16-17 points**	**18-20 points**	**/**20
	May veer off topic. Show little effort to participate in learning community as the discussion develops by posting no replies.	Summarize what other students have posted and contain few novel ideas by posting at least 1 reply. Show marginal effort to become involved with group.	Make good effort to be involved in the group by posting at least 2 replies. Add to the discussion by building on the ideas already presented.	Make concerted effort to be involved in the group by posting at least 3 replies. Extend discussions already taking place or pose new possibilities or opinions not previously voiced.	
				TOTAL POINTS (sum of 2 Criteria)	**/50**

Figure A6. Evaluation rubric for online discussion forum posts and responses.

Score	4	3	2	1
Recognition of Situation	Demonstrates the ability to identify the nuances that contribute to the conflict.	Demonstrates the ability to identify the nuances that contribute to the conflict with some assistance.	Demonstrates the ability to identify the nuances that contribute to the conflict with a great deal of assistance.	Not able to identify the nuances of the scenario that are causing the conflict.
Mindset & Knowledge Applied	Demonstrates the ability to apply the appropriate adaptive mentoring mindset to connect with and problem solve with student to resolve conflict.	Demonstrates the ability to apply the appropriate adaptive mentoring mindset to connect with and problem solve with student to resolve conflict with some assistance.	Demonstrates the ability to apply the appropriate adaptive mentoring mindset to connect with and problem solve with student to resolve conflict with a great deal of assistance.	Not able to apply the appropriate adaptive mentoring mindset to connect with and problem solve with student to resolve conflict.
Skills Applied	Demonstrates the ability to apply the appropriate adaptive mentoring skills to connect with and problem solve with student to resolve conflict.	Demonstrates the ability to apply the appropriate adaptive mentoring skills to connect with and problem solve with student to resolve conflict with some assistance.	Demonstrates the ability to apply the appropriate adaptive mentoring skills to connect with and problem solve with student to resolve conflict with a great deal of assistance.	Not able to apply the appropriate adaptive mentoring skills to connect with and problem solve with student to resolve conflict.

Figure A7. Evaluation rubric and faculty self-reflection questionnaire for scenario exercises.

Campus Climate Addendum. The following addendum adds questions to the campus climate survey to assess SRCC's effectiveness in producing a campus-wide mentoring culture that supports students' development and mastery of intrinsic motivation, sense of belonging, and academic confidence.

Questions concerning the supports students' receive in developing and honing intrinsic motivation:

1. Teachers, staff, and administrators help you :

Strongly agree	Agree	Neutral	Disagree	Strongly disagree

- Develop awareness about how you best learn;
- Identify what negative emotions interfere with your learning;
- Learn strategies to work through these negative emotions;
- Determine what you want to accomplish as a professional;
- Understand where your existing values and desires come from;
- Understand the relationship between your professional goals and your personal values;
- Explore course objectives in ways that are meaningful to you;
- Find meaningful connections to your course content and your values, beliefs, and interests;
- Assess what academic experiences are worth the emotional and physical cost for accomplishing your desired professional and personal goals.

Questions concerning the supports students' receive in developing and honing sense of belonging:

2. Teachers, staff, and administrators help you:

Strongly agree	Agree	Neutral	Disagree	Strongly disagree

- Navigate the newness of the college experience by providing you with a peer support network;
- Make connections with peers for academic support;
- Make connections with faculty for academic and career support;
- With conflict resolution tactics;
- Find outlets for their career and personal interests.

Questions concerning the supports students' receive in developing and honing intrinsic motivation, sense of belonging, and academic confidence that come from the learning environment:

3. Teachers create learning assignments and activities that help you:

Strongly agree	Agree	Neutral	Disagree	Strongly disagree

- Make meaningful connects between your goals and the course curriculum;
- Make meaningful connections with your peers and the instructor

Appendix B: Interview Protocol

Background Information on Interviewee

Date:

Name:

Number of Semesters Attended:

Current GPA:

Other Student Success Programs Participated In:

General Questions

What services and resources do SRCC students need to strengthen the noncognitive skills specific to motivation that facilitate student engagement in an active learning environment?

1. How do you define motivation?
    a. In terms of your academic pursuits, what kinds of things are you motivated about?
2. How do you display your motivation for your academic pursuits?
3. How do your values and personal aspirations influence your motivation for your academic pursuits and your ability to accomplish your goals?
4. When you have to work individually/autonomously in pursuit of your goals, what personal strengths do you rely upon to get the job done?
    a. What hurdles do you face when having to work individually?
5. How does your skill level or existing knowledge base impact your ability complete tasks and accomplish goals?
6. Do you ever struggle to complete tasks/accomplish goals?
    a. What emotions and/or thoughts cause you to want to give up?
7. When does the effort required to complete a task or goal seem worth it?
    a. When does it not seem worth it?
8. Do you think that you need more support to develop the motivation to stay on task and/or accomplish your goals?
    a. What kinds of support and resources would be helpful for you?

What services and resources do SRCC students need to strengthen the noncognitive skills specific to sense of belonging that facilitate student engagement in an active learning environment?

1. Can you describe what it looks like when you bring your "real" self to the learning environment?
2. What feelings are evoked when you feel comfortable to be your "real" self to the learning environment?
    a. What feelings are evoked when you do not feel comfortable being your "real" self?
3. What is your relationship like with your peers…your faculty…the staff? Please describe with examples of how you interact with them.

   a. How do these relationships influence the way you feel/think about SRCC, coming to campus, and engaging in the learning process?
   b. How do instructors and staff make you feel supported, validated, and encouraged?
      i. How does that encouragement, support, and validation influence how you "show up" (in bringing your real self)?
      ii. How does that encouragement, support, and validation influence your motivation?
      iii. How do instructors and staff make you feel not supported, validated, or encouraged?
   c. In what ways could the faculty and staff make it easier for you to bring your "real" self to the learning environment?

What services and resources do SRCC students need to strengthen the noncognitive skills specific to academic confidence that facilitate student engagement in an active learning environment?

1. How confident are you in your ability to perform well and earn your degree/certificate?
2. What factors contribute to this academic confidence?
   a. What factors undermine this confidence?
3. When you are academically confident are you more willing to work individually/autonomously? Why or why not?
4. When you are more academically confident are you more willing to put forth more effort to learn something new/something difficult? Why or why not?
5. How does your academic confidence level influence your ability to connect to the learning environment?
6. In what ways could the faculty and staff help you become more confident as a student?