The Impact of Developmental Course Enrollment on Self, Identity, and College Success

Tammie B. May, Laila Sanguras, & Lacy K. Crocker Papadakis

Baylor University

Abstract

A typical pattern occurs in community colleges where students must enroll in developmental coursework before beginning college-level classes. As a result, these students often struggle and face a lack of academic success. To better understand the experience of first-year college students enrolled in developmental courses at community colleges, this discussion examines the impact of enrollment in developmental courses and the long-term effect this enrollment has on the student's perception of self and their persistence and college success. Practical implications and recommendations for future research are also included.

Keywords: developmental course enrollment, community colleges, persistence, college completion, first-year students, perception of self, labeling theory

The Impact of Developmental Course Enrollment on Self, Identity, and College Success of First-Generation College Students

Enrolling in developmental coursework is a reality for many first-generation students entering college. Understanding the impact of this enrollment and the label of "developmental" being placed onto students is critical to addressing these students' success rates. This article describes the existing literature on developmental education in the United States and related factors contributing to first-generation college students' journey while enrolled in developmental courses. A literature review reveals how these students navigated the college setting, perceived their sense of self and identity, and worked towards completing a degree or credential. As noted in the literature, a typical pattern in community colleges is first-generation college students often enrolled in developmental coursework before starting their college-level classes (Martin et al., 2017). Overall, the effect of labeling college students' developmental was missing in the research. In addition, the evaluation of first-generation college students and the effect of being labeled developmental was also ignored. Knowledge around the effect of labeling developmental college students' developmental is critical since so many developmental college students do not finish their degree and struggle to get a job (Attewell et al., 2006; CCRC, 2019).

Community Colleges and the Birth of Developmental Education

The establishment of Juliet Junior College in 1901 represents the beginning of community colleges in the United States. Smith Morest (2013) described the origins of community colleges and their role in providing high school students the chance for a degree, especially those who did not wish to pursue a baccalaureate education. Community colleges were and still are an inexpensive alternative to a four-year education and offer a unique role in the United States, attracting students from diverse backgrounds with the intent of learning (Smith Morest, 2013). According to Smith Morest (2013), the community college mission set the stage for students to earn degrees and or certificates in career and technical programs or complete a transfer degree. However, researchers argued that with the open-access policy present within so many community colleges, students arrived at college underprepared, and the need for remedial level programming was born (Dell-Amen & Rosenbaun, 2002; Koch et al., 2012; Lundberg et al., 2018; Moss et al., 2014; Moss & Yeaton, 2013; Smith Morest, 2013).

The need for developmental courses has increased dramatically over the last few decades, especially in community colleges (Levin & Calcagno, 2008). Community colleges have exhausted significant resources on remediation in the hopes of addressing the deficiencies many students entering community colleges bring (Levin & Calcagno, 2008). Utilizing a review of several remedial approaches

showing success in reducing dropout and failure rates, Levin and Calcagno (2008) described the complex challenge community colleges face in meeting these students' needs. Levin and Calcagno (2008) argued that community colleges could no longer rely on the typical approach of teaching preparatory standalone developmental courses before students move into their college-level classes and must evaluate new remedial strategies and take chances on their implementation. Dell-Amen and Rosenbaun (2002) described a unique approach to remediation that avoided stigma for developmental college students where students were not labeled. Unknowingly, Dell-Amen and Rosenbaun (2002) found the stigma-free approach had the unintended result of moving students into an invisible status at the college without their awareness.

The literature examining community colleges and developmental education included a multi-faceted look at community colleges' role in college students' remediation. The impact of the label "developmental" for college students was absent from the discussion and its effect on students' academic success and community colleges' overall success. Understanding the impact of labeling college students' developmental is needed so that community colleges can redirect their focus and better support developmental students' journey.

The Modern American Developmental Education System

For decades, colleges have instituted academic support to assist students with a documented lack of college coursework readiness (Bettinger et al., 2013; Daiek & Dixon, 2012; Lundberg et al., 2018; Moss & Yeaton, 2013; Rutschow & Sneider, 2019). This process, described as remediation by Lundberg et al. (2018), plays an essential role in higher education institutions across the nation and provides access to a college degree for many (Bettinger et al., 2013; Moss & Yeaton, 2013; Rutschow & Sneider, 2019). Remediation is a common approach at community colleges used to academically and socially prepare students during their early stages of college, yet every higher education sector has students that start college underprepared (Levin & Calcagno, 2008; Lundberg et al., 2018; Moss & Yeaton, 2013; Rutschow & Sneider, 2019).

For traditionally disadvantaged students—including students of color, low-income students, and students whose parents are recent immigrants to the United States—researchers indicated that remediation requires colleges and universities to dedicate considerable resources to provide developmental education for underprepared students entering college (Lundberg et al. 2018; Moss & Yeaton, 2013; Uretsky et al., 2021). As a result of the academic challenges these students face on top of their backgrounds, providing academic support in relation to their academic experiences is needed.

Completing the developmental sequence is a challenge for many students (Attewell et al., 2006; Bailey et al., 2010). Using the Achieving the Dream database of overly 200,000 students, Bailey et al. (2010) examined enrollment and completion rates for thousands of developmental community college students who progressed through the developmental sequence. They found many students did not complete their developmental sequence and stopped attending college altogether. However, Bailey et al. (2010) noted just passing one or two developmental courses prepared students with essential skills for future education and life. Attewell et al. (2006) found a strikingly different picture around enrollment in developmental courses and college success. Attewell et al. (2006) found that academic struggle did not persist through the student's educational journey. The academic gap seen with college students enrolled in developmental coursework was more likely due to pre-existing academic weaknesses present before students entered college.

Current research focuses on poor preparation and pre-existing academic weaknesses for students rather than the label of being developmental. As students continue to test into developmental courses, a complete understanding of their struggle with success and the effect labeling has must be understood.

First-Generation College Students' Journey and Developmental Coursework

First-generation college students, or those students whose parents graduated high school but did not attend college, represent a substantial population and are considered high risk for persistence and retention when arriving in college (Alessandria & Nelson, 2005; Hand & Miller Payne, 2008; Martin, 2015). McFadden (2016) found first-generation community college students faced several barriers to academic success and were at the greatest risk of dropping out. Several researchers indicated first-generation students often did not understand what to expect with college, experienced less family support, came from poorer households, and experienced poor academic preparation while in high school (Kilgo et al., 2018; McFadden, 2016; Pascarella et al., 2003; Terenzini et al., 1996). When considering the race and ethnicity of first-generation students, Martin (2015) found low-income White first-generation college students were more likely to attend college part-time, work while attending college, commute to school, and not be involved in co-curricular activities or with other students. Alessandria and Nelson (2005) examined the self-esteem of minority racial and ethnic first-generation college students. They found the first-generation status of minority and ethnic students impacted these students' self-esteem, with self-esteem scores being higher for these

first-generation students versus non-first-generation American students.

