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Exploring Community College Student Persistence in Mandated Developmental Coursework

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This is to certify that the doctoral study by

Karen L. Beck

has been found to be complete and satisfactory in all respects,
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Walden University
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Abstract

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Coursework

by

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BS, University of Maryland, Baltimore, 1998

MA, University of Maryland Baltimore County, 2011

Dissertation Submitted in Partial Fulfillment of the

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Abstract

The problem investigated in this study was the low completion rates of students in mandated developmental education courses at a local community college in the mid-Atlantic region of the United States. The purpose of this study was to examine factors that may contribute to the persistence of community college students who have completed mandated developmental education courses. The qualitative study uses Tinto's student departure theory as the conceptual framework to examine the lack of persistence of students in developmental education classes. The study included interviews with eight students who have completed at least one developmental education course in the past 3 years. Data analysis included an extensive review of the interview transcripts to develop codes, categories, and themes to answer the research question. The findings of this study may identify personal or academic persistence strategies that may assist community colleges in increasing the success rates of students in developmental education. Completing a credential has social change implications as it may provide more significant job opportunities, and the ability to earn higher wages impacting their overall quality of life. Moreover, an individual that receives an associate degree may earn 17% more in their occupation than their counterparts with a high school diploma or equivalent.

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Dedication

I want to dedicate my work to members of my family that helped me achieve this milestone. My mother has always been my touchstone, the person I go to when life is challenging and celebrate my victories. I would not be here without your constant love and support. I also wish to thank my dad. While he has been gone for over twenty years, I was blessed with his drive that helped me countless times throughout this process.

Lastly, I wish to dedicate this work to my three amazing daughters. Lindsay, Rachel, and Riley have taught me as much as I have hopefully taught them. They will always be my sun, moon, and stars, and behind everything I ever do. I hope that I have provided them with an example to work hard to make their dreams a reality and not let anything hold them back. I love all three of you more than I can say with words.

Acknowledgments

I want to take a moment to thank my wonderful char, Dr. Marilyn Robb, for her assistance during the entire process. Dr. Robb was supportive, helped me focus on critical points for this study, and always provided timely and excellent feedback. I will never forget that the interpretation of my findings is not the place for another literature review after her countless reminders. I will always be grateful for her help and encouragement over the almost two years we worked together. Thank you so much, Dr. Robb!

Additionally, I would like to thank my second committee member, Dr. Laurel Walsh, for her assistance in this process. Dr. Walsh provided great feedback, helped me to fine-tune my interview questions, and shared my enthusiasm for this study. Her background with developmental education helped me as this was a new area for me in completing this study. Thank you, Dr. Walsh!

I wish to express my gratitude to my University Research reviewer, Dr. Cheryl Burleigh. When I received the edits for my prospectus, I felt overwhelmed. However, as I worked through making the corrections, I realized that her careful review was helping to ensure my research was sound and helped me be a better scholarly writer. Thank you, Dr. Burleigh!

Lastly, I would like to thank Dr. John Johnson. I attended a session with him during my academic residency with a faint idea for my study, and in a short time, he helped me frame the research in this dissertation

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Chapter 1: Introduction to the Study

Across the United States, community colleges have open or broad admissions policies to create a gateway to higher education for anyone desiring to attend. The only primary requirement to enroll is a high school diploma or equivalent, such as a general education degree (Quarles & Davis, 2017). While community colleges enroll approximately 45% of all college students, a significant number of these individuals are underprepared to take college-level courses (Crocker & Mazer, 2019). Currently, only 20% to 37% of students assigned to developmental education courses successfully finish the course(s) and continue to the next semester (Xu & Dadgar, 2018). The problem to be explored in this study is student persistence in mandated developmental education coursework during their first year of community college. Students deemed underprepared for college coursework are often required to take developmental classes to prepare them for college-level content (Crocker & Mazer, 2019; Hagedorn & Kuznetsova, 2016; Xu & Dadgar, 2018). Positive social change implications include supporting more diverse and inclusive community college graduates through scaffolding support in developmental coursework that can serve as a barrier to degree completion

Between 50% to 80% of new community college attendees are mandated to attend at least one remedial education course before taking college-level coursework (Barhoum, 2018; Boatman & Long, 2017). Community college students who require developmental education in either reading, writing, English as a second language, or math begin their college careers at a disadvantage. The required coursework is noncredit bearing, even

though students pay the same cost to participate while also increasing the time to degree completion (Bahr et al., 2019). The additional length of study and cost required for completing developmental courses is the leading cause of attrition among these students (Barhoum, 2018).

This study examined the challenges community college students face in the completion of mandated developmental education coursework and possible strategies to increase student passing rates and retention. The study provides an overview of the background literature of the problem and additional context to challenges experienced by community college students in mandated developmental education courses. Interviews with students who successfully completed a developmental course within the past three years served as the primary source of data for this study. The interview transcripts assisted in identifying strategies of personal or academic success to help other students complete their developmental coursework.

Background

Community colleges share a mission to provide broad or open access to educational opportunities within their communities, allowing anyone with a high school diploma or equivalent a chance to earn a workplace certificate or an associate degree (Finn & Avni, 2016; Flink, 2017). Community colleges broad or open admissions lead to a higher percentage of students from underprepared and underserved backgrounds. This policy creates challenges for students as they adjust to the demands of higher education. Those students who cannot acclimate to the higher academic rigor are more likely to drop

out in the first semester or choose not to enroll altogether (Bahr et al., 2019; Crocker & Mazer, 2019; Quarles & Davis, 2017). Students deemed as underprepared or underserved may encounter obstacles in earning a degree because of various challenges in their academic and personal lives (Quarles & Davis, 2017). Underserved students, those from a minority, low socioeconomic status, or first-generation college students are the most likely to lack the academic skills necessary for success in a college classroom (Boland et al., 2018; Logue et al., 2017).

Community colleges provide developmental education classes for students in the areas of reading, writing, English for nonnative speakers, and math to bridge the gap between high school and college skills to prepare a student for college-level work (Bahr et al., 2019; Goudas, 2018). Students identified as not ready for college-level courses in any of these areas enter a remedial section they must pass in order to move forward in their degree program (Shields & O'Dwyer, 2017). Moreover, the remedial series for reading, writing, English as a second language, or math may have up to three courses that a student must complete before taking the actual college-level English or math class (Boatman & Long, 2017; Shields & O'Dwyer, 2017). A student at the lowest levels of preparedness must take all three classes before moving forward, which may take over a year to complete (Boatman & Long, 2017). On average, half of all students requiring developmental courses will take 2.6 classes before moving to college-level work (Finn & Avni, 2016). The issue of completing mandated developmental classes becomes more

complex as 29% of these individuals needed remedial work in multiple subjects increasing the likelihood of failure (Boatman & Long, 2017; Shields & O'Dwyer, 2017).

Students who are unsuccessful in developmental education attribute this failure to both academic and personal challenges (Quarles & Davis, 2017). Developmental education courses are in place to bridge the equity gap for underserved students from minority groups and low socioeconomic backgrounds. Moreover, the same students are least likely to have success in remedial education (Bahr et al., 2019; Logue, et al., 2017; Quarles & Davis, 2017; Shields & O'Dwyer, 2017; Weisburst et al., 2017). The academic issues for individuals include frustration with the extended timeframe to degree completion, a lack of preparation and understanding of the rigor required for college, lower levels of self-efficacy, a lack of knowledge about academic supports provided by the institution and a need for more academic and emotional support (Baier et al., 2019; Barhoum, 2018; Hagedorn & Kuznetsova, 2016; Perez & Hansun, 2018; Xu & Dadgar, 2018). A student who does not understand how to study or learn content while not having confidence in their ability to be successful is less likely to persist in completing the required courses.

Underprepared students also face a myriad of personal challenges that hamper their ability to persist in developmental education coursework. Many of these individuals must work and provide for their families, forcing them only to enroll part-time, adding to the time it takes to earn a degree (Shields & O'Dwyer, 2017). The students have significant financial burdens as they must pay for their remedial classes even though they

do not count towards earning a degree (Quarles & Davis, 2017). The fact that they must pay for these courses that will not earn credit and take longer to reach their goals often leads to frustration leading some to give up. Twenty-five percent of developmental education students who earn an associate degree take up to10 years to graduate (Shields & O'Dwyer, 2017).

University systems in the United States are not producing enough graduates, especially with bachelor's degrees, to keep up with the needs of industry and other western countries (Boland et al., 2018). This deficit of academically prepared employees entering the workforce will only grow unless institutions are able to increase graduation completion rates (Boland et al., 2018). Upwards of 74% of students who enter a community college will drop out or take a break without earning a degree (Anderson & Goldrick-Rab, 2018). Leaving school lessens a student's overall earning potential and ability to receive promotions throughout their lifetime, affecting their socioeconomic status and lessening opportunities (Anderson & Goldrick-Rab, 2018).

A student that graduates will have greater job opportunities and earn higher wages than their counterparts that leave school (Goudas, 2018; What Works Clearinghouse, 2019). Graduating from college may also benefit those from underserved communities in reaching a higher socioeconomic status increasing their contribution to their family and society (Goudas, 2018). A student that receives an associate degree will earn approximately 17% more in their lifetime than their counterparts with a high school diploma or equivalent (What Works Clearinghouse, 2019). This study examined

individual student's academic persistence strategies in developmental education that may serve to potentially increase the success rates in these courses. The intent of this study was to identify strategies to assist individuals to continue in school to earn an associate or bachelor's degree.

Problem Statement

Approximately 50-80% of new community college students will require at least one developmental course in reading, writing, English for non-native speakers, or math, yet, as many as 90% of those students will not persist to college-level work, leaving school in their first year (Barhoum, 2018; Walker, 2015). Developmental students often face external challenges, including jobs and dependents, which make the path to a degree difficult (Jaggars et al., 2015). Multiple institutions have used a variety of solutions to address the lack of persistence of community college students. Currently, 31% of students taking remedial math and 41% requiring remedial English complete the series of classes and move on to the college level counterpart (Barhoum, 2018; Quarles & Davis, 2017; Swanson et al., 2017; Walker, 2015;). Only 28% of students who complete their developmental education coursework will earn a degree within eight and a half years (Barhoum, 2018). There are a variety of reasons for the lack of persistence in these courses including an individual student's economic status and educational background. There is little information to identify why approximately one-third of students are successful in their mandated developmental coursework (Swanson et al., 2017). The

problem investigated by this study is the low completion rates in developmental

education courses of students at the local community college.

Purpose of the Study

The purpose of this qualitative study is to examine factors that may contribute to

the persistence of community college students who completed developmental education

courses. This research study took place at an urban mid-Atlantic community college that

offers developmental coursework in reading, writing, English for non-native speakers,

and mathematics. Interviews were conducted with eight participants that completed at

least one mandated developmental education course within the past three years. The goal

of this study was to identify personal or academic strategies of persistence from

interviewees that have successfully completed at least one developmental education

course within that past three years. The personal and academic strategies identified in this

study may prove useful in increasing completion rates in developmental education classes

that students are required to complete at a community college.

Research Question

The current literature shows the lack of persistence in the completion of mandated

developmental education coursework at the community college level (Barhoum, 2018;

Walker, 2015). While the number of students requiring developmental education

coursework in community colleges continues to grow, many students do not complete

these courses to move on to college-level work. According to Quarles and Davis (2017)

only 31% of students placed into developmental reading or writing and 44% of those

placed into developmental math successfully complete the mandated remedial course. The Quarles and Davis research highlights the challenges students face but does not provide much information on how they may succeed. While some studies such as Finn and Avni (2016), Xu and Dadgar (2018), and Bahr et al. (2019) focused on the lack of success in completing developmental courses, this study considered students who were successful in remedial education and sought to identify personal and academic strategies for their persistence at an urban community college in the mid-Atlantic region of the United States.

The research question for this study sought to answer the following question: Research Question: How do community college students who had successfully completed developmental education courses describe their personal or academic strategies for educational persistence?

Conceptual Framework

The framework for this study focused on Tinto's student departure theory, which demonstrates that one requires integration and engagement with both the social and academic aspects of an institution to persist (Aljohani, 2016; Distefano et al., 2004; Tinto, 1988). The academic components include learning performance and communication with faculty and staff, while the social aspects relate to their peers and participating in extracurricular activities (Distefano et al., 2004; Oseguera & Blackmon, 2012). While this theory assumes that attributes students possess before college such as academic preparation, family support, and academic skills play a significant role in their

decision to remain in college, interventions at the college level may assist them in assimilating into the school environment (Distefano et al., 2004; Oseguera & Blackmon, 2012). When a student builds a relationship with the institution's academic and social components, their ability to handle the stress and demands of higher education increase, leading to persistence in their education journey (Fletcher & Mullen, 2012).

Tinto's student departure theory informs this study by providing a lens in which to consider why approximately only 10% of students in developmental education are successful and persist in college-level work (Barhoum, 2018; Walker, 2015). This point is especially true at the community college level, where the student population is more diverse, with significant numbers of underserved students requiring developmental education coursework (Bahr et al., 2019). Underprepared students frequently come to college without adequate academic preparation and family support that may also hamper their success (Oseguera & Blackmon, 2012). The key to academic success may lie not only in one's preparation for higher education but also in their integration into the culture of the institution.

Tinto's student departure theory provides an opportunity to consider the lack of persistence in developmental education coursework. This conceptual framework allows for consideration of the research question regarding strategies of persistence. Moreover, the theory offers an opportunity to consider a student's social and academic backgrounds and how they affect their educational goals. The development of interview questions will

also consider students' connections in their personal and academic communities to determine if they play a role in their academic success.

Nature of the Study

This study sought to understand why a small group of students are successfully completing mandated developmental coursework and possible strategies that may increase these success rates. This study surveyed eight students that have completed at least one developmental education course in the past three years at a mid-Atlantic urban community college. The goal was to identify strategies of personal or academic persistence that could assist future developmental education students in completing their classes and moving into college-level work.

The qualitative study allowed the researcher to examine the perspective of participants and how their circumstances related to the problem at hand (Ravitch & Carl, 2016). Tinto's student departure theory provided the researcher the opportunity to examine the participant's perspective on an issue (Ravitch & Carl, 2016). The consideration of each participant's perspective provided an opportunity to make meaning of their experiences and identify how they related to their ability to succeed in mandated developmental education courses while also considering their social, cultural, and personal contexts as they may relate to the study (Given, 2008). This conceptual approach also tied in with Tinto's student departure theory as it considers how a student's academic and social attributes affect their performance in mandated developmental education courses. (Aljohani, 2016).

A generic qualitative research design was the best choice as it offered an examination of the issues at the root of the problem without utilizing a specific lens (Caelli et al., 2003). This method allowed for a thorough investigation to identify the factors contributing to the problem and sought viable strategies that may increase persistence in developmental education (Caelli et al., 2003; Kahlke, 2018). The flexible nature of this approach worked best for this research design and allowed for the interviews to be as general or detailed as best fit the study (Caelli et al., 2003; Kahlke, 2018). A generic method also works well with a smaller sample size, such as the participants in this study (Kahlke, 2018). As a researcher studied success in remedial education, this approach allowed for changes as the data indicated to obtain a deeper understanding of the problem while contributing to the research in this area of higher education.

The data collection for this study was interviews with participants who have completed at least one developmental education class within the past three years to ensure that their perceptions are still current. The participants are students at a community college in the mid-Atlantic region who have successfully completed one developmental education course within the last three years. The developmental courses may include reading, writing, mathematics, and English for nonnative speakers. Eight students were selected for interviews offering different perspectives to identify strategies of academic or personal persistence present among multiple interviewees highlighting patterns in their experiences. Interview questions were developed with a focus on student

experiences in developmental education courses and included considerations for past experiences and choices that may have impacted their path to success in developmental education courses (Eberle, 2014). The interview questions were open-ended to allow participants to expand on any items they may choose and provide concrete examples of their thought process through their coursework (Eberle, 2014). While the interviews were open-ended and semistructured in nature, I had a script for the interview process (Appendix A) to ensure the participants received critical information and understood the reason they were participating in this study (Jacob & Furgerson, 2012). The open-ended semistructured interview also related to components of participants social and academic interactions at the institution to ensure the integration of the conceptual framework based on Tinto's student departure theory.

Audio recordings were completed for each student interview. The audio recordings were used to develop transcripts of the interviews to ensure accuracy in documenting participant's responses. Additionally, the transcripts allow for analysis that was essential to identifying themes in the data (Jacob & Furgerson, 2012). The possibility of a second shorter interview may be required for clarification of statements made during the initial interview process (Jacob & Furgerson, 2012). Once assured of the accuracy of the participants' interview responses, data examination looked for themes or strategies of persistence among the interviewees.

Definitions

The following terms are defined in the context of this study.

Developmental or remedial courses: These interchangeable terms describe courses that serve to fill gaps in students' knowledge and prepare them for college-level work. These courses are usually offered in reading, writing, mathematics, and English for nonnative speakers (Flink, 2017). Community colleges use placement testing to determine if a student is ready for college-level courses or have gaps in their education that require developmental coursework (Bahr et al., 2019). These courses must be completed to enroll in a college-level counterpart (Bahr et. al., 2019).

First generation college student: An individual that is the first to attend college in their immediate family (Bahr et al., 2019). These students are often at a disadvantage due to the lack of experience with the demands of higher education within the family. Moreover, first-generation college students are frequently underprepared for the needs of college and have fewer resources to support their academic goals (Quarles & Davis, 2017).

Open-access policies: Students can receive a college education without meeting specific criteria other than completing a high school diploma or equivalent. In the United States, community colleges have open access policies that allow individuals meeting these requirements to attend their institutions (Finn & Avni, 2016). While community colleges welcome all students with a high school degree or equivalent, they may not be prepared for higher education's academic rigor (Raby, 2020). Community colleges are

more likely to require developmental education than their four-year school counterparts (Finn & Avni, 2016). More than 60% of community college students require at least one developmental education course (Wilson & Lowry, 2017).

Persistence: A student's ability to complete a college course with a passing grade allowing them to enroll in other classes. Concerning this study, the term persistence relates to a student's ability to pass a mandated developmental education course successfully in order to take a college-level counterpart. Approximately 68% of new community college students are required to take at least one developmental education course (Quarles & Davis, 2017). Moreover, only 28% of the students required to complete developmental education at a community college will earn a college degree in eight years (Barhoum, 2018).

Socioeconomic status: An individual's position in society based on their economic and social status compared to their counterparts (Logue et al., 2017). There are five classes: upper, upper-middle, middle, working, and low. Individuals that fall into the low socioeconomic category are more likely to be underserved and underprepared for college-level work and frequently have the worst outcomes in completing developmental courses (Quarles & Davis, 2017). Individuals without a college education are less likely to obtain well-paying jobs that may have a positive impact on their economic status (Logue et al., 2017).

Underprepared students: An individual that does not have the educational background to be successful with the academic rigor of a college-level course (Boatman

& Long, 2017). These students are often required to complete mandated developmental

education courses if they choose to pursue a college education (Crocker & Mazer, 2019).

Underserved students: Students that are from a minority group, low

socioeconomic backgrounds, or a first-generation college student fall into this category

(Goudas, 2018). Students from this group are often underprepared for the academic rigor

of college-level courses and are frequently required to enroll in developmental education

courses. Students that are required to complete developmental education classes are less

likely to persist to earn a college degree (Barhoum, 2018; Walker, 2015).

Assumptions

This dissertation includes a few assumptions that were relevant to the study. First,

students placed in developmental education courses may lack the necessary skill set for

success in college-level work. Secondly, the study participants may have also taken

college-level courses after completing their remedial courses at the school. Also, the

student participants are currently students at the college working towards an associate

degree or transfer plan to a four-year institution.

Students participating in the interviews did so on a volunteer basis. Participant's

identities were protected in written transcripts and study documents. This ensured

participants were free to be candid in their responses. Lastly, some individuals freely

shared their thoughts during the interviews while others may have been more reserved.

The researcher worked to ensure everyone felt comfortable with the process and

understood how their participation helped identify strategies of success in developmental

education to foster dialogue.

Scope and Delimitations

A community college in the mid-Atlantic region in the United States was the

location of this study. The institution is a multicampus school that offers developmental

education courses for students each semester. The college provided participants for this

study that have completed at least one developmental education course in either reading,

writing, English for non-native speakers, or mathematics within the last three years. Eight

individuals meeting the criteria participated in a one-on-one semistructured interview. A

computer-based recording application collected and then transcribed the interviews for

analysis. The participants had an opportunity to review the transcribed interviews to

ensure they reflect their perceptions accurately. The results of this study are transferrable

in nature as community colleges nationwide struggle with student success in

developmental education; however, not all strategies identified will relate to all

community college systems.

Limitations

This study focused on students that completed a developmental education course

at a community college in the mid-Atlantic region of the United States. While this is a

sizable institution, the data identified may be unique to this institution. This research

study was general examination focusing on the overall experiences of the participants and

this community college in the Mid-Atlantic region of the United States. Participants were

not separated based on which form of mandated developmental education courses they completed to maintain a general examination of the problem in this study. Moreover, study participants represent one community college and not students taking mandated developmental education courses nationally. While some of the findings may be useful to other institutions, the findings focus on these students' experiences, which may be unique to others participating in remedial education across the county. This point is especially true if other schools are not using the same strategies to garner success for their remedial students. This study focused on the experiences of students that completed a developmental education course at an urban community college; therefore, the findings will not reflect the perspectives of the entire study body.

Dependability of this study was ensured by utilizing the same approach to each interview and analysis of the information provided. The participants reviewed a transcript of their interview to ensure it captured their thoughts accurately and allowed an opportunity for reflection and corrections as necessary. Careful examination of the findings also allowed an opportunity to ensure no bias by the researcher occurred in the interpretation of the findings and potential personal and academic strategies it identified.

<div align="center">**Significance**</div>

This study may add to the research relating to the characteristics of persistence in developmental education courses as it focused on success rather than failure. Previous studies demonstrate that cost, time, personal problems, and frustration over additional coursework are the primary reasons that students either fail or decide to leave school

whereas this study focused on strategies of student success (Allen et al., 2017; Hagedorn & Kuznetsova, 2016). The intent of this research study was to identify additional personal and academic strategies that can help more students to understand the importance of completing these courses to prepare them for college-level work and reach their goals of earning or college degree or transferring to a four-year institution (Crisp & Delgado, 2014).

The findings of this study could influence the success of underprepared students by potentially identifying personal and academic strategies that can bolster success for developmental education students. This study may provide a greater understanding of the needs of this population where 50-80% of students do not successfully pass their mandated developmental education courses (Barhoum, 2018; Walker, 2015). As community colleges seek to increase completion rates among this demographic, college administrators seek viable solutions to meet this goal not only to help students persist but also to assist with the considerable expense associated with developmental education courses for both the student and the institution (Hagedorn & Kuznetsova, 2016).

This study also can have a positive social change impact on underprepared students facing developmental coursework both at this institution and nationally. The identification of new personal and academic strategies from the success of participants, could increase personal and academic persistence rates in remedial classes potentially allowing more students to persist to college work and possibly degree completion (Quarles & Davis, 2017). Goudas (2018) indicated that a student who successfully

completes his or her developmental courses is more likely to earn a degree than their counterparts that drop-out. A student that successfully completes mandated developmental education coursework and earns a college degree can earn higher wages in their career which may increase their socioeconomic status and overall contribution to society which has social change implications for the individual and society (Weisburst et al., 2017; What Works Clearinghouse, 2019). Furthermore, a student that receives an Associate degree will earn approximately 17 % more in their career than those holding a high school diploma as their highest level of education (What Works Clearinghouse, 2019). This study aims to identify personal and academic strategies for students who have completed mandated developmental courses.

Summary

Students entering the community college system to earn a degree are often faced with the challenge of being underprepared for the academic rigor of college-level coursework. Nationally 50%-80% of new students will require at least one remedial course before taking traditional classes which leads to frustration and high rates of student departure (Barhoum, 2018; Walker, 2015). The lack of degree completion prevents these individuals from obtaining a higher earning job in their lifetime decreasing their overall opportunities (Weisburst et al., 2017; What Works Clearinghouse, 2019). This study sought to identify personal and academic strategies of persistence to assist more students with success in developmental education. The literature review offered a detailed examination of the challenges surrounding remedial education for the student

and institution while considering current strategies to increase persistence, varied

delivery methods and supports implemented to assist students in their educational

journey.

Chapter 2: Literature Review

This review of the literature examined the problem investigated in this study relating to the low completion rates of students in mandated developmental education courses at a local community college in the mid-Atlantic region of the United States. Community college students who are deemed unprepared for college-level coursework are required to take developmental level classes to bring them on par with their academically prepared counterparts (Crocker & Mazer, 2019). The need for these classes adds additional financial constraints and extends the time required to earn a degree resulting in 63% to 80% of students dropping out and leaving community college (Xu & Dadgar, 2018). The purpose of this study was to explore personal and academic strategies that contribute to the persistence of students who have completed developmental education courses.

This section examined the strategy selected to review current literature in the field of remedial education at the community college level along with the conceptual framework selected for this study and how it informs this research. Throughout this section the researcher also considered current and relevant literature that examines the challenges facing students required to complete remedial courses and how this affects their success. The chapter also examined efforts to increase completion rates, such as how institutions are determining preparedness, new strategies to bolster success, such as mainstreaming, acceleration, learning communities, and providing additional resources for individuals. This literature review intends to inform this study in a manner that

increases understanding of the problem to effectively seek strategies to assist more students in completing developmental education courses.

<div align="center">**Literature Search Strategy**</div>

The literature review began with a focus on challenges in developmental education at the community college level. Multiple databases were examined to ensure thoroughness (Education Source, ERIC, Google Scholar, ProQuest, SAGE, and Thoreau) focusing on the key terms: *Challenges, barriers, difficulties; developmental* or *remedial education; community college*, or *higher education*, and *persistence* or *success.* The use of these terms directly relates to the problem and the purpose of this study, providing the best manner to collect information. A review of each article included an examination of the bibliography to identify other titles that might be applicable as well as authors referenced throughout the article. There are over 100 research studies on this topic showcasing several themes in the challenges surrounding developmental education. These themes include low success rates, personal and academic challenges faced by underprepared students, challenges in placement testing, government involvement in mandating remedial education, strategies to bolster success, the cost to both the student and institution, and the effectiveness of developmental education in preparing a student for college-level work. This section will examine each theme as it informs this study and provides a conclusion to summarize this chapter.

Conceptual Framework

The conceptual framework of this study centers student departure theory developed by Vincent Tinto (Tinto, 1997). Tinto examined this topic in 1975, followed by some revisions to his work in 1997 (Tinto, 1975; 1997). Tinto's theory of student departure, also referred to as the interactionist theory falls under the umbrella of sociological theories and serves as the foundation for numerous studies on the topic of student persistence as others seek ways to help students persist in their educational goals (Braxton et al., 2004; Reason, 2009). The theory of student departure includes 13 points identified in his work that fall into several themes; student entry characteristics, the initial commitment to one's goal and the institution, and the degree of one's social and academic integration to the school (Braxton et al., 2004).

The first few points of this theory relate the characteristics one possesses as they enter college, including their academic preparation, self-efficacy, motivation, and confidence as factors that are important to persistence at the college level (Reason, 2009; Tinto, 1997). A student that feels prepared for the challenges associated with the academic rigor of college has the discipline to remain focused on their work and is confident in their skills will have a more significant commitment to their goals of persisting and graduating from college (Braxton et al., 2004; Tinto, 1997). Their overall dedication to their overarching goals will assist them through challenging times, especially during the first year of school, decreasing the chance that they will leave the

institution before earning their desired degree or certificate (Braxton et al., 2004; Tinto, 1997).

The other major theme relates to the initial commitment to various components of being a college student, as this dedication to the process can see them through to completion (Braxton et al., 2004; Tinto, 1997). Tinto sees one's commitment to graduation as an essential component to their overall success as a student that has a strong desire to earn their degree is more likely to invest in the institution's social and academic components (Braxton et al., 2004; Tinto, 1997). Tinto's theory clearly defines academic and social integration and details how each is paramount to success. Social integration relates to how one forms bonds to others at school, including their peers, faculty, and mentors (Braxton et al., 2004; Reason, 2009; Tinto, 1997). Academic integration relates to how a student handles the academic rigor, institutional policies, and overall structure of the school (Braxton et al., 2004; Tinto, 1997). Tinto finds that a student with a strong commitment to completion is more likely to effectively integrate into the social and academic aspects of college life which will also allow them to feel more connected to their faculty, peers, and the institution (Aljohani, 2016; Braxton et al., 2004; Tinto, 1997).

Tinto considered the challenges students may have outside of school that play a role in persistence such as family, work and other demands that make the expectations of college a challenge (Aljohani, 2016; Braxton et al., 2004). These outside influences play a crucial role for the underserved and underprepared students that attend community

colleges across the nation and are a factor in their decision to leave school (Aljohani, 2016; Braxton et al., 2004).

While some researchers consider this theory to be a sound framework for their study, others feel it misses the mark and needs revision to consider more populations. Braxton et al. (2004) conducted a review of research based on the interactionist theory and determined this theory relates more to students in four-year colleges that live on campus, versus the environment of commuter schools or community colleges. Students within community colleges are often on campus only for their classes and do not spend much time at school to build relationships with others (Braxton et al., 2004; Reason, 2009). These students also have more responsibilities outside of school and often work part- or full-time jobs (Braxton et al., 2004). Moreover, community college students are also more likely to have dependents or family members they care for, which also reduces the opportunity for social and academic integration (Braxton et al., 2004). While a student may want to feel connected to others, they do not have the time to participate in anything that is not directly related to their classwork (Braxton et al., 2004).

Reason (2009) also found an issue with the theory of student departure as they feel its focus is too narrow in scope. Tinto's theory does express that a student from an underserved population often has more challenges with goal commitment and integration to a school, which may lead to departure (Reason, 2009; Tinto, 1997). Furthermore, Tinto states that students in this population are more likely to leave college to assist with family

challenges without considering its effect on their long-term success (Reason, 2009; Tinto, 1997).

In this context, they are identifying their family as something that may stand in the way of earning a degree. Reason (2009) found that it is not the individual's race or socioeconomic status that inhibits success, but somewhat their academic preparation and family support that can be a hindrance to graduating. Moreover, they also found that frequently a student from an underserved group can be successful if they had a solid academic foundation and family support. In contrast, their counterparts without both are less likely to succeed. The student's preparation and support network upon entering college has the most significant effect rather than their race or income status (Reason, 2009).

While several researchers have identified challenges with the student departure theory to consider, it is still a solid foundation for this study. Examining strategies of persistence in developmental education through the lens of student entry characteristics, initial commitments to their goals and education along with their academic and social interaction provides an opportunity to consider a student's perspective. Considering how closely they are tied to their goals, how invested they are with their peers, faculty, mentors, and the school provides a lens to consider what tools they use to succeed. These students do not fall into the category of being well-prepared as they required remedial education indicating they were not ready for college-level work. Considering this point

with Tinto's theory opens this study up to see if some of the other characteristics were enough to help them succeed and why.