The literature on first-generation students consistently identified concern for these students' preparation for college and overall academic success. Again, a continued absence of discussion in the literature was still present when considering labeling college students' developmental and the impact on first-generation students' academic success.

College Preparedness and College Readiness

College preparedness and college readiness are essential skills that lead to college student's academic success, especially those enrolled in developmental classes. Reid and Moore (2008) examined first-generation college students' perceptions and attitudes and found that almost half of the students in their study felt unprepared for college. Additionally, Reid and Moore (2008) found that first-generation students and their families needed ongoing support and information about the college experience and that first-generation college students benefited from additional support and guidance from college staff and personnel. According to Byrd and MacDonald (2005), experiences students gained from work, and the support and motivation they received from family, played a valuable role in developing key skills students needed to succeed in college (i.e., time management, goal focus, and self-advocacy skills). Byrd and MacDonald (2005) found that younger first-generation

college students were at greater risk of being underprepared than older first-generation students due to having fewer life experiences that prepared them for college. This finding was critical for students whose parents never attended college since these students were likely to see themselves as inadequately prepared for college from the start (Byrd & MacDonald, 2005).

Understanding the effect of college students labeled as developmental needs to be examined so educators can develop programming for them that ensures they are better prepared and ready for college.

College Persistence and College Completion

College persistence and college completion for developmental college students is a topic of concern for community colleges (Crisp & Delgado, 2014; Fong et al., 2018; Grimes, 1997; Hanover Research, 2014; Ishitani, 2015; Ishitani & Reid, 2015; Napoli & Wortman, 1996). Hanover Research (2014) indicated that community colleges must consider the possible benefit of mandatory developmental programs and optional developmental programs to improve persistence and retention for developmental students. Crisp and Delgado (2014) found that college students enrolled in developmental courses had a slightly higher likelihood to persist than college-ready students who intended to transfer and earn a degree at a four-year college. As a result, college-ready students dropped out at community colleges (Crisp & Delgado, 2014).

Ultimately, Crisp and Delgado (2014) argued that educators should examine factors such as motivation to understand community college persistence. Fong et al. (2018) identified unique motivational profiles based upon students' personal beliefs and goals towards learning and discussed how these beliefs could positively or negatively affect their achievement and persistence. Grimes (1997) similarly examined the person and considered factors such as self-esteem, study strategies, and student's locus of control. Grimes (1997) indicated that underprepared students demonstrated less persistence in their coursework than students who arrived in college skill-ready and presented a stronger internal locus of control, perhaps resulting in an overall higher course success and completion rate.

Psychosocial factors such as motivation and a student's perception of self were strong indicators for achievement and persistence outcomes in college (Grimes, 1997). This finding reflected other community college research on motivation and its relationship to persistence. Two essential studies that considered persistence for first-generation university students came from Ishitani (2015) and Ishitani and Reid (2015). Both found persistence for first-generation students to be problematic, and Ishitani and Reid (2015) indicated first-generation students in their second semester were at the highest risk of leaving college. After their second year, students' likelihood of dropping out diminished

(Ishitani & Reid, 2015). Napoli and Wortman (1996) indicated that psychosocial factors like motivation and self-regulation were positively correlated to success for community college students. That overall identifying positive aspects that can support student retention is essential. Napoli and Wortman's (1996) study revealed gaps in community college persistence literature, primarily motivational predictors.

College students enrolled in developmental courses find college completion a daunting task (Bailey et al., 2010; Ishitani, 2015). Ishitani (2015) argued first-generation college students were more likely to leave college than their peers with college-educated parents; students whose parents did not have a college degree had an 8.5 times higher likelihood of not finishing college and were likely to leave during their second year of school. Confirming being a first-generation college student negatively impacted college persistence and completion, Ishitani (2015) later added that students' high school experiences influenced and shaped the likelihood of graduating from college. Ishitani (2015) illustrated the necessity of examining first-generation student attrition during the second year of college and the effective timing of interventions for moving students towards college completion.

Smith Jaggars et al. (2015) investigated three developmental programs. They found developmental students on accelerated pathways or pathways which allow students to complete

remediation and enroll in college-level math and English within a shorter time frame had greater success than students not on an accelerated approach. Students on an accelerated pathway completed their college credit courses within three years. To maintain strong student performance and completion in college-level coursework, Smith Jaggars et al. (2015) argued robust content, well-trained faculty, and wrap-around student support services must be in place for students connected to the accelerated pathways models. Bailey et al. (2010) argued the need to build several developmental instruction levels into one longer, more intensive, fast-paced course. According to Bailey et al. (2010), the goal is to reduce the confusion around the developmental sequence and shorten the time before a student starts college courses. When students begin their college credit coursework as soon as they start college, students are more likely to have academic success, attain a degree, and complete college (Bailey et al., 2010).

The literature examining developmental college students' persistence indicated psychosocial factors such as motivation are essential to persistence for developmental college students. In contrast, completion strategies around the second year of college and accelerated developmental models showed promise. However, until the full impact of labeling students' developmental is understood, college persistence and completion rates for developmental students will continue to lag.

Success and Challenges of America's Developmental Education System

Today, a top priority for community colleges is to improve their students' academic success (D'Antonio, 2020; Daugherty, 2018; Fong et al., 2017; Goldrick-Rab, 2010; Lundberg et al., 2018; Moss, 2013; Ngo, 2019; Woods, 2017). Goldrick-Rab (2010) reviewed qualitative and quantitative studies using a meta-analysis approach and examined the factors leading to understanding community college successes and challenges. Goldrick-Rab (2010) and Moss et al. (2014) identified a need to go beyond a discussion around the completion rates and weaknesses of community college students. They recommended that colleges move to a discussion around strategies shaping community colleges' ability to serve students.

Developmental English Strategies for Academic Success

Community college developmental writing courses are critical to developmental students' academic success since these courses provide students with the fundamental writing skills needed in their other college classes (D'Antonio, 2020; Daugherty et al., 2018; Moss et al., 2014; Woods et al., 2017). D'Antonio (2020) examined a developmental writing course that included an identity-oriented approach to better understand students' experiences in community college developmental writing courses. D'Antonio (2020) found that adding strategies within the developmental writing curriculum that

encouraged students to explore their identity could enhance students' academic writing.