Tinto's theory will also assist in the data analysis for this study. As the interview transcripts are reviewed and the process of developing codes, categories, and themes commenced, the 13 points presented in Tinto's work were considered (Braxton et al., 2004). This examination included looking at the participant's perspective on their academic preparation, self-efficacy, and outside support system. Another key point to consider is the student's connections to the internal and external aspects of their education (Reason, 2009; Tinto, 1997). Do they feel a connection to the school, their faculty, and peers? The theory of student departure will assist in analyzing the data to identify participants' personal and academic persistence strategies that allow them to complete their developmental education coursework.

Literature Review Related to Key Concepts

Historical Background

The Colonial Education System

The need for classes that provide necessary skills to students dates to the 1600s to prepare students for higher-level work in colonial American colleges (Wheeler & Bray, 2017). Through colonial times and the 1800s, college enrollment was primarily white males from privileged families with the resources needed for success (Arendale, 2011; O'Banion, 2019). While some institutions began sending recruits to preparatory schools to be more inclusive, it was not until the 1900s that Americans demanded accountability

and more significant equity in educational opportunities for students from minority groups and low socioeconomic status households (Morris, 2016). Community colleges began opening their doors to students in the early 1900s, providing a significant opportunity to those from more diverse backgrounds with their affordable tuition and preparatory options, including developmental courses (O'Banion, 2019). Moreover, as community colleges opened, four-year schools frequently moved their remedial programs over to the community college, placing the burden of college preparedness on their shoulders (Arendale, 2011).

The American Community College Student

The American Community College system is unique in its mission to provide open access to education for any students with a high school diploma or equivalent (ASHE, 2010). As more students from underserved populations such as minorities, low-socioeconomic status, and first-generation college students desire an education, many are turning to their local community college to provide this opportunity (Duchini, 2017; Finn & Avni, 2016; Flink, 2017; Lewis & Yates, 2019; Li et al., 2018). These institutions also serve large numbers of international students that require English for nonnative speakers (ENS) courses to increase their ability to speak, read and write in English (Weisburst et al., 2017). Currently, community colleges nationwide account for 45% of all undergraduate students, which equates to approximately 12 million individuals (Crocker & Mazer, 2019).

As the number of students attending community college increases, they bring educational deficiencies with them that require remediation (Finn & Avni, 2016). Approximately 68% of students entering public two-year schools will require at least one developmental course that they must pass to take its college-level counterpart (Walker, 2015; Xu & Dadgar, 2018). Furthermore, it is common for students to require more than one developmental course as the average number of required remedial classes is 2.6 per student (Finn & Avni, 2016). Those that require remedial classes are less likely to persist to earn an Associate Degree. Moreover, only 28% of those placed in remedial classes remain in school to graduate in 8.5 years (Barhoum, 2018).

Community college students that require remedial education are academically underprepared for college, meaning they do not have a full complement of skills for success in the academic rigor of higher education (Logue et al., 2017; Perez & Hansun, 2018). The students requiring remediation most often come from Black, Hispanic, low-income households or are the first in their families to attend college (Boland et al., 2018; Logue et al., 2017). Male students are also less likely to be successful than their female counterparts from all races (Swanson et al., 2017). Underserved students have an attrition rate of 89% after their first semester, and while some return to school after a break, others do not (Swanson et al., 2017).

Not only do these individuals require skills education to assist with critical and high-order thinking, but they also lack other essential characteristics such as time management, taking practical notes, self-efficacy and seeking help from peers and faculty

(Hagedorn & Kuznetsova, 2016; Hesser & Gregory, 2016; Swanson et al., 2017).

Students may require help with reading, writing, and math, but also how to be a college

student and balance the demands of their classes effectively while being successful.

Moreover, students also feel embarrassment or frustration for being deemed not ready for

college, which may lead them to feel unworthy and not enroll in school at all (Crocker &

Mazer, 2019; Lei & Lei, 2019; Martin et al., 2017). A future section will discuss some

programs schools are using to assist these student's adjustment to college.

 Underprepared students also face personal barriers that may stand in the way of

attending college. As previously stated, underprepared students come from lower

socioeconomic households leaving them with significant financial strain. When these

individuals are required to complete remedial classes, this adds additional costs to their

education even though these courses will not earn any college credit nor show up on their

college transcript (Lei & Lei, 2019). Furthermore, if a student is unsuccessful in this

course, they will have to repeat it, delaying their path to college-level work and

increasing their costs as they must pay for both the failed class and their repeat the next

semester (Lei & Lei, 2019). Students who can complete their remedial classes on the first

try can move through college faster and reach their goal of earning a degree (Xu &

Dadgar, 2018).

 Individuals often work while in school and may also have dependents to care for

that take precedence over their educational goals (Quarles & Davis, 2017; Shields &

O'Dwyer, 2017). Students who have educational challenges and financial strains are less

likely to persist to complete their required developmental coursework despite the opportunity it provides to earn a higher salary throughout their lifetime (What Works Clearinghouse, 2019). The facts provided by these researchers highlight the problem of persistence in developmental education as most community college students will require at least one course in reading, writing, or math, yet few persist college-level work.

Developmental Education at the Community College

The increase in the underprepared and underserved student population at the community college level has led to more significant numbers of students requiring developmental courses to prepare for college-level work placing a more substantial burden on two-year colleges (Crocker & Mazer, 2019; Flink, 2017). As previously stated, 68% of students entering community colleges will require at least one developmental education course they must complete before taking a college-level course (Walker, 2015; Xu & Dadgar, 2018). Placement into these classes is often the result of a placement or entrance exams students complete before registering for classes (Bahr et al., 2019; Hodara & Cox, 2016). While some schools will use the traditional SAT or ACT scores, about 90% of community colleges proctor the Accuplacer or Compass exams for this assessment (Bahr et al., 2019; Barhoum, 2018; & Hodara & Cox, 2016). These exams often examine students reading and writing abilities, as well as mathematics skills (Bahr et al., 2019). If they score below a certain threshold, they are placed into developmental courses in that discipline (Bahr et al., 2019).

Researchers highlight the national debate regarding the use of these exams as the sole criteria for placement as they only offer a single viewpoint of a student's knowledge and abilities (Bahr et al., 2019; Duchini, 2017; Hodara & Cox, 2016). This fact is also true for non-Native students where English is not their first language as these individuals face challenges with the exams based on language barriers (Park, 2019). Some institutions are utilizing other criteria, including high school grade point average (GPA), as this can highlight students' overall academic dedication, discipline, and self-efficacy (Hodara & Cox, 2016; Woods et al., 2019). A student may show the discipline to work through challenging academic content throughout high school indicating college readiness while performing poorly on exams (Hesser & Gregory, 2016; Hodara & Cox, 2016). According to Woods et al. (2019), a student's high school GPA provides a reliable indicator of their likely performance and retention in their first and second year of college. The overall GPA that schools are using to determine readiness varies, with the average being a 2.6-2.7 GPA (Hodara & Cox, 2016; Perez & Hansun, 2018).

Remedial courses typically fall into four disciplines; reading, writing, English for non-native speakers, or mathematics (Boatman & Long, 2017; Walker, 2015; Xu & Dadgar, 2018). There are typically three to four levels of remedial coursework in each of these areas that a student might require before taking the college-level counterpart (Xu & Dadgar, 2018). The school will use the test scores to determine which level a student might need to prepare for college-level work (Hodara & Cox, 2016). While one student may only need the highest remedial math course, another may require two levels of math

and two levels of writing before they can take traditional classes. The latter might be looking at two semesters of classes before they can enter college-level English or College Math. This fact is an awkward position for a student as they will have to pay for and complete classes over a year that will not earn any credit towards a degree. An individual that has academic and financial challenges may not see the value in this process, which may lead to a high attrition rate (Xu & Dadgar, 2018).

Government Policy in Developmental Education

The low completion rates among remedial students is a concern for policymakers and state governments that fund these institutions (Hagedorn & Kuznetsova, 2016; Perez & Hansun, 2018). Government agencies are also balking at the price tag for delivering developmental education in America, which is approximately four to six billion dollars annually (Boatman & Long, 2017; Cung et al., 2019; Hagedorn & Kuznetsova, 2016). Lawmakers in multiple states are challenging the developmental education system due to the cost of this program, along with the low completion rates.

A few states have interceded in this process and created laws that affect the delivery of these classes or abolish them altogether. Florida is one that has mandated for the elimination of required developmental education as the State Senate feels it costs the students and institutions too much money (Weisburst et al., 2017; Wheeler & Bray, 2017). The Florida community college system transformed its remedial program to meet this requirement and ensure they maintained their funding (Weisburst et al., 2017). The college system is meeting these requirements using mainstreaming, modularization and

corequisite classwork with higher levels of academic support inside and outside the classroom (Brower et al., 2018). A section later in this chapter provides details on these success strategies.

Other states, including Colorado and California, have opted not to remove developmental coursework but rather reform the process so that students can move through these classes at a faster rate using modular education, acceleration, and mainstreaming (Weisburst et al., 2017). Tennessee is using a slightly different approach as it is going into public high schools and testing student's mathematics ability to identify those that may have deficiencies (Hagedorn & Kuznetsova, 2016). Students that are not college-ready in mathematics take a preparatory course while still in high school in addition to their regular math courses and can corequisite the developmental classes with the college level counterpart during their first year at a community college (Hagedorn & Kuznetsova, 2016).

Washington State is combining workplace skills with academic literacy courses to provide a broader skillset to students that would need developmental education (Hagedorn & Kuznetsova, 2016). While these programs are mandatory via government policy, they may assist in increasing persistence rates in underprepared and underserved student populations. Explanations of these methods will be reviewed later in this chapter but focus on targeting a student's specific educational needs and getting them to college-level courses in a shorter timeframe (Weisburst et al., 2017).

With the lack of persistence nationally, more states will likely seek to mandate remedial education reform or require its removal altogether. While this may be difficult for community college systems, it can provide an opportunity to look at options that may improve the system, student completion, and overall success. Reforming the current system allows these schools to consider costs as well and the best use of funds to help students achieve their goals.

Current Strategies to Increase Student Completion of Developmental Education.

This section will examine a variety of approaches currently in progress across the United States to assist the completion agenda while ensuring students develop the skills and critical thinking needed to be successful in higher education. The research literature in this section will show that many studies have addressed solutions to help close the college readiness gap, but progress is slow, and the number of students persisting in college-level work and earning degrees is still low. The primary methods include bridge programs, mainstreaming, learning communities, and accelerated classes. An analysis of these strategies' effectiveness will conclude this section to provide insight into the effectiveness of these programs.

Bridge programs focus on early interventions to allow students to complete any required developmental classes before their first semester of school (Wathington et al., 2016; Wendel & Hu, 2018; Wilson & Lowry, 2017). These bridge programs either start while the student is still in high school or occur during the summer before they begin at the community college. They focus on current high school students or those recently

graduated versus adult learners. McHenry Community College in Illinois developed a program for high school students to prepare them for college and saw a 30% decrease in the need for developmental education in recent graduates between 2011 and 2015 (Wendel & Hu, 2018).

Colleges are also allowing some students to skip developmental coursework through mainstreaming. Schools that participate in mainstreaming allow students with placement in developmental education to enroll in sections of the college-level course where they will have additional supports to assist their success (Eunjyu & Canton, 2015; Kosiewicz et al., 2016; Logue et al., 2017). These added resources can include weekly workshops where the students have additional instruction, work on assignments, or bring their questions to the faculty member for clarification (Kosiewicz et al., 2016; Logue et al., 2017). In some cases, the students complete a workshop before the semester begins to prepare to provide basic skills reviews (Melzer, 2015). Other institutions require students to complete a companion class or corequisite at the same time to provide advising, mentoring and support by showcasing different resources on campus such as tutoring, advising, library services and more personal support items (Crank et al., 2019; Walker, 2015). The additional requirement for students to participate in tutoring sessions with faculty or peers and more intensive advising sessions ensures that they are receiving the help they need with understanding course concepts and planning their education to meet their goals (Cook, 2016).

Another support that some schools add to those participating in mainstreaming is contextualization where the student is participating in an additional support course tailored to their overall career goals or academic interests (Bailey et al., 2016). The premise is that students will have more engagement with these courses because they provide the material needed to be successful in college-level classes, along with a focus on the area they seek to study, increasing their overall interest and self-efficacy (Bailey et al., 2016).

Another strategy community colleges have used in developmental education are learning communities. The concept of learning communities (LC) is not new, as colleges began incorporating them into their programs in the 1970s to promote collaboration amongst students and faculty (Buttram, 2016). Learning communities require students to have co-enrollment into two courses that will weave together over a semester (Weiss et al., 2015). These classes can have the same instructor or two instructors that work together for the semester (Buttram, 2016). The courses share assignments, readings, and projects that bring together concepts from both areas of study to assist students in covering material from different perspectives relating to each course (Weiss et al., 2015). Learning communities often increase student engagement, foster community, increase retention to the next semester, and enhance academic progress (Weiss et al., 2015).

Moreover, students participating in LC's often develop higher respect for diversity and learning gains in essential concepts that will benefit their overall college education (West & Williams, 2017). Furthermore, those from underserved populations

also see gains in their social network at the college, assisting their connection to both the

school and their peers (Rima et al., 2019). This factor is an essential gain for individuals

attending community colleges as they do not have the same opportunity to build

community as those in four-year institutions that live on campus.

Another approach to increase student success in remedial coursework is the use of

accelerated classes that provide an opportunity to move through content at a faster pace

(Cafarella, 2016; Emblom-Callahan et al., 2019; Schudde & Keisler, 2019). There are

several forms of accelerated courses. These include corequisite content, compressed

courses, or modularization of developmental material (Cafarella, 2016; Emblom-Callahan

et al., 2019; Weiss & Headlam, 2019). The goal with each acceleration model is to

increase persistence in both developmental content and college-level work by reducing

the required time for each step in the process (Jaggars et al., 2015).

The corequisite approach is like a learning community in that students enroll in

two courses together; however, they do not always have the infusion of content or the

same students in both classes. Another method of acceleration is to reduce or compress

the number of courses a student completes in the developmental program (Stahl, 2017).

The intent is to focus on the skills and critical concepts a student needs to be successful in

college versus additional content that might be helpful, but slows their movement though

school (Cafarella, 2016; Walker, 2015). Moreover, students are more likely to persist

with a shorter timeframe as they are less likely to be pulled by personal challenges such

as work and family if they move through remedial and college content at a reasonable

pace (Schudde & Keisler, 2019). The shift to a compressed curriculum focuses on what students need to know for success in their education and beyond, which is a different approach from the traditional model (Schudde & Keisler, 2019).

The last form of acceleration is modularization, content broken into modules or learning units that students complete in a few weeks allowing them to complete multiple modules in one semester (Barhoum, 2018; Edgecombe, 2016; Weiss & Headlam, 2019). This process allows students to focus on specific content for a few weeks at a time, which may lead to increased mastery and course success (Edgecombe, 2016; Watanabe-Rose & Guy, 2019; Weiss & Headlam, 2019). These classes are usually set up to last from three to six weeks at a time, allowing students to complete multiple modules in each semester (Weiss & Headlam, 2019). Modularization provides an opportunity for students to focus on their educational deficits as they work on the modules they need versus an entire class (Xu & Dadgar, 2018). This approach is targeted to a student's specific needs and can help prevent boredom and frustration that may occur when students are covering material they already know (Xu & Dadgar, 2018).