Daugherty et al. (2018) examined 36 community colleges in Texas and the corequisite design or the pairing of a college-level English course and the developmental English course utilized at colleges for developmental writing and college English. Daugherty et al. (2018) noted that emerging data around English corequisites was positive, showing that students enrolled in the co-requisites courses had greater success than students not enrolled in the courses; however, additional research on corequisite models and the students who experience the greatest benefit from the approach was still needed.

Using a quantitative approach to examine the state of Florida's 2014 cohort of incoming college students, Woods et al. (2017) found college students who chose to enroll in developmental courses were more successful overall in these courses. Many developmental students enrolled in a gateway English course over a developmental course when given a choice (Woods et al., 2017). Future research exploring the success of underprepared developmental English students is crucial to the decisions made around the ongoing redesign of developmental education in higher education.

Moss et al. (2014) considered the classroom composition of students' first credit course in English and the impact on developmental students' performance. They found participation in English developmental programs was higher when full-time faculty

taught the classes and when the classrooms contained more developmental students versus non-developmental students (Moss et al., 2014). The literature on developmental writing courses emphasized their success is key to students' academic success. Given the critical nature of developmental writing courses, the research gap around labeling students' developmental needs to be investigated to improve these students' academic success

Developmental Math and the Long Journey to College Completion

In community colleges across the nation, mathematics is the most common remedial subject for incoming underprepared college students and poses the most significant academic challenge (Fong et al., 2015; Kwon & Ngo, 2015; Lundberg et al., 2018). Lundberg et al. (2018) utilized a case study approach to better understand remedial math students at Chief Dull Knife College in Lame Deer, Montana. They completed their developmental coursework and successfully continued to credit courses. In their study, Lundberg et al. (2018) found developmental math students who adopted ways to think, believe, and value their identity as developmental math students had greater success in their developmental coursework and avoided the stigma of being a developmental student. Fong et al. (2015) examined over 800 community college developmental math students' beliefs about their learning strategies. They found developmental math students had difficulty evaluating their learning strategies, which decreased their ability to succeed in their

math courses (Fong et al., 2015). Black developmental math students had the lowest accuracy in estimating their learning strategies.

In contrast, Hispanic developmental math students indicated a higher use of motivational and cognitive learning strategies for learning (Fong et al., 2015). With developmental math success, Fong et al. (2015) asserted it was necessary to understand that students from different racial and cultural backgrounds responded differently to beliefs about their learning strategies which must be considered when considering course design. Kwon and Ngo (2015) examined over 12,000 first semester community college students and the role of multiple measures such as transcript outcome data (GPA and prior math courses) and placement test scores for students and overall success in college. Using transcript data and placement test scores for developmental students' initial placement, Kwon and Ngo (2015) asserted that community colleges could place students at the appropriate course level more effectively.

The literature examining developmental math indicated many successes for developmental math students, including college students who completed remedial education and successfully continued their education. Nevertheless, many developmental math students stalled and failed or even dropped out (Fong et al., 2015). Understanding the role labeling plays with developmental math students is imperative and must be considered in creating and designing developmental programming and curriculum. Many

students are at-risk in developmental college math programs nationwide, and the lack of success is seen.

Developmental Reading Strategies as an Answer to America's Growing Literacy Problem

Reading deficiencies are present for many students entering college, impacting college retention and completion rates for these students (Caverly et al., 2004; Flink, 2018; Snyder, 2002). Flink (2018) argued the benefit of Sustained Silent Reading (SSR) for teaching readers coming to college in need of reading remediation. Although Flink (2018) did not see a change in reading beliefs for students after participating in the SSR reading course, observation of a positive attitude towards reading was present, which increased students' comfort level with reading. Pacello (2014) described the importance of developmental reading, writing students' experiences, perceptions, and ability to take knowledge from the courses and apply it to different learning contexts. Caverly et al. (2004) examined developmental reading through the lens of a standalone course providing instruction on strategic reading. They found students retained the skills learned from the strategic reading instruction and outperformed the control group on a standardized test and average grade for a reading-intensive history course. Snyder (2002) identified a positive relationship between course-based reading strategy training and increased reading comprehension skills for first-year students.

The literature on developmental reading highlighted examples of success for college students enrolled in developmental reading courses and those who went on to succeed at the college course level (Flink, 2018). However, college students continue to arrive at college underprepared as readers and struggle to complete their developmental courses and stay enrolled.

First-Generation College Students, Developmental Coursework, and Perceptions of Self

A key element to understanding community college students as a whole is understanding the multiple roles students play in their lives beyond students. Kim et al. (2010) argued student perceptions of self and their age were useful in examining community college students. Students' self-perceptions of the primary roles in their lives (i.e., student, worker, parent) were critical to understanding how roles emerged for students and the coping mechanisms they developed to deal with their many obligations (Kim et al., 2010). To explore student differences within community college populations and understand the social-psychological outcomes and the many roles demands students experience, Kim et al. (2010) utilized role theory. Kim et al. (2010) emphasized that student self-perceptions framed the way students walked into the college environment and their hopes and dreams about their education.

The label of developmental college student adds another layer of identity that educators must understand when considering college

students today. This awareness can inform the redesign of a developmental curriculum that works for students and supports their academic success.

The Impact of Labeling before College

Before college, labeling begins early in a student's academic journey and can have a negative effect on their educational outcome and academic success (Levin et al., 1982; Maas, 2000; Shifrer, 2013; Van Houette, 2013). Levin et al. (1982) examined high school teachers' evaluation of ninth-grade students using a school psychologist report provided to teachers for review. Teachers' expectations were less favorable and negatively and significantly influenced when the reports described students as emotionally disturbed. Continuing to examine the negative effect of labels placed onto students, Maas (2000) examined fourth-grade students from 200 schools in the Netherlands and investigated the interaction process between teachers and students and how teachers came to label a student as a problem student. Teachers considered two factors in the labeling of problem students (Maas, 2000). The first factor was a student who fell below the minimum level of achievement for their class, while the second factor considered a student with behavior problems (Maas, 2000). In this study, Maas (2000) determined the students' social class background, gender, and ethnicity were the most important characteristics considered by teachers when considering whether students met the factors that

determined the problem student label. Ultimately, Maas (2000) found that students' social class background had the most significant negative effect in labeling students as problem students.

Shifrer (2013) explored how stigma influenced teachers' and parents' educational expectations for students labeled with learning disabilities while in high school. The study's findings indicated that teachers and parents were more likely to hold lower academic expectations for their children labeled with a learning disability. The children were likely to have expectations like their teachers and parents (Shifrer, 2013). Continuing to examine label placement, Van Houette (2013) used a multi-level analysis of data of 6,545 students in 46 Flemish secondary schools. This study's findings indicated that those students' teachers identified as less able and less interested in school were negatively labeled (Van Houette, 2013). Teacher expectations for these students were low, and teachers spent less time supporting these students in the classroom (Van Houette, 2013).

Labels placed onto students prior to college can have a devastating and long-term effect on the students' academic journey. Some students, when entering college, have the uphill battle of fighting labels previously placed before entering a college classroom.

Theories of Identity and Self

The awareness of self and identity is critical to understanding developmental college students and their construction of self. In everyday life, people think of new ways of acting, which frees them to determine their destiny (Miller, 1973). This process can be applied to developmental college students and how they perceive themselves as learners. Howard (2000) emphasized the social bases of identity, especially race, ethnicity, sexuality, class, and age. He concluded that identity is defined in a layered and fluid manner in today's world, and the many layers must be understood to appreciate one's sense of self. Approaching identity and self through the various meanings people attach to themselves and others and the values people hold, Hitlin (2003) argued the critical nature of understanding self and identity and asserted that people's self-conceptions consist of more than the various roles and values groups they are connected to. Self is defined through role expectations and reference groups and prioritized values within these groups (Hitlin, 2003). Still focused on the importance of roles in people's lives, Marcussen (2006) argued that the self is composed of various identities from how they represent themselves in a particular role. The relationship between students' many roles, self-esteem, and psychological distress, specifically depression and anxiety, is essential to understanding college students. Marcussen (2006) analyzed the direct effects of aspiration and obligation

discrepancy and found high levels of correlation between how students deal with depression and anxiety and their resulting level of obligation and aspiration. The literature on identity and self revolves around social psychological explanations of self and identity that view self as a social, emotional byproduct. The literature must include research and study around the emergence of self and labeling college students' development since this labeling is influential in how the student defines themself.

Race, Ethnicity, Gender, and Self

Educators must understand the impact of race, ethnicity, and gender to alter the trajectory of how developmental college students succeed in the classroom (Acevedo-Gil et al. 2015; Barbatis, 2010; Brickman et al., 2013; Green & McClenney, 2008; Huerta et al., 2018; Marsh & Noguera, 2017; Martin 2015). The research of Huerta et al. (2018) examined the complicated process of academic identity formation for ethnically diverse male high school students who aspired to attend college. The significance of the Huerta et al. (2018) study was the researchers challenged the existing literature and prominent storyline that young men of color do not invest in higher education. Huerta et al. (2018) found that young men of color who planned and attained goals for college, received support and encouragement from peers and family, and attended schools that supported their success formed a college identity that permitted the young men to see themselves moving through several statuses,

including college enrollment, the military, and/or career and vocational training.

Marsh and Noguera (2017) explored Black male students labeled at-risk academically and their perceptions about their academic journey and teachers' perceptions of these students. Marsh and Noguera (2017) highlighted concerns about the impact of labels placed in school and contended the impact teachers' perceptions had on these students and their academic experiences were critical. Green and McClenney (2008) examined minority status, student engagement, and educational outcomes in community colleges. They sought to determine whether students from certain racial and ethnic groups differed in the effort they devoted to their education and the extent to which this effort impacted the students' outcome in college. Black students were found to be more engaged in school but less successful academically when compared to their White peers, and Hispanic students earned considerably lower grades than their White peers (Green & McClenney, 2008).

Brickman et al. (2013) found Hispanic students in developmental classes had greater academic success and higher degree completion when compared to their peers not enrolled in developmental courses. Brickman et al. (2013) argued the necessity to understand factors such as interest, instrumentality, and self-regulation for Hispanic students and why some students were more motivated than others in their academic persistence and college success.

Similarly, Acevedo-Gil et al. (2015) examined Latinas/os community college students enrolled in developmental education courses and found when developmental college students received academic approval that emphasized high expectations, positive social identities, and improving academic skills, these students performed at a higher level. College personnel and peers' validation and approval were critical to Latinas/os success in developmental education courses (Acevedo-Gil et al., 2015).

Barbatis (2010) examined the perceptions of underprepared, ethnically diverse community college students who participated in a first-year learning community and found parents and extended family were instrumental to these students. Faculty and college leadership, Barbatis (2010) asserted, would do best to develop new academic programming based on student experiences that supported college success and persistence to graduation. To that end, Barbatis (2010) suggested developmental education would benefit from research that reflected the developmental college student's voice and focused on access and preparation topics.

Martin (2015) examined low-income, first-generation, White students and investigated their social class impact while in college. Martin (2015) described the students as being overextended while working in college, with one student comparing their academic experience to a rubber band wound too tightly and likely to break.

The literature on race, ethnicity, and gender presented various factors that shaped the academic journey and experience for diverse, developmental college students. For the most part, a continued absence of discussion around the labeling of students' developmental and the label's impact was noted once again in the literature; however, Marsh and Noguera's (2017) study, which explored the labeling of Black male students academically high risk, stands alone as a remarkable project on the effect of labeling Black students. Research like Marsh and Noguera's (2017) exemplified the need to examine labeling's impact, especially when considering the already impactful perceptions held toward race, ethnicity, and gender for students.

Self-Concept and Self-Efficacy

Self-concept and self-efficacy are essential attributes to understanding developmental students' persistence in college and their academic success. Bandura (1982) asserted self-efficacy influences how the individual acts, thinks, and their emotional state. Bong and Clark (1999) argued that self-concept and self-efficacy shared similarities, such as perceived competence in how the two concepts are defined. Self-efficacy referred to a person's conviction to achieve a particular result, whereas self-concept embraced self-related ideas and feelings, with competence as a critical ingredient (Bong & Clark, 1999). Bandura (1982) identified that the higher the level of self-efficacy, the higher the individual's accomplishments.

Fong and Krause (2014) examined underprepared college students who enrolled in a developmental learning frameworks course and their self-reported beliefs around self-efficacy. By providing students' feedback on their course progress, Fong and Krause (2014) argued students had increased mastery levels that led to the reversal of a history of underachievement and failure, supporting Bandura's assertion about self-efficacy and accomplishments. Martin et al. (2017) argued that when college students enrolled in two or more developmental courses, academic self-concept decreased for those students due to their sense of success being diminished when taking an increased number of developmental classes. Colleges seeing academic success for developmental students, Martin et al. (2017) suggested, should not adjust course content and delivery or how students are placed due to the impression that enrollment in two or more developmental courses could have a negative psychological impact, especially on self-concept and self-efficacy.