Analysis of Current Strategies.

While numerous community colleges nationwide are using the strategies discussed in this section to increase persistence in developmental education, there is still much debate regarding their success. There are also conflicting research studies as some support the use of these strategies. In contrast, others determine they are not making a difference in the number of students completing developmental education or persisting in

college. Moreover, some researchers' find that underprepared students are best served with the traditional approach of remedial coursework and are less ready for college-level work with bridge programs, mainstreaming, learning communities, and accelerated learning.

Developmental education is an essential aspect of the community college education system as it works to meet the needs of underprepared students in developing the skills they need for success in college-level work (Lei & Lei, 2019; Perez & Hansun, 2018). While the studies showcase this importance and the need for higher levels of completion, there is debate as to whether strategies such as mainstreaming, learning communities and acceleration are increasing persistence among underprepared students (Boatman & Long, 2017; Goudas, 2018; Hodara & Xu, 2018; VanOra, 2019). Moreover, some researchers find that the methods used to increase persistence are less effective than the traditional approach to developmental education (Goudas, 2018; VanOra, 2019). According to VanOra (2019), while traditional developmental education may require more time and money, students that complete these classes have higher levels of persistence than their counterparts that can bypass this content through mainstreaming. Underprepared students not only develop academic mathematical and literacy skills in their remedial courses, but they also work on effective study strategies, self-efficacy and discipline, note-taking and critical thinking that will benefit them in all college-level courses (Hesser & Gregory, 2016; Perez & Hansun., 2018; VanOra, 2019).

Faculty instructing remedial students worry about losing these essential lessons with the rise of mainstreaming championed by governmental policies and special interest groups such as the Bill and Melinda Gates Foundation (Goudas, 2018). Moreover, the increased use of mainstreaming, identified after the introduction of the completion agenda under President Barrack Obama in 2009, has seen no increase in persistence to graduation for this group of students (Goudas, 2018).

Bridge programs work to prepare students for the academic rigor of higher education before they begin their first semester of classes. As previously highlighted, these programs can either occur while a student is still in high school or during the summer before attending college (Wathington, et al., 2016; Wendel & Hu, 2018; Wilson & Lowry, 2017). While some schools identify modest success, overall, bridge programs do not appear to increase overall persistence into the second year of college or graduation (Wathington et al., 2016). Wathington et al. (2016) examined six community colleges and two public universities in Texas that offered summer bridge programs. The researchers wanted to see if they increased both student persistence and the number of credits earned in their first two years of school. The study did find that more summer bridge students enrolled in college courses for the first semester. However, the datum loses significance after two years as the number of bridge students still enrolled is similar to those that did not complete the program (Wathington et al., 2016). The team also found that the number of credits earned over the two years was almost identical by both groups with bridge students earning 19.4 credits and the control group 19.9 credits (Wathington et al., 2016).

While the results of this study are concerning, schools are still working with the Summer

Bridge options to try and increase persistence in underprepared students.

As previously stated, learning communities started gaining popularity in the

1970s throughout higher education (Buttram, 2016). Community colleges are using

learning communities to increase success in their developmental courses. Schools have

adopted this strategy by either linking two developmental classes or one remedial class

with a student success course (Hagedorn & Kuznetsova, 2016; Rima et al., 2019;

Weisburst et al., 2017; Weiss et al., 2015). Researchers indicate that the learning

communities help developmental students in building comradery among their peers and

faculty (Weiss et al., 2015). Furthermore, when a learning community includes a student

success class, individuals have a better understanding of all the resources the institution

can offer for their success such as advising, tutoring, mentors, and time-management

planning (Hagedorn & Kuznetsova, 2016; Rima et al., 2019; Weisburst et al., 2017;

Weiss et al., 2015; West & Williams, 2017). This combination of courses is most

commonly offered in the first year of college but can be provided at any point that a

student attends the school (Hagedorn & Kuznetsova, 2016; Rima et al., 2019; Weisburst

et al., 2017; Weiss et al., 2015; West & Williams, 2017).

Several researchers identify that developmental learning communities are

increasing student success at various colleges. According to Hagedorn and Kuznetsova

(2016), the combination of a remedial and student success course can reduce failure by

50% over completing each as a stand-alone class. Research conducted by Weisburst et al.

(2017) found a four percent increase in passage rates for learning community students over their traditional counterparts. While learning communities are a great tool, they are more challenging in the community college setting as all students are commuters that often only on campus for their classes (Rima et al., 2019; Weiss et al., 2015). This fact makes it challenging to work on projects with classmates and attend required tutoring and mentor sessions (Rima et al., 2019; Weiss et al., 2015). Another concern raised by some researchers relates to the design of learning community studies.

Students can self-enroll for learning communities versus automatic placement into these sections (Rima et al., 2019; Weiss et al., 2015). In many cases, these are higher-performing students that enroll with an understanding of the higher expectation that these courses will require versus other underprepared students (Rima et al., 2019; Weiss et al., 2015). Furthermore, these studies do not have a control group to compare to the learning community group to validate their findings (Rima et al., 2019; Weiss et al., 2015). Lastly, while they identify small gains in retention in some studies, no data is indicating that learning communities improve student persistence to graduation (Weiss et al., 2015).

The use of accelerated courses has grown nationwide over the past decade as colleges seek ways to increase persistence rates (Emblom-Callahan et al., 2019; Gupta & MRDC, 2017; Stahl, 2017). The premise behind accelerated models is to reduce the timeframe required to complete remedial courses saving the student time and money (Watanabe-Rose & Guy, 2019). The most common forms of acceleration include corequisite courses and compressed or modularized classes (Barhoum, 2018; Quarles &

Davis, 2017). While some of the data shows modest increases in the completion of

remedial courses with a corequisite approach, several researchers find that these increases

do not equate to more students earning a degree (Goudas, 2018; Perez & Hansun, 2018).

Perez and Hansun (2018) compared students in a corequisite model to a control group in

traditional remedial classes. While 87% of students in the corequisite model completed

the course compared to 72.5% of the traditional students, the overall research study found

no statistical significance between the groups in completing college-level courses and

earning a degree (Perez & Hansun, 2018). The results of this study correlate with others

that also found a slightly higher rate of remedial course completion that did not lead to

students taking more courses overall or becoming graduates of the institution (Emblom-

Callahan et al., 2019; Goudas, 2018).

Acceleration also includes shorter courses or modularization where student's

remedial education truncates into modules that last a few weeks (Cafarella, 2016;

Watanabe-Rose & Guy, 2019; Weisburst et al., 2017; Weiss & Headlam, 2019). Students

in these accelerated classes can complete one module at a time and then move to the next

required section to speed up the process while allowing them to focus on areas where

they have gaps in their learning (Cafarella, 2016; Watanabe-Rose & Guy, 2019;

Weisburst et al., 2017; Weiss & Headlam, 2019). As with the other models, researchers

identify small gains in student success. Weisburst et al. (2017) identified a 12% increase

in completion of accelerated remedial classes and a 4% increase in the completion of

college-level math as compared to their counterparts in traditional courses, but no

increase in completing more college credits or a degree. Weiss and Headlam (2019) also had mixed results as they concluded that students in the accelerated program did not have more success than students in traditional sections.

The researchers examining modularized developmental education found that this strategy is not a good fit for all students. Cafarella (2016), reviewed several studies on math courses and reported that modular education might work well for students with small or minor gaps in their knowledge as they have a solid mathematical foundation. However, it does not work well for students with significant educational gaps. Moreover, they also noted that this form of instruction does not allow faculty to provide skills work such as time-management, note-taking, and other skills that many underprepared students need to learn in their remedial courses (Cafarella, 2016). Other researchers came to the same conclusion that this is not a good program for students with more significant gaps in knowledge, and modularization may leave these individuals unprepared for college-level work (Quarles & Davis, 2017; Weiss & Headlam, 2019).

The research studies regarding the various strategies to increase persistence in developmental education provide a few insights. First, community colleges and educators are aware of the problem and are working to identify solutions to increase underprepared student success in their institutions. As the number of underprepared students entering these schools increases, the challenges of meeting their needs expand. While strategies such as mainstreaming, learning communities, and acceleration show modest increases in success, the gains are short-lived and do not lead to persistence in degree completion.

Moreover, one method, such as modularization, may work well for a student that only has minor educational deficits, but not for those with significant gaps in their knowledge. Even the short-term gains in the completion of remedial courses are not of significance, highlighting the need for additional solutions to this complex problem.

As college administration and faculty continue to seek viable solutions and researchers examine the effectiveness of these strategies, the need for more options is evident. The challenges facing underprepared students require a systematic approach in identifying their needs to foster success. One area that has little to no available research is the examination of individuals that completed developmental education to see if this might provide insight into strategies that may foster success in other students. This study will examine successful students to consider what they can share, adding to both the research and an evident gap in practice in the field of remedial education.

Summary

The literature available regarding developmental education in community colleges across the country highlights several problems within this system. The number of individuals seeking to attend college is higher than ever and includes students from underserved populations (Lewis & Yates, 2019). This increase in underserved students in community colleges leads to more individuals that are underprepared, requiring developmental coursework to be ready for college-level courses (Crocker & Mazer, 2019). Currently, 50% to 80 % of students entering community colleges require at least one developmental course (Barhoum, 2018; Boatman & Long, 2017). Furthermore, only

20% to 37% of remedial students will complete these classes and persist to the next semester of school (Xu & Dadgar, 2018).

The reasons that students do not complete their remedial courses include both academic and personal difficulties. Individuals become frustrated academically with the additional time commitment for these classes and lack the discipline and rigor needed to be successful in higher education (Baier et al., 2019; Barhoum, 2018; Hagedorn & Kuznetsova, 2016; Perez & Hansun, 2018; Xu & Dadgar, 2018). Moreover, they do not have the necessary skills they need for college, even at the remedial level (Xu & Dadgar, 2018). Also, underprepared students face personal challenges that may hamper success as many need to work and take care of their families, leaving less time for school (Shields & O'Dwyer, 2017). These challenges may lead an individual to leave school, missing the opportunities a college degree may offer.

Community college administrators and faculty are aware many of the challenges and individual institutions have developed strategies to help increase success rates. The most common strategies include bridge programs, learning communities, corequisites, and the acceleration of content (Emblom-Callahan et al., 2019; Hagedorn & Kuznetsova, 2016; Wathington et al., 2016). The literature review examined each of these methods, along with their effectiveness and concerns. While there have been positive gains with some of these programs, they are not making a significant impact on the number of students completing developmental courses (Emblom-Callahan et al., 2019; Gupta &

MRDC, 2017; Hagedorn & Kuznetsova, 2016; Rima et al., 2019; Stahl, 2017; Weisburst et al., 2017; Weiss et al., 2015).

The current literature showcases multiple studies that focus on remedial students who were either unsuccessful in completing remedial coursework or the effectiveness of a strategy in increasing completion rates. This study will not focus on unsuccessful students or a particular strategy but rather on individuals that completed a remedial class. Moreover, it will look at success on the individual level and identify personal or academic strategies that may help others to succeed in completing their developmental classes and persist in college-level work.

The next chapter will examine the proposed methodology of this study. This section will include the study's design, the role the researcher will play in the process, and the overall methodology with close attention to participant selection. This section will also address any concerns that may hamper the study from accurately depicting the responses of interviewees.

Chapter 3: Research Method

Underprepared students who enroll in community colleges require mandated developmental education courses to prepare them for the academic rigor of college-level work (Crocker & Mazer, 2019; Hagedorn & Kuznetsova, 2016; Xu & Dadgar, 2018). The purpose of this study was to identify personal and academic strategies of persistence that may assist community colleges and developmental education students in increasing persistence to college-level work. This chapter examined the research design that will be implemented to answer the research question for this qualitative study.

The purpose of this study was to identify personal and academic strategies of persistence in developmental education at the community college level. This study took place in a multicampus community college in the mid-Atlantic region of the United States. This institution offers developmental coursework in mathematics, reading, writing, and English for nonnative speakers. The college also participates in offering accelerated and mainstreaming in its remedial class options for students. This school was one of the first to develop the corequisite accelerated approach in remedial education (Walker, 2015).

Chapter 3 includes a detailed overview of the research methodology for this study, which sought to explore personal and academic strategies that contributed to the persistence of students who completed developmental education courses and persisted in college-level work. The chapter includes components of the research design, including the rationale for this study and the role of the researcher in preventing bias and ensuring

the ethical treatment of participants. In this chapter I will review participant selection, instrumentation for the study, and identify measures to ensure the protection of any data collected with this study.

Research Design and Rationale

A qualitative approach worked best for this study, as it seeks to consider the perspective of community college students that have completed a developmental education course (Ravitch & Carl, 2016). The intent of this study was to identify personal and academic strategies of success in completing developmental education courses that may assist other students in completing their remedial coursework and persisting in college-level classes. The use of a basic qualitative study concerning a complex problem such as persistence in developmental education was the best choice as this design allows the process to be open-ended rather than focused from a particular lens (Caelli et al., 2003).

Research Question

The research question for this study focused on identifying strategies for personal and academic success in students who have completed a developmental education course at a community college in the mid-Atlantic region of the United States. Interviews with the participants served to answer the question to garner a better understanding of how each participant succeeded in a developmental education class. The transcripts assisted in identifying themes that will highlight the personal and academic strategies of success for this study.

Research Question: How do community college students who had successfully completed developmental education courses describe their personal or academic strategies for educational persistence?

Research Tradition

A qualitative approach was the best choice for this study as the research sought to identify strategies of personal and academic success in developmental education (Babbie, 2017). The qualitative approach considers an individual's perspective and how it affects all aspects of their lives (Ravitch & Carl, 2016). To fully understand the participants' academic success while taking community college developmental education courses a qualitative research design was employed. There are five methods commonly used for qualitative research within the social sciences: ethnography, phenomenology, grounded theory, case study, and narrative (Babbie, 2017). While each of these methods have merit, they do not fit this study.

Ethnography requires the researcher to study participants in their natural setting to provide a detailed description of their personal experiences (Babbie, 2017). These studies focus on participants' stories from an observational approach (Babbie, 2017). A researcher using ethnography does not develop findings from their observations, but rather, tells a story (Rashid et al., 2019). Moreover, researchers spend a great deal of time with their subjects to provide an accurate depiction of their way of life (Rashid et al., 2019). Ethnography will not meet this study's objectives because it will focus on one facet of the participant's lives, which is their developmental education experiences.

Furthermore, the researcher will not merely observe participants, but rather conduct interviews to obtain the information necessary to address this study's research question.

Phenomenology examines participants' lived experience over an extended timeframe, such as several months to years (Liu, 2016). This approach is similar to ethnography, except it does not just tell the participants story, but instead allows the researcher to make sense of what they observe and develop conclusions (Babbie, 2017). Conducting phenomenological research requires an excellent focus on participants' lived experiences and how it shapes their lives and perspectives (Finlay, 2013). While this study will consider students' experiences, it will focus on their time in developmental coursework, not their overall lives. Moreover, the researcher will not serve as an observer over their lives for months to years to address the research question but rather conduct interviews to seek the necessary answers.

Grounded theory offers a more inductive approach as it allows for the development of a theory after conducting research (Liu, 2016). Researchers using this methodology examine various observational data to consider multiple viewpoints to address a phenomenon (Babbie, 2017). The use of grounded theory does not require the development of research questions or objectives at the start of a study, but rather the use of data to identify new theories (Flynn & Korcuska, 2018). This methodology will not meet the overall goal of this study as it does not aim to develop a theory but rather to identify personal and academic success strategies for students in developmental education. Additionally, this study is focused on answering a specific research question

and will use participant interviews to answer this question. Lastly, this study is not

attempting to develop a theory but instead uses the conceptual framework around Tinto's

student departure theory.

Case study research uses a deductive approach that focuses on a singular event to

examine theories that may apply to the study (Jones et al., 2014). This methodology is

useful when a researcher has a sizable number of variables to consider for their study that

focuses on the event they are examining (Aczel, 2015). This approach's primary practice

is to consider all the data and variables first and then complete a skeptical consideration

of the theories that allow a researcher to identify those that conflict with the data (Babbie,

2017). This methodology will not suit this study as it does not seek to skeptically

consider theories but rather answer the research question. Moreover, the study uses

Tinto's student departure theory for the conceptual framework rather than finding a

theory that fits that data. Lastly, this study data centers on participant interviews, which

does not fit the criteria of utilizing various data points as required by case study research.

Narrative research tells the story of participants in chronological order while

allowing comparisons between the participant and the researcher's perspective

(Czarniawska-Joerges, 2004). In this methodology, a researcher seeks to understand the

participant's phenomenon through their stories as they share those experiences and

provide insights into their meaning (Lal et al., 2012). This methodology does not match

this study for several reasons. Narrative inquiry focuses on the participant's stories in

chronological order, which does not effectively answer this study's research question. The

intent to identify personal and academic success strategies in students completing developmental education courses that cannot be hampered by following a specific timeline. Furthermore, I will not provide their insights into the experiences of participants as that will remove focus from the research question while potentially allowing for bias in the findings. The researcher's perspective on the lack of persistence in developmental education will not provide the necessary conclusions to this study that must come directly from the participant's experiences.

The use of a generic qualitative approach offered the opportunity to consider the interviewees and the responses they provided without the use of a specific lens (Caelli et al., 2003; Kennedy, 2016). This methodology also allowed for flexibility in making the interview process as general or detailed as needed to get the information required to address the research question (Caelli et al., 2003; Jones et al., 2014; Kahlke, 2018). General studies are also the right choice when working with a small number of participants (Kahlke, 2018). This study included a smaller sample size of eight participants. The use of a generic qualitative approach provided the flexibility needed to make changes necessary to obtain the information needed to address the research question and identify strategies of personal and academic success in developmental education at the community college level.

Role of the Researcher

My role as the researcher in this study was to be objective, seeking to understand the perspective of the student participants without participating in the study directly

(Babbie, 2017). Currently, as an associate professor at the community college, I am teaching selective admissions courses in the field of laboratory medicine in the School of Health Professions. As the individual conducting this study, I do not teach any developmental education coursework; therefore, I have no relationship with the participants of the study nor power over their status with the institution.

Transparency in all aspects of this study is key to ensuring the validity of the findings (Ravitch & Carl, 2016). While I have not taught any of the students or know them personally, I must consider bias that may affect the study and its findings (Thomas, 2006) Having taught community college students for 13 years, I needed to recognize that a certain level of bias may exist. At the community college, there have been many excellent students, students that worked hard, and others that did not put much effort into their coursework. Therefore, I should not bring any of my previous experience as an instructor to the interview process or the analysis of data.

Moreover, I should not compare the participants to my students because that will create an unintentional bias that may affect the findings. Also, I have no experience in developmental education as I have never completed a remedial course nor instructed in this arena. I must remember that my focus is to garner an understanding of the participant's experiences. This process requires no comparisons to my students that have been successful enough for acceptance into a selective program with the rigor of higher education.

The key to helping participants feel comfortable with the process is to ensure they know my role with the institution and why they are participating in this study. I must also show everyone my full attention and respect to help them feel comfortable and valued throughout the process (Ravitch & Carl, 2016). Allowing participants to freely share their stories and perspectives surrounding their developmental education courses assisted to establish trust and ensure ethical treatment of the data (Ravitch & Carl, 2016). Furthermore, it is paramount that students understood their role in this study and how their experiences may help identify personal and academic persistence strategies that could prove useful for future developmental education students since there is no incentive for their participation.

Methodology

Qualitative research begins with the research question and identifying the best way to gather data that provides an answer (Lichtman, 2014). The use of the generic qualitative research approach allowed flexibility within the study but required clarity in the research with a clear linkage between the methodology and the research question (Cooper & Endacott, 2007; Kahlke, 2014). This section will highlight the methodology for this study and provide a detailed explanation of the process to ensure it has the academic rigor necessary to be reliable (Thomas, 2006). The overall process included several steps: planning the interviews, conducting interviews while collecting the data, analysis of the data, and identifying the findings (Babbie, 2017; Caelli et al., 2003; Lichtman, 2014). The methodology section identified this process, including the selection

of participants, the interview instrument, and the treatment of the data to ensure individual students' confidentiality.

Participant Selection

According to Guest et al. (2006) there is variation regarding the appropriate number of individuals to interview in qualitative research to reach data saturation. In purposive sampling, the number of participants relates to the methodological approach; however, research conducted by Guest et al. highlighted that data saturation occurred at 12 individuals. This is just one study and not representative of other studies. Data saturation occurs when redundancy is found in the responses and no new information is obtained (Moser & Korstjens, 2018). To assure data saturation in addressing the research question, I conducted interviews with eight students attending a community college in the mid-Atlantic region of the United States. The possibility that data saturation may occur with fewer participants or require more individuals if additional themes are identified must be considered. I needed to consider data saturation through the data collection process to ensure the appropriate number or participants were included. The number of participants for this study did change due to global pandemic challenges and reaching data saturation with a smaller group of students.

The successful completion of at least one developmental course in reading, writing, English for non-native speakers, or mathematics at the institution was a requirement for their selection in this study. This requirement was essential in seeking strategies for personal and academic success in developmental education. The intent was

that the students would provide different perspectives from their remedial courses offering contextualization, which provided insight into their experiences in remedial education. A detailed review of the interviews also helped to identify commonalities among participants as well as unique experiences that may be relevant to this study (Frey, 2018). This process also contributed to the identification of themes from the data that informed this study (Jones et al., 2014; Liu, 2016).

The colleges planning, research, and evaluation (PRE) department verified that potential participants met the criteria of successfully completing at least one developmental education course within the past three years. The dean of developmental education and special projects (DESP) at the institution supported this study, and their office assisted in identifying volunteers. The college policy required that another individual designated by the Dean of DESP reach out to potential participants on behalf of the researcher. The request for interviews with prospective participants clearly stated that their participation was voluntary, and their choice to volunteer or not participate had no bearing on their standing at the college. The designated person assigned by the Dean of the DESP department sent an email to the prospective participant's school email address that included a disclosure document for the students to sign (see Appendix C-once I have this document) and also contact information to reach out to the individual should they wish to participate. This process of allowing a designee to request participants ensured the confidentiality of everyone approached to participate in this

study as the researcher only received information on those that wished to participate in the study.

Instrumentation

This study included semi-structured interviews with formalized open-ended questions. While there were scripted questions, I added additional questions when I felt the participant could expand further on a subject (Lichtman, 2014). This approach also allowed for follow-up questions that sought to garner a deeper understanding of the individual's viewpoint or clarification of information (Lichtman, 2014). The interviews included a responsive style that acted as a conversation while allowing the opportunity for participants to address the overall research questions and share their insights (Rubin & Rubin, 2012).

I created the interview instrument with a semi-structured introduction, a set of formal questions, potential follow-up questions, notes sheet to examine the demeanor and non-verbal cues of the participant, and a conclusion (see Appendix A). The development of this protocol ensured that I centered the interview on the research question while relating the overall process to the conceptual framework. Moreover, examining the participant's demeanor and non-verbal cues assisted me in identifying the participant's willingness to be open to sharing their thoughts (Vaughn & Turner, 2016). The use a semi-structured interview protocol ensured that I meet the key points with each participant without being too formal and unwelcoming as the goal was for the

participants to feel comfortable in sharing their thoughts and perspectives (Rubin &

Rubin, 2012).

The interview questions included the recommendations of Rubin and Rubin

(2012), which began with general primary questions about their experiences in

developmental education, leading to more detailed questions that have a narrow focus on

their perspective and takeaways from remedial coursework. I also planned to develop

some follow-up questions strictly related to the research and only added them if

necessary (Rubin & Rubin, 2012). While I created possible follow up questions in

advance, I had to develop some questions while interviewing a participant to obtain

needed information.

The interviews took place either in-person on the college campus or through a

video conferencing platform such as Zoom or Microsoft Teams that allows both the

interviewer and interviewee to see one another should they be unavailable to meet in-

person. All interviews had an audio recording for transcribing and analysis purposes.

There are several apps such as Otter, Steno, and Recorder Pro that both record the

interview while automatically providing a transcript. These apps can be used for both in-

person and video conferencing interviews and captured both the interviewer and the

participant. One of the above-mentioned apps will be used to save time in transcribing the

interviews allowing more time for data analysis. A password-protected Dropbox and

OneDrive served as storage for the transcripts and any other data to ensure they remain

protected. Dropbox now offers a feature called "Vault" which requires an additional pin

code to access. The data is stored within this vault requiring two separate codes for access. These measures worked to protect a participant's confidentiality and loss of the data (Ravitch & Carl, 2016). The creation of a pseudonym for each participant helped ensure their confidentiality in all study documents. The list of codenames was secured in the password protected site with all other student documents. Only the representatives from PRE, the Dean's office and myself know the actual identity of the individuals participating in the study.

The conclusion of the interview offered participants an opportunity to ask any questions or seek clarification to ensure they did not leave with any confusion on the process (Ravitch & Carl, 2016). The researcher concluded all interviews with a semi-scripted series of statements to ensure each participant received the same general message and essential points about how I will use their information. Moreover, the researcher asked participants if they were open to answering additional questions later if needed and verified the best way to contact them in the future. Once the interviews were transcribed, I offered transcript checks, allowing the interviewees to ensure the accuracy of their original thoughts (Thomas, 2006).

Not only did Walden's University Reach Reviewer (URR) need to approve this study before any research may begin, but the PRE-Director also examined the study plan before agreeing to provide potential students for the interview. The PRE representative did not serve as a peer reviewer, but instead approved the study on behalf of the community college. This extra step ensured that the participant's best interests were at the

forefront, and they were not harmed in any way by volunteering to share their

experiences in developmental education at the community college.

Data Analysis Plan

While there are well-defined strategies for data collection in qualitative studies,

there are no specific parameters for analyzing the data with a generic qualitative

methodology (Thomas, 2006). Bryman and Burgess (1994) suggested a generic inductive

approach of analysis that ensures a systematic review of the data that is straightforward in

identifying themes that arise from the interviews. The data analysis strategies of both

Bryman and Burgess (1994) and Thomas (2006) will be incorporated in the overall data

analysis plan for this study.

Analyzing the data was a cyclical process that required the researcher to

continually review the data to identify the meaningful information relevant to addressing

the research question (Noble & Smith, 2014). This process began with a detailed review

of the interview transcripts reading over them multiple times to understand the

participant's responses to the questions without taking any notes (Cooper & Endacott,

2007). After reading through the interviews, I began taking notes relating to the

interviewee's transcripts focusing on commonalities among responses. The notes written

from the actual interview were reviewed to consider each participant's demeanor and any

other attributes that are relevant. The initial set of notes were used to identify the first set

of codes to sort the data. Codes are words or short phrases that describe an attribute

identified in the data that focuses on the research question and the conceptual framework

of the study (Saldaña, 2016). The codes allowed me to organize the data to assist in

understanding the student perspective. Memos were developed during this process to

serve as a reflective journal to keep track of my thought process at each cycle of data

review. Keeping track of the researcher's thoughts during the analysis process ensures

integrity of the study in an unbiased manner (Saldaña, 2016).

Once the development of the initial set of code words or phrases was complete, I

read through and coded the transcripts using a spreadsheet or application such as

Dedoose or NVivo to bring together all the transcript data that met each code (Thomas,

2006). New codes appeared during this activity, which required that I began the process

over again, which was tedious, but necessary to ensure a full understanding of the data

(Noble & Smith, 2014; Saldaña, 2016; Thomas, 2006). Once the coding of the transcripts

was completed with no additional codes identified, I looked for commonalities within the

codes and transcripts to form categories (Babbie, 2017). The process of reviewing the

data then begun again, and I sorted the transcripts into the newly developed categories.

Some of the data fell into multiple categories, while other parts of the transcripts did not

fit into any of them (Bryman & Burgess, 1994; Thomas, 2006). While the goal of the

analysis was to identify categories and later themes that address the research question, it

is typical to have data that does not address the purpose of the study or link to the

research objectives (Thomas, 2006; Vaughn & Turner, 2016). The data that does not

directly relate to the study was placed into a category titled "unrelated" to be reviewed

throughout the analysis to ensure that it did not relate to the study.

Once the search for categories was exhausted, and sorting of the transcript data was completed, I began to look for overlap among categories and reduce the number of categories into broader groupings to identify themes (Bryman & Burgess, 1994; Thomas, 2006). Thomas (2006) suggested creating a tree connecting categories to identify the overarching themes. This same process was used to establish possible themes for this study. Once this process was complete and reviewed extensively, I examined the themes to see if they addressed the research question of this study. Lastly, I completed a final review to ensure that my analysis accurately depicted the participants' responses without bias (Cooper & Endacott, 2007).

As the analysis process reached a point where there was no new information, and the identification of themes was complete, one final review occurred to ensure the inclusion of essential information. The final themes for this study provided a summary of the data that serves as the findings (Rubin & Rubin, 2012). Moreover, these conclusions highlight the personal and academic success strategies used by the participants to be successful in their developmental education courses at the community college. As I completed this process and began writing up the findings, it was essential to include evidence that supports the themes to ensure the rigor of the data (Rubin & Rubin, 2012). A variety of software programs such as Dedoose or NVivo can help with the coding and analysis of the qualitative data (Vaughn & Turner, 2016). While this might be useful, it takes time to learn how to use the various programs, and they can be cumbersome (Vaughn & Turner, 2016). Excel may also be used to create spreadsheets for the various

cycles of coding, category development, and theme analysis. Each cycle of data analysis was saved separately so that I continually compared the findings to ensure the accuracy of the analysis.

Discrepant Cases

Another critical aspect of the analysis process is the discrepant cases, which do not fit in with the rest of the data. As previously stated, some of the transcript data was not useful to the study, but other components contradicted the conclusions all together (Ravitch & Carl, 2016). While it would be easiest to ignore this data, that would risk the accuracy of the findings (Morrow, 2005). I considered this data and compared it to the established categories and possible themes to ensure it was not useful to the study (Onwuegbuzie & Leech, 2007). According to Waite (2011) the outliers should be reviewed first. I looked to see if outliers shed some light on the findings or conclusions, then acknowledged them if there is not a place within the findings or conclusions. This process also prevented bias on my part as the researcher, as I included all components of the data in this study (Onwuegbuzie & Leech, 2007).

<div align="center">

Trustworthiness

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According to Shenton (2004)**,** qualitative research's trustworthiness is questionable to positivist's researchers because the data is not determined in the same manner as quantitative work with statistical support for the findings. The qualitative research community identified four characteristics that help to ensure trustworthiness in qualitative research. The four areas are credibility, transferability, dependability, and

confirmability (Korstjens & Moser, 2018). This section will examine how this study

seeks to meet each of the criteria, ensuring trustworthiness.