The literature examining self-concept and self-efficacy effectively describes internal constructs for the developmental college students; however, research on the labeling of college students' developmental is still ignored. A discussion was emerging around developmental students' self-concept; nonetheless, a direct examination of the developmental label is needed to effectively

understand the shaping force on students' college success or lack of success.

Motivation

Understanding the attribute of motivation is key to improving the persistence and success rates of developmental college students. Ley and Young (1998) compared the motivation levels of developmental college students to regular admission college students. They found that providing additional support to developmental learners was crucial to developmental students' success despite their similar motivation levels to college-ready students. By including motivation in the design of instructional strategies, Ley and Young (1998) argued instructors could encourage self-regulated learning for college students enrolled in developmental classes. Fong et al. (2018) examined college students' goals and motivation and achievement, and persistence. They asserted that understanding characteristics that put students at risk and buffered against academic difficulty was critical to understanding community college student success.

In the review of the literature, a pattern was present where researchers examined college success and persistence through a lens of race and ethnicity to determine success for community college students. To best understand college student success and persistence, Fong et al. (2018) found that educators could understand community college students' persistence levels more

completely by evaluating malleable attributes like motivation and academic performance. Examining motivation and self-empowerment, Martin et al. (2014) found that predictors like college persistence, cultural capital, and being academically underprepared could be overcome by community college students who were motivated about their learning. Martin et al. (2014) asserted motivation was a shaping factor that influenced students' drive to succeed and have academic success. Martin et al. (2014) argued the necessity to offset students who lacked cultural capital or academic preparedness with motivation for their learning.

The literature on motivation highlighted the importance of this attribute when considering community college students. With increased motivation, students can overcome being underprepared in the classroom and focus on their learning. By investigating the effect of labeling on developmental students and utilizing the knowledge gained around motivation, educators can help students use motivation to move beyond their label and strive towards academic success. This knowledge will also play an essential role in the understanding associated with shame and the success of developmental students.

Shame

Shame is a critical emotion to understanding the success of developmental students. Ways that students can experience shame are in the form of failure related to academic goals and not

achieving them (Turner & Husman, 2008). Steps students used in the learning environment to sustain, improve, or minimize their academic motivation after experiencing shame were identified by Turner and Husman (2008). In their study, Turner and Husman (2008) found that when students have a collection of study strategies to turn to after a shame-producing learning event, they successfully managed their emotions and perceptions of failure. Colleges, Turner and Husman (2008) asserted, should introduce multiple learning and study strategies early in a student's academic journey to improve their ability to be successful in shame-producing scenarios.

As research on shame has evolved, so has the development of instruments to measure it. Reinhard et al. (2010) utilized the Achievement Emotions Questionnaire (AEQ) to examine emotions college students experienced while studying and taking tests, including shame. Reinhard et al. (2010) found negative emotions like shame were likely detrimental to students' engagement and learning and must be understood to support student's academic success efforts. Johnson (2012) examined shame in the education environment using the Social Environment Survey and found that faculty need to understand and consider academic failure and personal inadequacy when developing course objectives and assessments utilized to evaluate students. Johnson (2012) asserted that when faculty understand how shame is associated with

academic failure and use that understanding to create alignment between course objectives and course assessments, students have a greater sense of control and motivation in their classes and reduced the level of shame students experience in their classes.

The literature on shame and learning and creating college success was limited but is influential to the understanding of college students labeled developmental who regularly deal with shame's adverse effects. Offering strategies to assist developmental students when confronting shame is critical to students' persistence and college success.

Grit

For developmental students, grit is a critical element in understanding how underprepared students can persist in college and experience academic success. Duckworth et al. (2007) defined grit as "perseverance and passion for long-term goals" (p. 1087). Hochanadel and Finamore (2015) examined learning and growth mindset and explored how educators can nurture grit and foster an attitude oriented towards growth. Hochanadel and Finamore (2015) argued that when educators create a learning environment that teaches growth and encourages a growth mindset, students persist and experience academic success. Sriram et al. (2018) examined several environmental factors (i.e., focusing on others, socializing with others, investing time in academic activities, success-oriented purpose, and valuing religion) associated with self-control and the

emergence of grit. The findings of the Sriram et al. (2018) study supported a growing body of literature where purpose, spirituality, and religion play an important role in students developing high levels of grit and can be effectively applied to developmental students.

Light and Nencka (2019) examined the relationship between intellectual ability, grit, and academic outcomes. The study's findings indicated low-ability students, like developmental college students, succeeded in reaching academic targets by compensating for educational shortcomings using grit (Light & Nencka, 2019). Light and Nencka (2019) indicated their findings do not suggest grit is as significant as ability. Still, for low-ability college students who were successful, grit played an essential role in their success (Light & Nencka, 2019).

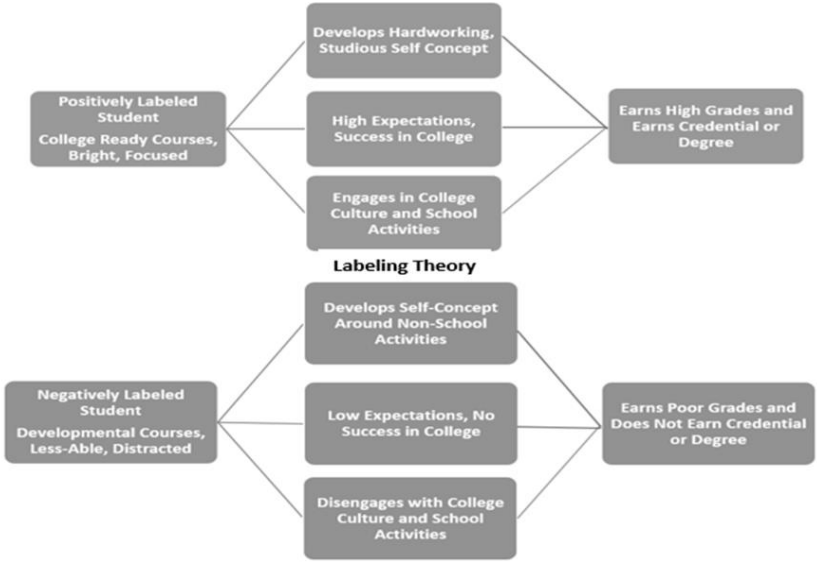
Grit has been associated with college students persisting and having a greater sense of purpose and ability. Unfortunately, the grit literature did not examine persistence in reaching long-term goals for college students labeled developmental. This literature gap is vital to recognize since grit may be instrumental in academic programming where developmental college students can thrive and experience success although lower in academic ability.