Credibility relates to the internal validity of a study, ensuring that the findings

relate directly to the study (Amankwaa, 2016). The participants for this study were

volunteers that will have the right to refuse participation in the study and could withdraw

at any point. The study included eight participants allowing a few to withdraw while

having enough interviewees to maintain rigor (Guest et al., 2006). The purpose of

allowing participants to withdraw at any point helped ensure their responses were

genuine and not forced (Shenton, 2004). Also, the participants had an opportunity to

review the transcripts of their interviews and the findings. A transcript check provided the

study participant the opportunity to review the interview transcript for accuracy

(Kornbluh, 2015). If the study participant felt that they were misrepresented in the study,

revisions of the transcripts occurred by the participant. Furthermore, if the researcher

needed additional information, they reached out to the interviewee to request a follow-up

interview as laid out in the conclusion of the interview protocol (see Appendix A).

Transferability considers the study's external validity or whether the findings

apply to other institutions that might examine the same problem (Amankwaa, 2016).

While the location of the research and the participants selected was unique, it is crucial to

examine these aspects of the research study so that other researchers may build on the

findings if they desire (Korstjens & Moser, 2018). One way to provide generalizability in

this study was to select participants with varied experiences (Shenton, 2004). The criteria

for this study required the successful completion of one developmental education course within three years. This course could be in math, reading, writing, or English for nonnative speakers and does not set any other parameters which provided a varied background to help with the overall generalizability. The researcher also discussed their role and any unique information regarding this study for others to consider, such as the background of the institution and its developmental education curriculum.

Dependability considers if the researcher would identify the same findings if they repeated the study under the same conditions (Amankwaa, 2016). While this may not always be easy to assess with an ever-changing world and scenarios, ensuring clarity in the research design and the study's implementation plan helped to provide dependability in the study (Morrow, 2005; Shenton, 2004). Each cycle of analysis of the data had its own excel spreadsheet that included transcript data relating to the code or category. These Excel spreadsheets also included notes and analytic memos to see the thought process as I moved through the analysis process (Saldaña, 2016). As I worked through the themes and overall findings, it was essential to examine all previous reviews of the transcripts and include this overall process in the final presentation of the study.

The confirmability of the study focused on the overall objectivity of the process, which is essential in qualitative research (Connelly, 2016). The findings represented the participant experience rather than any bias the researcher may unintentionally provide (Kornbluh, 2015). Confirmability is accomplished through researcher reflexivity. It required the researcher to consider their position in the overall process at each step to

determine if they were accurately representing the data without their voice playing a role (Cunningham & Carmichael, 2018). As previously mentioned, I completed a separate spreadsheet at each phase of analysis, which included notes and memos. Once a cycle of data analysis was complete, I reviewed the information and ensured the findings addressed the participant experience rather than my perspective.

Ethical Procedures

Ethical procedures are essential in protecting individuals participating in a study. The most basic tenet is that a researcher does not harm its participants (Babbie, 2017; Rubin & Rubin, 2012). Furthermore, a person should be no worse off because they volunteered as a subject for the study (Rubin & Rubin, 2012). While previous sections of this chapter address ethical components, they must be reviewed to showcase how participants' protection will occur throughout the study.

The community college where this study took place required that another individual appointed by the PRE or DESP divisions reached out to prospective volunteers that met study criteria to see if they were willing to participate. If a student expressed interest as a potential study participant, their information was forwarded to me to discuss the study. At this point, the potential study participant understood all aspects of their participation, including the time involved, the focus of the study, what their role entails, and any other pertinent details (Ngozwana, 2018). The potential study participant also needed to be aware that the interviews were recorded and how confidentiality was maintained. Part of this process was obtaining each person's informed consent to

participate (Rubin & Rubin, 2012). The consent form is a document signed by both the participant and researcher that ensures each interviewee understands their role and is willing to serve as a subject (Babbie, 2017; Ngozwana, 2018). The community college where this study will occur has its own informed consent which will be required.

This study was subject to Institutional Review Board (IRB) approval at both Walden University and the community college. The IRB process reviewed any proposed research to verify that participants are protected from harm while volunteering for a study (Rubin & Rubin, 2012). The use of IRB's began in the twenty-first century due to the harm or mistreatment of study volunteers (Maxwell, 2019). The process of approval at Walden University occurs after the approval of the proposal. The IRB process at the community college occurs through the PRE department before reaching out to participants.

One concern for this study was the possible early withdrawal of participants or their refusal to participate. Each candidate had the right to remove themselves from the study at any time and would not experience any negative consequences if they choose to no longer participate in the study (Ngozwana, 2018). Participants were asked to notify me via email if they choose to withdrawal from the study. If someone decided to remove themselves from the study, their transcripts were moved to a separate secure file within the OneDrive and Dropbox that remained confidential. These files will be obtained until the study is complete and published. At this point, they will be deleted. This file would

also include a discussion of their choice to leave the study. Their choice to withdrawal would be included in the findings as a measure of academic rigor (Golafshani, 2003).

Study participant's personal information is confidential as only me and the representatives from the PRE and Dean's department know their actual identity. Confidentiality was ensured for all materials, including forms, transcripts, and coding spreadsheets, as these forms are saved in a password protected Dropbox and OneDrive. I am the only person that has these passwords. Furthermore, a pseudonym was established for each participant. This pseudonym replaced the participant's actual name on any public study materials and the actual dissertation (Ngozwana, 2018). All files relating to this study will be deleted once this study is published.

Lastly, as this study occurred at the institution where the researcher works, they assured the study participants that this fact does not affect their standing in the community college. The researcher teaches students in a health professions program that requires a selective admissions process outside of being students at the college, which prevents their role from affecting their participation. Moreover, I ensured that each participant understood their role at the school before the interview process and provided an opportunity for them to ask questions or express concerns (Babbie, 2017). Furthermore, there was no power differential, and their participation had no bearing on their role as a student at the school.

Summary

This chapter provided an overview of the proposed methodology for this study seeking to identify personal and academic strategies of successful students in mandated developmental education at a community college. The researcher will serve as an observer in the interviews with eight students that completed at least one developmental education course at a community college in the Mid-Atlantic region of the United States. The college's PRE office assisted in the identification of possible student participants and worked with the Dean of Developmental Education and Special Projects to seek volunteers for the study. The researcher received information from those offices once individuals agreed to participate in the study and will then made contact.

I described the semi-structured interview protocol for the interviews that included an introduction, note sheet, interview questions (main and follow-up), and conclusion to use for every interview that took place in-person or through a video service such as Zoom or Microsoft Teams. A recording software recorded and transcribed each interview for analysis, and the storage of data was within a password secured Dropbox and OneDrive. These steps ensured that the data was not accessed by anyone else without permission. Lastly, the study required approval by both the Walden Internal Review Board, the doctoral committee, and a member of the PRE and Dean's committee at the community college to ensure the protection of participants before any research began.

This chapter also described the data analysis plan following a generic qualitative approach. This process began with a thorough review of the transcripts, followed by the

development codes, categories, and themes. The iterative process of analysis ensured the

transcript data supported the findings without bias from the researcher. This process

helped to ensure that the interview process protected participants and allowed them to

share their perspectives freely. The completion of these steps from the beginning helped

to prevent challenges and mistakes in the research process of the study (Ravitch & Carl,

2016). Chapter 4 will summarize the first three chapters of this research study, laying the

foundation for the results of this study once the interviews and analysis are complete.

Chapter 4: Results

In this chapter I review the results identified through qualitative interviews with the participants for this study. The purpose of this qualitative study is to examine factors that may contribute to the persistence of community college students who completed developmental education courses. The research question will assist in addressing the purpose and problem in this study:

> Research Question: How do community college students who had completed developmental education courses describe their personal or academic strategies for educational persistence?

This chapter will examine the study setting, the data collection process, plan, and analysis, along with the trustworthiness of the process and ethical procedures followed to ensure that participants were protected. This section will also review the data analysis process utilized and the results identified from a careful and thorough analysis of the data. Lastly, this chapter will provide evidence of the trustworthiness of this study, including its credibility, transferability, dependability, and confirmability.

Setting

This study was conducted at a community college in the Mid-Atlantic region of the United States. The director of planning, research, and evaluation (PRE) and the dean of developmental education and special projects (DDESP) assisted in obtaining participants. These individuals disseminated the email invitation to participate in the study to other deans and faculty teaching developmental education courses. While their

assistance was necessary, there were challenges in obtaining participants for this study. Students did not respond to the interview request, and it took several months to complete the interview process.

There could be various factors for the lack of participation, but it is important to note that this process occurred during the global pandemic. The study institution was following national and state guidelines offering 75% of classes entirely online. The courses running in-person were those with science labs and health professions programs. The student participant pool for this study was completing their courses online, making them less accessible to disseminate information. Faculty that would typically inform students about study participation during their class posted the information online to be missed. Slowly through the spring, I was contacted by potential candidates, and in numerous cases, I did not hear back after sending the informed consent document.

The study participants ranged in age from late teens through over fifty. Some are new to college, having just started in the last year, while others are returning students who decided to attend community college for a new career opportunity. A few of the participants are international students that are adjusting to American customs and education. This study aimed to have students representing all areas of developmental education (reading, writing, math, and English for non-native speakers). These participants completed developmental math and English for non-native speaker courses. This challenge will be discussed further in this chapter.

Data Collection

Eight students participated in this study. The interviews included students that completed a developmental education course in the last three years. Several of the participants are also returning to school after several years in the hopes of earning a degree. All but one individual has a degree and career goal in mind.

Content validity for this study is established by ensuring the conceptual framework and data collection instrument relate to the participants' perspective and their experiences in developmental education (Tesler & Christensen, 2009). The development of the interview instrument focused on Tinto's student departure theory and relevant research relating to student success in developmental education. The interview questions focused on participant's academic integration (instructors, classmates, college resources) and social integration (relationship with peers and faculty, college involvement, and feeling of belonging to the school) at the study location. Moreover, questions relating to one's challenges and self-efficacy are also included based on previous research for this study. Relating the interview instrument to the conceptual framework and relevant research ensures that content validity is established in this study.

The primary data collection instrument is the interview with each participant. The interview includes multiple components to ensure sufficient data points, including a video recording, text transcript, and interviewer notes. I scrutinized each item to ensure an accurate picture of participant's experiences in developmental education. Furthermore,

each interview is carefully reviewed with the research question in mind to ensure it is addressed.

There were a few changes to the data collection plan presented in chapter three. First, no interviews were conducted in person because of the global pandemic. All interviews occurred over Zoom. Secondly, I requested a change from Walden IRB to offer participants a $15 dollar Amazon gift card for participating in the interviews. This change was requested due to the challenges in obtaining participants. It was approved and helped increase participation.

Data Analysis

The research question for this study seeks to identify academic and personal success strategies that assisted participants in completing developmental education courses. Additionally, the conceptual framework focuses on a student's academic and social integrations and how they assist in answering the research question. The question and framework are the basis for analyzing the data in this study. This analysis was accomplished in the data coding process.

The coding process began after a thorough review of the transcripts to ensure their accuracy. I read each transcript several times, making memos where I saw information relating to the research question, framework, or items stated by other participants. As I read through the transcripts multiple times, I began to see similarities between the student's responses and began making notes. For example, each participant discussed using additional resources such as faculty office hours, working with their peers, or

tutoring for assistance in their classes. I made a memo about this commonality and then went through each transcript to find instances where students used these various resources.

Each transcript was uploaded into NVivo software for the analysis process. I started with my handwritten memos and created codes based on my initial transcript reviews using the NVivo highlighting feature. I then went through each transcript in the NVivo software, highlighted the different examples, and used this to develop a code for each resource a student mentioned. NVivo allowed me to select colors for each code that I could see when reading through a transcript to show the coding done in previous cycles. I then coded participant responses into each of these codes. This process allowed me to pull up each response relating to faculty office hours as an example and see which participants commented on this code and how they described the experience. I repeated this process countless times.

Once I completed finding examples for a code, I would review the transcripts again, starting with student one to find a different strategy they used to complete their developmental course. If I identified a new strategy, I would make a code and then search through the other seven transcripts for examples of this code using the NVivo coding feature. I would then create a new memo after each code and update the spreadsheet. Once I felt I had identified any new codes in student one's transcript, I repeated this process with the transcript for student two. If I found a new code, I would again go through all other transcripts (including student one). Some reviews would lead to new

codes, while other times, a participant's response would be coded into more than one code. It was helpful for me to go through each transcript, looking for new codes, and then reviewing the other student's responses because it provided a new way to see what they said in their interviews. Performing the data analysis in this manner allowed me to ensure I did not miss any relevant information.

   I repeated this process multiple times until I felt all codable information was identified in the NVivo software. Discrepant cases were also coded as "discrepant information." The discrepant cases were reviewed several times to ensure they did not factor into the conclusions for the study.

   The analysis process continued for several weeks as additional interviews were conducted after the coding process started. The analysis ended when no new insights were identified from the data. The codes for this study included: academic integration, social integration, challenges, stop-outs, Covid effects, tutoring, office hours, coach class, writing center, library, additional supports, positive professors, learning strategies, peer support, family support, family challenges, career goals, work ethic (self-efficacy), college-level preparation, developmental placement, confidence, desire for a degree, and discrepant data.

   Once all codes were identified, I then moved to the development of categories. A careful review of the codes and relationships among them in NVivo led to establishing the relationships that became categories. The relationships feature allowed me to pull information from selected codes for review to see if they shared similarities. For

example, participants provided resources to help them in their developmental courses, including tutoring, faculty office hours, coach classes, and the college writing center.

Each item had a code in the first process but came together to form the category of "additional resources." While each item is slightly different, they are all resources students used outside of class to help them succeed in their courses. I took each code and compared it to others to see if the information was related. This process was completed for every code. The codes were similar and could be grouped into a more significant category, while others were different. After comparing two codes, I made a brief memo in the software to state if the two codes appeared to have a relationship or were different strategies. After analyzing each established category, I completed another review of the category in NVivo. Once each code was placed into a category, I completed a final review of the transcripts codes and categories in NVivo to ensure my analysis was complete. The categories for this study include acceptance of placement, personal or academic challenges, primary resources, additional resources, connection to others, outside help or hindrance, self-efficacy, and influential professors.

The creation of themes began by examining each category to see the correlating relationships among them. I once again turned to the relationships software feature in NVivo to create new links between categories that fit together. I completed this process in the same manner as I did in creating the categories. For example, I found a relationship between the categories of influential professors and connections to others. The participant's ability to connect to their faculty and classmates was crucial in their overall

success in developmental education. These two categories came together to become the

theme connection to faculty and/or peers. I went through each review cycle of reviewing

the categories to ensure I had not missed any relevant information carefully to consider

the primary mechanisms that stood out for each participant and helped them succeed in

one or several developmental classes. I then reviewed the data color-coded in the

relationships feature among categories to create the overall themes for this study. The

themes for this study included: the use of additional resources, connection to faculty

and/or peers, overcoming challenges, and self-efficacy. Table 1 provides the progression

of developing the codes, categories, and themes for this study.

Table 1

Study Codes, Categories, and Themes

Codes	Categories	Themes
Office Hours Tutoring Coach class Academic integration Writing center Library Additional supports	Additional resources	Use of additional resources
Social integration	Connection to others	
Positive professors	Influential professors	Connection to faculty and/or peers
Peer support	Primary resources	
Covid effects Stop outs	Personal and academic challenges	
Academic challenges Family support Family challenges	Outside help/hindrance	Overcoming challenges

College-level preparation		
Learning strategies		
Career goals		
Work ethic	Acceptance of placement	Self-efficacy
Developmental placement	Self-efficacy	
Confidence		
Desire for degree		

As previously mentioned, discrepant cases were given a code to ensure the data was continuously reviewed and did not address the research question. As categories and themes were established, I returned to the discrepant data to consider if it offered any insight or relevance. This code had very few entries as most student's stories were a rich source of information. The discrepant data code includes a student discussing their job with no relation to their schoolwork and another participant discussing their dog after it barked during an interview.

Results

The themes of this study provide insight into the academic and personal strategies used by students to complete their developmental education classes at a community college in the mid-Atlantic region of the United States. While each participant's experiences were unique, they developed similar methods to complete their courses and move on to college-level work. Their experience shows perseverance and a dedication to achieving their goals.

Use of Additional Resources

The first theme relates to students' use of resources outside of class. The college offers various resources to assist students if they realize they could not simply go to class and do their assignments independently. Every participant utilized additional resources to help them in their developmental classes. The most common included faculty office hours, tutoring, the writing center, and the library while other students mentioned coach class, , the college website, and advising.

Faculty Office Hours

Office hours proved very useful to several participants. Student 2 explained:

Yes, I was in his office hours, three days a week. I did the same thing before with [math] 082. When I passed [math] 082, I went to [math] 083, and I was confused in that area, but the office hours, really helped me out because it is one on one; if no one else showed up for his office hours, then it was just me and him, and we just did, multiple problems together until I understood it.

Additional participants also stated that office hours were helpful in their success in developmental education classes. Student 1 commented, "I often stayed after class and did the office hours." Student 7 also addressed this in their interview "I mainly used the professor's office hours for help." The feedback from participants highlighted that this extra help from their instructors gave them a place to take their questions or areas of confusion to seek clarity. This option helped their understanding of the material and assisted in their success in their developmental education courses.

Faculty office hours are a staple in higher education, with many schools requiring that professors offer a certain number of hours weekly for students. The study site requires faculty to offer five office hours weekly. The participants in this study who used faculty office hours found it helpful as they could get help with concepts they did not understand, go over challenging assignments, and even request extensions on work due to circumstances. They also liked the less formal atmosphere of the faculty's office, where they could share their concerns and ask questions that they did not want to bring up in front of the entire class. The students in this study that sought out their faculty during office hours indicated that having this time to ask questions and clear up confusion was instrumental to their success in the class.

Tutoring Services

Tutoring services are another resource that is beneficial to college students and utilized by the study participants. Student two explained how they used tutoring services at multiple campuses depending on where they were taking classes (the campus names are removed to ensure confidentiality of the college location).

> I was taking tutoring two days a week; actually, I was taking three to four days a week because I didn't know that you were limited on your tutoring. So, I would take tutoring at [campus A] because I had classes on [campus A] campus, and I also had classes on the [campus B] campus, so I would take tutoring four days a week.

Student 3 also discussed how they used tutoring services to help them understand their course content.

> Besides the tutoring they offer, the tutoring services are also another kind of help they offer, which I like, I was able to get from the class, and that helps me because I actually used it a lot. I tried to schedule tutoring appointments up to a couple times a week when I have a lot of work, and then really helps to get things done.

The study institution offers drop-in and scheduled tutoring. Student 4 took advantage of the drop-in option frequently. They describe their experience, "Yeah, I went to the tutoring center so I do have my class in the morning so after [instructor's name] class, I go straight to the tutoring center, do all my tutoring there so they helped me in their tutoring." While scheduling appointments with faculty for help is still a solid choice, the flexibility of drop-in sessions allows students to get assistance when they need it. The students who participated in tutoring identified this as a critical factor in their success in their developmental education courses. They could work through the challenges step-by-step to get the correct answers and better understand the process.

The Writing Center

Another resource mentioned by several students, especially those taking English for non-native speakers, was the college's writing center. This service is a free resource where students can bring writing assignments and help with preparation, organizing, and editing their work. This resource allows students to work with a faculty member or tutor

on assignments, improving the quality of their work helping the individual learn how to be a better writer in all of their classes.

Student 4 speaks to their experiences with the writing center as they required both developmental math and English for non-native speakers:

I use writing center. The writing center helped me a lot. The time after class, I will just go straight to the writing center do all my stuff, they're gonna help you with your English and tell you where you are failing. I know how much I will appreciate them, but they helped me a lot. That right now, I can write a paper or whatever, like they helped me a lot.

While the benefits to students using the writing center are evident, it is an underutilized resource. The issues are similar to other resources; students lack free time and not realizing how the writing center can assist them (Arbee, 2020). Colleges can assist students by offering more flexibility in the writing centers' times and getting the word out to students about the resources they offer (Arbee, 2020; Nicols & Williams, 2019).

Developmental education faculty are a great resource to help make students aware of the college's options. Student eight mentioned this during their interview "the professor from the very first day of class mentioned all the different ways that we could get help if we didn't like his teaching style, we could get the information from all these different places to help us." The college's writing center was a key factor in student success for some participants, especially those from a non-English background. This resource

allowed them to work through writing assignments and build their confidence and English writing skills.

The College Library

The participants also mentioned using additional resources, including the library. The college offers librarians in-person and online to assist students in finding items they need for classes. Students can drop in during certain hours or schedule appointments to get help with their assignments or projects. Student three adds, "I use the services in the library, very often, because there is constantly different assignments from different classes where I need to look things up and the librarians help." The participant's research skills were positively impacted by working with the library staff as they learned how to find adequate resources for their assignments. The ability to search for sources is an essential skill for all college students. The students in this study were grateful to have the help they needed to build these essential skills.

The use of additional resources can increase success rates in developmental education. Perez and Hansun (2018) investigated whether mandated tutoring bolstered student success in developmental math courses. Their study examined students required to complete two hours of tutoring a week versus no requirement and found that the former group had a 14.5% higher passage rate. While the study location does not require students to participate in tutoring services, it is evident that it assisted the participants in passing their courses.

Connection to Faculty and/or Peers

The study participants highlighted their connection with their developmental education faculty and classmates during their interviews. The students who fostered relationships with these individuals felt more comfortable reaching out for assistance to their faculty or classmates when they did not understand course content, which helped them succeed. These relationships also boosted their confidence in their abilities and helped them develop new learning strategies to succeed.

Faculty

The second theme identified in this study relates to the participant's connections to their faculty and peers. The interviewees discussed their professors in every interview and benefitted from those who were engaging, welcoming, and willing to work with them to understand the content. These interactions helped to bolster their confidence in asking questions and in understanding the content. Every participant mentioned how their professors played a role in helping them to succeed. Student 1 spoke about their appreciation for their faculty in detail as they stated:

> I think when I first took like my math for success class, it was in like the basement of the school, and I walked in, there was like six desks, so it was clearly just me and a handful of other kids… But the professor was like, we're here, and we're gonna do this, and we're gonna learn this together… So I think specifically what helped me was the professor's being able to learn what my specific issue was, instead of just bad at math, like I'm bad at math because I do this.

Student 2 also addresses how their professors helped them to be successful:

> I felt like I probably build bonds with my professors, and I think it's because if I have questions, I'm always like, willing to go to office hours or email. And I think when they see a student that's really working hard, that makes them want to help you more.

Another participant described the warm environment in their classroom that made them excited to come to class. Student 5 provided this insight:

> Most of the professor was very nice with students, and they sometimes they find new ways to learn us most of students come to class, after work, like me, I work. I worked until five, and then I go to ESOL class five till nine. All of us was tired, but sometimes our professor asked us to stand up and walk around the class, and talk together, or play some games that was related to class. I think these activities, was helpful that I liked to be at class tomorrow… I didn't miss any classes. I everyday go class, and I was happy because of the atmosphere of there.

Another factor mentioned was having faculty that they felt comfortable with asking questions and sharing when they did not understand concepts. Student six explained the importance of this:

> I've been very fortunate I've heard horror stories about other teachers. I think the professors like being willing to answer questions and, you know, working with us. I think that really helped. Yeah, I think that really made

the difference, just the way you know making you comfortable and if you

have a question about something, you know when going over, and I love

teachers who like if there was a problem with one of the homework that's

like next day in class. All right, let's go over the problem, you know, this

number, number seven because everybody seems to have trouble with it,

and then breaks it down that way. I really like that. I'm a visual person, so

for me, that really helped to kind of pick up the concepts a lot faster and a

lot easier.

It is evident from the interviews that it is critical for students to feel comfortable

with their faculty. Furthermore, faculty willing to work with students and be present help

the students succeed in their classes. A few participants also discussed having faculty that

did not appear invested in their success and how this affected their progress in their

courses. In some cases, they even dropped the class.

Student 2 explained how one professor harmed their success:

It definitely did. I actually ended up dropping my math class because I had [math]

083 this semester that they kicked us out of school. It felt like the instructor wasn't

helping us. I just didn't feel like that she wanted us to succeed like she wasn't for

us. I felt like at that time; she was kind of, I guess for herself. Whenever I asked

her questions, I told her I was having a difficult time in math. And I said, so how

can we meet up, will you be able to teach us online, like via Zoom or anything

like that? And her response was, I'm gonna do what the school tells me to do,

nothing more, nothing less… I left her class that day and dropped that class.

Student 6 also discussed their experiences with faculty that were not student-

centered:

Some of them [professors] you felt like they were just kind of moving through the

material kind of fast and it was sometimes hard to like, all right, when I don't

know if I have this and some of my classmates who really were not grasping the

concept, I kind of felt like we just kept moving on. Moving on, and they were

kind of left behind.

The participants for this study indicated the benefits faculty had on their success.

They stated that they did better when they felt the professor was invested in their success

and were more likely to reach out for assistance. When their instructors were doing the

bare minimum, it hurt the class, leaving students frustrated. At least two of the eight

participants dropped courses due to ineffective professors requiring them to retake them

in the following semester. In some cases, the students actually "stopped out," leaving

school for a more extended period. Student eight left for several years because of various

reasons, including personal challenges and ineffective faculty. This situation will be

discussed in more detail in the next section.

Every participant mentioned their relationship with the faculty teaching their

developmental course and how it impacted their overall success. When the faculty

member was helpful, engaging, and welcoming, the students benefitted greatly as they

willingly asked questions and sought help. Developmental education faculty must work to create a learning environment that makes students feel welcome.

Peer Relationships

Peer relationships are another factor of student success in developmental education. While not every participant highlighted their peers as a resource, several found this connection helpful. Not only did they develop personal relationships with their classmates, but they also had study groups, formed group chats, and provided support to one another in their developmental classes. Whether the students worked on assignments together or just had general conversations about their classes, it served as another resource and connection to help them complete their courses.

Student five discussed their relationship with their classmates in their English for non-native speaker's class: "Yes, I did, um, I did. Sometimes we [students] call together with my classmates and talk about classes, or sometimes we check our homework together". Student six also talked about having a group chat with their developmental math classmates where they could ask each other questions about the content:

I think as far as peers, a lot of people like usually almost every single one of my math classes, we swap numbers, and so if there was something somebody didn't understand, we text each other, and I think that really helped. Because sometimes people other people would have a different way of doing things that it was just like, oh, I see what you did there, makes sense. You know they have a different, maybe a slightly different way or they explain it in a different way than, you

know, it's like okay, that makes sense to me I got that, you know, so I think

definitely having a relationship with my fellow students really helped.

Student six also explained that they had a good grasp on most of the material, and they served as a resource for a classmate, which helped them. The more they explained the concepts, the better they understood the material. While not every student chooses to connect or work with their classmates, faculty may suggest that students create social groups to help them in their classes. Working with peers as a suggestion versus requirement would allow those interested in connecting while others can work alone if that is their preference.

Overcoming Challenges

The interview process for their study included various stories from the participants of the challenges they have overcome to be successful in their developmental education courses. These difficulties range from personal challenges, family issues and academic barriers. In each scenario, the student had to modify their lives or school habits to complete their courses.

Several participants described health-related challenges during their developmental course that either affected them or an immediate caregiver. Student two provided several examples that occurred throughout their developmental classes; "Ya, since I have been at school, I've had quite a few. Recently, I had cataract surgery. Last semester, I had COVID. I've had quite a few since I've been in school".

Student four had several major health events while they were completing their developmental math courses as described below:

When my husband was admitted in the hospital because he's a kidney transplant patient. So, I think he had complications… And then I had a baby. So it was so much and tough on me, but I went through it I didn't drop the class. So, I went through it, and I passed the class. So another time was when I had my third baby. So, I think I missed three classes, then, but I didn't drop, but I finally I passed the class.

Student six described the general challenges of balancing school while working and having a family:

I had to leave behind my kids and my guy. He, you know, having to say goodbye like go into work and then coming home and then like, all right, I gotta go to class now. That was definitely hard for them, trying to make sure they're situated before I would go to class was always, you know, a big stressor, you know, making sure that dinner is made everybody was set, if the kids had work, their own homework, making sure they were set with that before I left.

The participants also considered their academic challenges related to their developmental placement. While most accepted their need for additional help (will be discussed further in the next section), they faced numerous challenges on their path. Student one talked in great detail about their challenges with math and discovering their learning disability while in developmental math classes.

I came to found find out that I actually have like a math learning disability, it's called dyscalculia. I believe I'm pronouncing that correctly. And I had never been able to learn how to do like basic math on paper because of it I didn't know that, and it wasn't until I was in that class that somebody, you know, a friend of mine, I was like I'm in this class and they were like, you know, why don't you, you know maybe look a little further into that…

Three of the study participants are international students and discussed their challenges with the English language while they were in their developmental classes. Student three explained their difficulties "I'm from Ethiopia, so my first language is different, so sometimes I have trouble my classes." Student five also relates to their challenges with English "I read, and I don't have a problem with words, but speaking, it's new for me because I just came to the U.S. two years ago, and before that, I didn't speak English." These two examples reiterate the challenges international students may face as they learn English while participating in English-based courses.

Another challenge participants had to overcome was financial or personal family barriers. Ali-Coleman (2019) indicated that community college students are from low socioeconomic backgrounds, requiring them to work while taking classes. Moreover, community college students are more likely to have dependents or be the primary caregiver for family members putting a strain on their educational goals (Bahr et al., 2019; Quarles & Davis 2017). Study participants spoke to these challenges. Some of

them had to stop out of school to address their external challenges and return when they were in a better position to focus on school.

Student seven discussed their challenges with going to school while working and how family support made it possible:

> Definitely. So I think college in general is tough, but working full time, and I took three classes when I took the developmental class, so that was my heaviest semester. I backed it off after that, but it was definitely a lot of a learning curve that semester, trying to get back into the flow of being a college student working full time. So being able to lean on my fiancé and my parents, just to kind of keep me focused on what the goal is, definitely very helpful for getting me to keep going through the classes and know that it may be a little stressful, but it's doable, and I can keep pushing through it, and at the end of it all, it's the goal that I want. So, it's definitely nice having their support.

Student eight also briefly explained how they are returning to school for the second time due to personal challenges when they first enrolled in school: "…in terms of, you know, home stability. It wasn't the greatest when I originally had to enroll in developmental class when I ended up actually taking it again for the second time and passing it. There were no major obstacles like the first time around". These responses support the research indicating that financial and personal barriers can prevent students from success in their educational goals. It is critical that developmental education

students identify ways to overcome personal challenges to be successful in their developmental education courses.