Labeling Theory

Labeling Theory utilizes an evaluative process where one receives the placement of categorical terms such as good, bad, fast,

slow, well-behaved, or disruptive (Becker, 1963). This theory has been adopted in education to look at how teachers assign labels to students related to their ability, potential, or behavior and how students live to those labels (Marsh & Noguera, 2018). Several researchers indicate that labeling can negatively affect a student's educational outcome and academic success (Levin et al., 1982; Maas, 2000; Shifrer, 2013; Van Houette, 2013). Figure 1 describes the placement of a positive or negative label onto a student and the attributes that emerge.

Figure 1
Labeling Theory and Developmental College Students



With a positive label, students develop a hardworking self-concept with high expectations and a propensity to engage in college resulting in college degrees. With a negative label, students develop a self-concept rooted outside of college with low

expectations of school success and a tendency to disengage from the school environment and no college degree. When considering college students enrolled in developmental classes, placement of a negative label will likely result in students developing a self-concept based outside of college with low expectations of success and a likelihood of disengaging from school and leaving college without a credential or degree.

March and Noguera (2018) asserted labeling, despite its harmful effects on the individual's self-image and self-concept, continues to be used in schools throughout the nation and results in students being placed in negative categories, stigmatized, and denied membership in the broader academic community. Although research has shown that labeling has a negative effect on self-concept, which leads to academic failure, it is still used because of convenience (March & Noguera, 2018).

Synthesis of Selected Literature

The selected literature examined community colleges and the emergence of developmental education, the modern developmental education system, first-generation college students and developmental coursework, the successes and challenges of developmental education, and first-generation developmental students and their perception of self and identity. Researchers examining community colleges and the emerging developmental education system provided a multi-faceted look at the role

community colleges played in college students' remediation and the need for community colleges to redirect their focus and better support developmental students' journey (Dell-Amen & Rosenbaun, 2002; Koch et al., 2012; Lundberg et al., 2018; Moss et al., 2014; Moss & Yeaton, 2013; Smith Morest, 2013).

When examining the modern developmental education system, many researchers asserted colleges need to continue to provide academic support to assist students who have a documented lack of college coursework readiness and that community colleges play an essential role in this process (Bettinger et al., 2013; Daiek & Dixon, 2012; Lundberg et al., 2018; Moss & Yeaton, 2013; Rutschow & Sneider, 2019).

Researchers exploring first-generation college students and developmental education highlighted that a substantial population of students in colleges today are first-generation students, and they are considered high risk for persistence and retention when arriving in college (Alessandria & Nelson, 2005; Hand & Miller Payne, 2008; Martin, 2015). Researchers emphasized that first-generation students are consistently underprepared for college, and their overall academic success continues to be in jeopardy (Byrd & MacDonald, 2005; Crisp & Delgado, 2014; Fong et al., 2018; Grimes, 1997; Hanover Research, 2014; Ishitani, 2015; Ishitani & Reid, 2015; Napoli & Wortman, 1996, Reid & Moore, 2006).

When considering the research examining successes and challenges of developmental education, researchers emphasized the need to go beyond the relationship between the structure of opportunity at community colleges, the institutional practices, and the traits and characteristics of students and to focus on a discussion around the policies shaping community colleges' ability to serve students (Goldrick-Rab, 2010; Moss et al. 2014). An extensive examination considering research on English, math, and reading developmental course strategies illustrated the need for colleges to investigate a variety of developmental course designs to meet the needs of the students (Caverly et al., 2004; D'Antonio, 2020; Daugherty et al., 2018; Flink, 2018; Fong et al., 2015; Kwon & Ngo, 2015; Lundberg et al., 2018; Moss et al., 2014; Snyder, 2002; Woods et al., 2017).

Implications and Future Research

Researchers exploring first-generation students, developmental education, and these students' perceptions of self emphasized the need to understand the many roles developmental students play, their experiences before college, and the intersection of race, ethnicity, gender and its effect on the students' sense of self to effectively design a developmental curriculum that meets the needs of these students (Acevedo-Gil et al. 2015; Barbatis, 2010; Brickman et al., 2013; Green & McClenney, 2008; Hitlin, 2003; Howard, 2000; Huerta et al., 2018; Kim et al., 2010; Marsh & Noguera, 2017; Martin

2015; Marcussen, 2006). Still, other researchers asserted to best understand developmental students and their sense of self, an examination of self-concept and self-efficacy, as well as motivation, shame, and grit, was needed (Bandura, 1982; Bong & Clark, 1999; Fong et al., 2018; Fong & Krause, 2014; Hochanadel & Finamore, 2015; Light & Nencka, 2019; Martin et al., 2019; Johnson, 2012; Ley & Young, 1998; Reinhard et al., 2008; Sriram, 2018; Turner & Husman, 2008).

A significant body of literature was available to evaluate the critical topics of this study and highlighted the seriousness of the problem at hand for first-generation students enrolled in developmental courses and the effect on students' perception of self and college success; however, a consistent gap in the literature was found when looking at the impact of labeling first-generation college students developmental and understanding these students' journey to academic success. This literature review successfully underscored the need for additional research and study to look at college students and the effect of labeling college students' developmental. Educators and college leaders must understand this effect to move underprepared college students toward academic success and preserve students' sense of identity and self in the process.

References

Acee, T. W., Fong, C. J., & Weinstein, C. E. (2018). A person-centered investigation of achievement motivation goals and correlates of community college student achievement and persistence. *Journal of College Student Retention: Research, Theory & Practice*, *20*(3), 369–387.

Acevedo-Gil, N., Alonso, L., Santos, R., & Solorzano, D. (2015). Latinas/os in community college developmental education: Increasing moments of academic and interpersonal validation. *Journal of Hispanic Higher Education*, *14*(2), 101–127.

Alessandria, K. P., & Nelson, E. S. (2005). Identity development and self-esteem of first-generation American college students: An exploratory study. *Journal of College Student Development*, *46*(1), 3–12.

Attewell, P., Lavein, D., Domina, T., & Levey, T. (2006). New evidence on college remediation. *The Journal of Higher Education*, *77*(5), 886–924.

Bailey, T., Jeong, D. W., & Cho, S. W. (2010). Referral, enrollment, and completion in developmental education sequences in community colleges. *Economics of Education Review*, *29*, 255–270.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*, 122–147.

Barbatis, P. (2010). Underprepared, ethnically diverse community college students: Factors contributing to persistence. *Journal of Developmental Education*, *33*(3), 16–20, 22, 24, 26.

Becker, H. (1963). *Outsiders: Studies in the sociology of deviance*. Free Press.

Bettinger, E., Boatman, A., & Terry Long, B. (2013). Student supports: Developmental education and other academic programs. *The Future of Children*, *23*(1), 93–115.

Bong, M., & Clark, R. E. (1999). Comparison between self-concept and self-efficacy in academic motivation research. *Educational Psychologist*, *34*(3), 139–153.

Brickman, S. J., Alfaro, E.C., Weimer, A. A., & Watt, K. M. (2013). Academic engagement: Hispanic developmental and nondevelopmental education students. *Journal of Developmental Education*, *37*(2), 14–16, 18–20, 22, 31.

Byrd, K. L., & MacDonald, G. (2005). Defining college readiness from the inside out: First-generation college student perspectives. *Community College Review*, *33*(1), 22–37.

Caverly, D. C., Nicholson, S. A., & Radcliffe, R. (2004). The effectiveness of strategic reading instruction for college developmental readers. *Journal of College Reading and Learning*, *35*(1), 25–49.

College Atlas (2018). U.S. college dropout rates and dropout statistics. https://www.collegeatlas.org/college-dropout.html

Community College Resource Center (2019). Community college FAQ's. https://ccrc.tc.columbia.edu/Community-College-FAQs.html

Crisp, G. & Delgado, C. (2014). The impact of developmental education on community college persistence and vertical transfer. *Community College Review*, *42*(2), 99–117.

D'Antonio, M. (2020). Pedagogy and identity in the community college developmental writing classroom: A qualitative study in three cases. *Community College Journal of Research and Practice*, *44*(1), 30–51.

Daiek, D., & Dixon, S. (2012). At issue: developmental education and the success of our community college students. *Community College Enterprise*, *18*(1) 37–40.

Daugherty, L., Gomez, C., Gehlhaus Carew, D., Mendoza-Graf, A., & Miller, T. (2018). *Designing and implementing corequisite models of developmental education: Findings from Texas community colleges*. Rand Corporation.

Dell-Amen, R., & Rosenbaun, J.E. (2002). The unintended consequences of stigma-free remediation. *American Sociological Association*, *75*(3), 249–268.

Duckworth, A., Peterson, C., Matthew, M., & Kelley, D. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, *92*(6)1087–1101.

Flink, P. (2018). A silent reading intervention for developmental students: Exploring attitudes toward reading in college. *Reading Improvement*, *55*(4), 135–143.

Fong, C.J., Acee, T. W., & Weinstein, C. E. (2018). A person-centered investigation of achievement motivation goals and correlates of community college student achievement and persistence. *Journal of College Student Retention: Research, Theory & Practice*, *20*(3), 369–387.

Fong, C., Davis, C., Kim, Y., Kim, Y. W., Marriott, L., & Kim, S. Y. (2017). Psychosocial factors and community college student success: A meta-analytic investigation. *Review of Education Research*, *87*(3), 388–424.

Fong, C. J., Zientek, L. R., Yetkiner Ozel, Z. E., & Phelps, J. M. (2015). Between and within ethnic differences in strategic learning: A study of developmental mathematics students. *Social Psychology of Education*, *18*, 55–74.

Fong, C. J. & Krause, J. M. (2014). Lost confidence and potential: a mixed methods study of underachieving college students' sources of self-efficacy. *Social Psychology Education*, *17*, 249–268.

Gasiewski, J., Eagan, M., Garcia, G. A., Hurtado, S., & Chang, M. J. (2012). From gatekeeping to engagement: A multicontextual, mixed method study of student academic engagement in introductory stem courses. *Research in Higher Education*, *53*, 229–261.

Goldrick-Rab, S. (2010). Challenges and opportunities for improving community college student success. *Review of Educational Research*, *80*(3), 437–469.

Greene, T., Marti, C., & McClenney, K. (2008). The effort-outcome gap: Differences for african american and hispanic community college students in student engagement and academic achievement. *The Journal of Higher Education*, *79*(5), 514–539.

Grimes, S. K. (1997). Underprepared community college students: Characteristics, persistence, and academic success. *Community College Journal of Research and Practice*, *21*(1), 47–56.

Hand, C., & Miller Payne, E (2008). First-generation college students: A study of Appalachian student success. *Journal of Developmental Education*, *32*(1), 4–6, 8, 10, 12, 14–15.

Hanover Research (2014). *Best practices in retention at community colleges*.

Hitlin, S. (2003). Values as the core of personal identity: drawing links between two theories of self. *Social Psychology Quarterly*, *66*(2), 118–137.

Hochanadel, A., & Finamore, D. (2015). Fixed and growth mindset in education and how grit helps students persist in the face of adversity. *Journal of International Education Research*, *2*(1), 47–50.

Howard, J. (2000). Social psychology of identities. *Annual Review of Sociology*, *26*, 367–393.

Huerta, A.H., McDonough, P. M., & Allen, W. R. (2018). "You can go to college": Employing a developmental perspective to examine how young men of color construct a college-going identity. *Urban Review*, *50*, 713–734.

Ishitani, T.T. (2015). Studying attrition and degree completion behavior among first generation college students in the U.S. *The Journal of Higher Education*, *77*(5), 861–885.

Ishitani, T. T., & Reid, A. M. (2015). First-to-second-year persistence profile of commuter students. *New Directions for Student Services*, *150*, 13–26.

Johnson, D. E. (2012). Considering shame and its implications for student learning. *College Student Journal*, *46*(1), 3–17.

Kim, K. A, Sax, L. J., Lee, J. J., & Hagedorn, L.S. (2010). Redefining nontraditional students: Exploring the self-perceptions of community college students. *Community College Journal of Research and Practice*, *34*, 401–422.

Kilgo, C. A., Campbell, E., Phillips, C. W., Pascarella, E. T., & Martin, G. L. Getting critical about critical thinking: The role of parental education on first-generation students' cognitive gains in college. *Journal of College Student Development*, *59*(6), 756–761.

Koch, B., Slate, J., & Moore, G. (2012). Perceptions of students in developmental classes. *Community College Enterprise*, *18*(2), 62–82.

Kraska, M. F., Nadelman, M. H., Maner, A. H., & McCormick, R. (1990). A comparative analysis of developmental and nondevelopmental community college students. *Community Junior College Quarterly of Research and Practice*, *14*,13–20.

Kwon, W., & Ngo, F. (2015). Using multiple measures to make math placement decisions: implications for access and success in community colleges. *Research in Higher Education*, *56*(5), 442–470.

Levin, J., Arluke, A., & Smith, M. (1982). The effects of labeling students upon teachers' expectations and intentions. *Journal of Social Psychology*, *118*, 207–212.

Levin, H. M. & Calcagno, J. C. (2008). Remediation in community college's. *Community College Review*, *35*(3), 181–207.

Ley, K., & Young, D. (1998). Self-regulating behavior in underprepared (developmental) and regular admit college students. *Contemporary Educational Psychology*, *23*(1), 42–64.

Light, A., & Nencka, P. (2019) Redirecting educational attainment: Does grit compensate for low levels of cognitive ability? *Learning and Individual Differences*, *70*, 142–154.

Lundberg, T., Conrad, C., Gasman, M., Nguyen, T., Commodore, F. (2018). Practices of remedial mathematics students who succeed in college: A case study of developmental math education at Chief Dull Knife college. *Review of Higher Education*, *42*(1), 61–101.

Marcussen, K. (2006). Identities, self-esteem, and psychological distress: An application of identity-discrepancy theory. *Sociological Perspectives*, *49*(1), 1–24.

Marsh, L. T., & Noguera, P. A. (2017). Beyond stigma and stereotypes: An ethnographic study on the effects of school-imposed labeling on black males in an urban charter school. *Urban Review*, *50*, 447–477.

Martin, G. L. (2015). "Tightly wound rubber bands": Exploring the college experiences of low-income, first generation white students. *Journal of Student Affairs Research and Practice*, *52*(3), 275–286.

Martin, K., Galentino, R., & Townsend, L. (2014). Community college student success: The role of motivation and self-empowerment. *Community College Review*, *43*(3), 221–241.

Martin, K., Goldwasser, M., & Harris, E. (2017). Developmental education's impact on student's self-concept and self-efficacy. *Journal of College Student Retention: Research, Theory, & Practice*, *18*(4), 401–414.

Maas, C. J. M. (2000). The interaction process between teacher and students: The labeling of students on the basis of relative characteristics. *Social Behavior and Personality*, *28*(6), 515–528.

McFadden, D. L. (2016). Health and academic success: A look at the challenges of first-generation community college students. *Journal of the American Association of Nurse Practioners*, *28*(4), 227–232.

Miller, D. L. (1973). George Herbert Mead: Symbolic interaction and social change. *The Psychological Record*, *23*, 294–304.

Moss, B., Kelcey, B., & Showers, N. (2014). Does classroom composition matter? college classrooms as moderators of developmental education effectiveness. *Community College Review*, *42*(3), 201–220.

Moss, G. H. & Yeaton, W. H. (2013). Evaluating effects of developmental education for college students using a regression discontinuity design. *Evaluation Review*, *37*(5), 370–404.

Napoli, A. R., & Wortman, P. M. (1996). A meta-analysis of the impact of academic and social integration on persistence of community college students. *Journal of Applied Research in the Community College*, *4*, 5–21.

Pacello, J. (2014). Integrating metacognition into a developmental reading and writing course to promote skill transfer: An examination of student perceptions and experiences. *Journal of College Reading and Learning*, *44*(2), 119–140.

Pascarella, E. T., Wolniak, G. C., Pierson, C. T., & Terenzini, P. T. (2003). Experiences and outcomes of first-generation students in community colleges. *Journal of College Student Development*, *44*(3), 420–429.

Postsecondary National Policy Institute. (2021). *First generation students in higher education factsheet.*

Reid, M. J., & Moore, J. L., III. (2008). College readiness and academic preparation for postsecondary education: Oral histories of first-generation urban college students. *Urban Education*, *43*, 240–261.

Reinhard, P., Goetz, T., Frenzel, A., Barchfeld, P., & Perry, R. (2010). Measuring emotions in students' learning and performance: The achievement emotions questionnaire (AEQ). *Contemporary Educational Psychology*, *36*, 36–48.

Rutschow, E., & Sneider, E. (2011). *Unlocking the gate: What we know about improving developmental education*. MDRC.

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., & Jinks, C. (2018). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Quality & Quantity*, *52*, 1893–1907.

Shifrer, D. (2013). Stigma of a Label: Educational expectations for high school Students labeled with learning disabilities. *Journal of Health and Social Behavior*, *54*(4), 462–480.

Smith Jaggars, S., Hodora, M., Cho, S., X, D. (2015). Three accelerated developmental education programs: Features, student outcomes, and implications. *Community College Review*, *43*(1), 3–26.

Smith Morest, V. (2013). From access to opportunity: The evolving social soles of community colleges. *The American Sociologist*, *44*(4), 319–328.

Snyder, V. (2002). The effect of course-based reading strategy training on the reading comprehension skills of developmental college students. *Research and Teaching in Developmental Education*, *18*(2), 37–41.

Sriram, P., Glanzer, P., & Allen, C. (2018). What contributes to self-control and grit?: The key factors in college students. *Journal of College Student Development*, *59*(3), 259–273.

Terrenzini, P. T., Springer, L., Yaeger, P. M., Pascarella, E. T., & Nora, A. (1996). First-generation college students: Characteristics, experiences, and cognitive research in higher education. *Research in Higher Education*, *37*(1), 1–22.

Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago Press.

Turner, J. & Husman, J. (2008). Emotional and cognitive self-regulation following academic shame. *Journal of Advance Academics*, *20*(1), 138–173.

U.S. Census Bureau. (2015). "Educational attainment in the United States 2014," Table 2, *Educational attainment of the population 25 Years and over, by selected characteristics 2014*.

U.S. Department of Education. (2017). *Developmental education: Challenges and strategies for reform.*

U.S. Department of Education. National Center for Education Statistics. (2016). *Remedial course taking at U.S. public 2- and 4-year institutions: Scope, experiences, and outcomes* (Report No. 2016–405).

Van Houtte, M., Demanet, J., & Stevens, P. A. J. (2013). Curriculum tracking and teacher evaluations of individual students: Selection, adjustment or labeling? *Social Psychology Education*, *16*, 239–252.

Van Ora, J. (2019). "It's like one step for me to go forward.": A longitudinal study of community college students' perceptions about the value of remedial education. *Community College Enterprises*, *25*(1), 29–76.

Venezia, A., & Voloch, D. (2012). Using college placement exams as early signals of college readiness: An examination of California's early assessment program and New York's at home in college program. *New Directions of Higher Education*, *158*, 71–79.

Woods, C., Park, T., Hu, S., & Bertrand Jones, T. (2017). Reading, writing, and English course pathways when developmental education is optional: Course enrollment and success for underprepared first-time-in-college students. *Community College Journal of Research and Practice*, *43*(1), 5–25.