Self-Efficacy

Self-efficacy relates to a person's belief in their ability to succeed at any given task (Peaselee, 2018). This study indicates that students need the confidence, goals, and work ethic to succeed in their developmental education courses. The participants provided numerous examples indicating they had the self-efficacy needed to succeed in their courses, assisting them in passing these courses. Student one previously stopped out of school. When they returned this time, they had a different plan to help them achieve their goals. Student one explains:

I wanted to actually be successful and do something that I set out to do. I just kind of got like, I just, I was over it. I was like, this is what it is, what I'm going to have to work harder, I have to accept that. And, you know, try to get this done the best I can… I think that because I had tried this previously and had not been successful, I just got to this point is like I'm just gonna have to work harder. I'm just gonna have to try harder. I learned that I needed to have a strategy in the first place. I've learned that you know, procrastination isn't the thing to do, I kind of just got this attitude I hate to say it, it is so cliché, but like the Nike like, just do it like it just have to turn the laptop on or open the book or whatever it is and literally just start. Whatever it is, no matter how difficult it was, I felt like once I finally opened it up and actually started looking at it, I would start.

Student two also described their need to do the work even when challenging "The goals simply…I couldn't get a degree without passing math, I couldn't take biology without passing math, so you have to look at the bigger picture." Student four made a similar statement as they described their time in developmental courses while facing outside challenges: "I keep going. I refused to quit. It did not stop at all, and I passed the class." These participants accepted that they would have to work hard to achieve their goals.

Student seven mentioned how confidence in their abilities helped them in their developmental class. Student seven explained; "I'm pretty confident in my ability to succeed, don't want to sound like I'm so smart, but like I'm confident in my ability to learn something and test well with it and understand it, so I was nervous, but I felt like I would be okay." Student eight had similar confidence in their abilities: "I was very confident in it because a lot of it was review material, so I was very familiar… I was very confident that I was going to be able to get through the information and pass the course." Having confidence in their abilities provided these participants with the assurance that they would succeed.

Self-efficacy is also increased when individuals focus on their overall goals to earn a degree, better career opportunities, or benefit their families. Student one described their career goals: "I wanted to have like a career where I could be home with my kids. I just wanted to just be able to do it and get through all the courses and try to take my career on a different path." Student five simply expressed their desire for a better life: "The first

thing is I like to have a better job; I like to have a better life… I always liked to be in the medical field…like people who help others to find other people to find a vaccine for COVID-19. Student eight also stopped out of school for years before returning with a career goal to help them push forward with their developmental coursework. Student eight explains, "I'm interested in accounting… its completely different from information technology, and it's something that I'm 100% set on achieving, you know, in terms of what I was before. I do have a set career in mind now."

In other cases, it was the goal of being the first in their family to earn a degree in higher education. Student six describes their goal to be the first college graduate: "…nobody else in my family, like my immediate family, has gone to college so, you know, bragging points are huge." Student three also wanted to earn a degree for their family: "I want to be educated…Where I come from, I couldn't graduate from college. So, I want to be educated…. how will you explain to your children, teach your children without an education? That's my primary reason."

The participants in this study highlighted the importance of having self-efficacy to be successful in their developmental education courses. Their ability to garner confidence in their success helped them work through their challenges, seek help, and believe in their ability to succeed. It is also evident that having career or degree goals can assist students in building their self-efficacy and help with their forward movement through their coursework.

The themes for this study showcase the importance of students using both personal and academic strategies to complete their developmental education courses. The use of additional resources and connections to faculty and/or peers serve as academic strategies for the participants. They provide ways for students to obtain additional help with their courses and create relationships to help them with their studies. The other two themes: overcoming challenges and self-efficacy relate to personal strategies for this study. The participants had to identify ways to overcome challenges in their personal lives that could harm their completion of these courses. The students also had to have self-efficacy or develop it while in their developmental education to have confidence in their success. These findings highlight the importance of developmental education students' personal and academic strategies to complete these courses successfully.

Trustworthiness

The credibility of this study follows the plan provided in chapter three. All participants volunteered of their own free will and were made aware of their ability to withdrawal at any time. The informed consent provided this information, and it was reiterated during the conclusion of each interview. Participants were also offered a transcript of the interview at this time. Only a few requested this, and I provided it to them within a week as promised. I emailed the transcript and welcomed each to respond with any concerns or questions. One participant did respond, asking to elaborate on their experiences in developmental math and request a correction as some of the words did not transcribe well. The corrections were made, and the participant was satisfied. This

process ensured the internal validity of this study with genuine participant's responses relating to the research question (Guest et al., 2006, Shenton, 2004).

The transferability of the study focuses on its external validity and generalizability. This indicates whether the findings can be related to other institutions (Amankwaa, 2016; Korstjens & Moser, 2018; Shenton, 2004). The broad criteria for this study sought to increase its transferability, with the only requirement being the successful completion of a developmental education course in the past three years. While all participants met these criteria, there were no students that completed reading or writing developmental course. As previously stated, interviewees completed remedial math or English as a second language course. While this is disappointing and will be discussed in the limitations, the data can still be generalized to the challenges facing community colleges across the nation.

The focus of research dependability relates to identifying the same findings in the study repeated under the same conditions (Amankwaa, 2016). Dependability for this study included thorough documentation of each cycle of data analysis. I have a separate Excel spreadsheet for each cycle and included analytic memos where I included comments on items noticed in each cycle that had been previously missed. While this process helps ensure dependability, it is essential to note that this study occurred during the world pandemic. Since students completed their developmental classes before and/or during the pandemic, this may affect the study. The study institution switched to remote instruction at the end of March 2020. This situation created challenges for students and

faculty. During that timeframe, the participants taking their developmental classes discussed the challenges, which will have further discussion. While the pandemic may affect the dependability of this study, every effort has been made to address this component and allow participants an opportunity to discuss its potential impact on their education. An event of this nature cannot be foreseen.

The objectivity of the study process is paramount in ensuring confirmability (Connelly, 2016). A researcher must step back regularly to allow the voice of the participants to be accurately represented in the findings rather than the researchers (Cunningham & Carmichael, 2018). Findings must reflect their voice regarding personal and academic success strategies. As previously stated, a separate Excel spreadsheet was developed for each coding cycle, along with analytic memos. A careful review was conducted with each cycle to ensure the developing codes, categories, and themes reflected the voice of the participants and their experiences.

Summary

This chapter examined the data collection and analysis used for this study. A review of all software and applications showcased the use of Otter for transcription, Zoom for the virtual interviews, and NVivo for data analysis. The interview process was also reviewed, along with recruitment challenges related to the global pandemic. Moreover, this chapter explained the interview transcripts' review and analysis to identify the codes, categories, and themes.

The themes identified in this study addressed the research question seeking to identify personal and academic persistence strategies in community college students who completed a developmental education course. The participants indicated that the use of additional college resources was instrumental in understanding challenging course concepts. Additionally, the study found that students who connected with their faculty and peers helped them academically and connected them to the overall college community. The participants had to identify ways to overcome personal challenges that may have hampered their success in passing their courses. Lastly, the students either had the self-efficacy needed to succeed or developed it in their remedial classes.

The next chapter, Chapter 5 will include the interpretations, conclusions, and recommendations for this study. It will review the findings and interpretations in detail, acknowledge the limitations of this study, and provide recommendations for future research. Also, it will consider the study's implications for social change, the framework, and offer an overall conclusion of the study.

Chapter 5: Discussion, Conclusions, and Recommendations

This study sought to identify persistence characteristics in students that completed a developmental education course at a community college in the mid-Atlantic region of the United States. The generic qualitative study used interviews with students who completed one developmental education course in the past three years to address the research question. Currently, only 20% to 37% of students assigned to a developmental course complete it and move on to the next semester (Xu & Dadgar, 2018). The intent was to identify personal and academic strategies of persistence that assisted the participants in completing their developmental education courses to assist future students and increase completion rates.

Eight participants were interviewed for this study and provided insight into how they completed their developmental coursework. After completing data analysis, which included codes and categories in determining the themes from the interviews, the findings were identified. The participants highlighted four themes in their success: the use of additional resources, relationships with their faculty and/ or peers, the ability to overcome personal challenges, and self-efficacy. These findings were a significant part of their success as they moved through their developmental classes.

Interpretation of the Findings

The findings of this study correlate with the research provided in the literature review for this study regarding the challenges students face in developmental education. As previously stated, community college students are more frequently underprepared for

the academic rigor of college (Crocker & Mazer, 2019; Finn & Avni, 2016; Flink, 2017). Furthermore, they are more likely to be from underrepresented groups (Boland et al., 2018; Logue et al., 2017). The number of underprepared and underrepresent students in community colleges across the nation indicate that they will need additional education and resources to succeed in their developmental and college-level coursework (Hagedorn & Kuznetsova, 2016). The students in this study were no exception; however, they found ways to persevere in their classes.

The Use of Additional Resources

The use of additional resources by participants in this study benefitted their success. They sought help from tutoring, office hours, and the writing center as a few examples to help them with their coursework. The participants highlighted how using these services bolstered their confidence in the content and their ability to be successful in their courses. Hagedorn & Kuznetsova (2016); Hesser & Gregory (2016); and Swanson et al. (2017) have found that developmental education student students often come to school without critical thinking skills, time management, note-taking, and do not seek help when they do not understand the material. By seeking assistance outside of class to work on assignments and seek clarity for areas of confusion, these students can build the necessary skills to succeed in their developmental and college-level courses. Additionally, students that participate in tutoring, work with their faculty outside of class, or utilize other resources to help them succeed are more likely to pass their courses and move forward in their education (Cook, 2016; Crank et al., 2019; Walker, 2015).

Faculty Office Hours

The students in this study highlight the benefits of utilizing faculty office hours and how it helped them complete their developmental education courses. Several of the students in this study, especially students one and three, attribute much of their success to participating in faculty office hours. It is evident from the participants that seeking help from faculty via office hours is a strategy that can help students complete their developmental education courses. Research conducted by Abdul-Wahab et al. (2019) supports this study's findings. They found that student attendance at faculty office hours strengthens communication, comfort level, and ability to provide early interventions, allowing students to succeed in the course.

Study participants liked having one-on-one or small group time with their instructors provided during office hours. They felt comfortable bringing their questions about course content instead of asking them in front of their entire class. Student one appreciated this time as they felt embarrassed to ask their instructor to go over problems multiple times in class but felt comfortable doing so during office hours. During these sessions, the participant began to understand the content and built a better understanding of mathematical concepts.

The participants also demonstrated confidence in the course subject matter as they regularly attended office hours. Cafferty (2021) found that regular attendance at office hours equated to higher course grades for students. Briody et al. (2019) conducted a similar study that found a direct correlation between regular attendance at office hours

and course grades. These findings agree with this study as each participant passed their course and moved on to the next developmental section or the first college-level course. Students one, three, five, seven, and eight felt more confident going into their next course after receiving help from their faculty during office hour's sessions.

This study occurred during the global pandemic, which affected some participants as their classes were forced to become online. Faculty office hours had to move to a virtual format as well. While some participants (students one and three) preferred to have office hours in-person, others liked having the flexibility to attend online. Student eight found that they were able to attend more frequently with this virtual option. Mingzi et al. (2021) found that virtual office hours can be as effective as in-person options and may provide flexibility for students with challenging schedules. Additionally, it still offers the student-faculty interaction needed to help students succeed in their classes. This study shows that the participants benefitted from faculty office hours, with some preferring in-person and others virtual attendance. Future students may benefit from faculty offering both options to meet their student's needs.

Tutoring

Tutoring services are another beneficial resource to college students and utilized by the study participants as it provides a more relaxed environment where students are more likely to question and work with other students to understand the content (Joyce, 2017). All participants except students two and six used tutoring services at the study

college and found it helpful. They liked the opportunity to focus on their areas of confusion and work on class assignments with the tutor's assistance.

The students in this study took advantage of both scheduled and drop-in tutoring options. Some students liked the option to schedule an appointment to be included in their overall schedule, while others (such as student four) liked to use drop-in options right after class. Several of the participants used both options showing the importance of flexibility in offering tutoring services to students. The findings of this study showcase the need for community colleges to offer tutoring services that students can schedule or attend at will to meet their needs. Furthermore, they need to advertise these resources in numerous ways so that students are aware. It would be helpful to post announcements in the college's learning information system on the website, send an email to all students at the beginning of each semester, and ask faculty to provide this information to new classes. Several of the students in this study found out about tutoring services from their faculty and via emails from the study institution.

Tutoring services allow content and concepts to be addressed from a different perspective than the classroom, which may help students with varied learning strategies (Cook, 2016; Ontong et al., 2020). The study participants discussed finding tutors that helped them understand the material by presenting it differently. Students four and five talked about working through class assignments at the tutoring center and how it helped them identify new ways to understand the content. Seeing the course content presented in different ways helped them to put the information together.

Another option that provides flexibility is online or virtual tutoring sessions. Online tutoring is not new but has become more popular with the global pandemic that forced students out of the classroom or the campus altogether (Maier & Reynolds, 2020). A student can request help from a tutor at various hours when it is convenient for them. Student eight speaks to the use of online tutors and how it positively benefitted their success. Student eight explains, "I would have a problem that I couldn't fix, and it was kind of late at night, and I was able to just go online and get like an online tutor." The flexibility of this option provided study participants with another way to get the help they needed at a time that worked best for their schedule. This study's findings and Maier & Reynolds (2020) suggest that schools that offered online tutoring options because of the pandemic should continue this practice to provide another option for developmental education students to get help for their classes.

The Writing Center

Participants also used the study institutions writing center to assist them in their developmental courses. Writing centers assist with all aspects of writing, which is beneficial to developmental education students. Like other forms of tutoring, Arbee (2020); and Nichols & Williams (2019) indicate that using a college's writing center can help students' overall writing abilities, organization of information for papers, and current and future academic coursework. This study did not have any participants completing developmental reading and writing courses; however, the writing center was a resource for all participants taking English for non-native speakers courses. It helped them in

writing correctly in English and the nuances of grammar and formatting. This time spent

completing assignments with writing center faculty one-on-one fostered a better

understanding of English as a written language. Student five discussed how they

struggled with writing in English and have become more proficient with the help of the

writing center at the study institution.

Additionally, the writing center can assist students in making them more effective

writers (Bond, 2019). The study participants did become better writers by using the

writing center, and students four and five continued to use their services as they moved

onto college-level courses. Community colleges should offer a writing center to assist all

students to become more academic writers, but the needs of developmental education

students demand it. Faculty teaching developmental courses should advertise the writing

center or request an in-class session to explain how to help students. Some developmental

faculty at the study site currently offer students some extra credit for using the writing

center or require students to make at least one appointment for their first writing

assignment. Practices like these will expose more developmental students to the benefits

of seeking help and hopefully lead to regular use of the writing center.

Connecting to Faculty and/or Peers

The second theme in this study relates to students developing connections with

the faculty and/or peers in their developmental education courses. Each participant in this

study highlighted these relationships in their interview and how they helped them pass

their course(s). As they established relationships with these individuals, they became

more comfortable with the class and sought out help when they needed it, which helped

bolster their confidence.

Faculty

Another key finding from this study highlights the importance of students

connecting with their faculty and/or peers. The participants discussed how it helped them

feel comfortable with their faculty and seek help or ask questions in and outside of class.

Positive student-faculty relationships are shown to increase student involvement in the

classroom and college community, lead to better academic performance, and decrease the

likelihood of dropping out (Ingraham et al., 2018; Snijders et al., 2020). While all of the

participants mentioned their faculty during their interview, students one and two spent a

great deal of time talking about how their instructors impacted their classroom

experience. Their instructors welcomed their questions and offered help whenever

requested, creating an environment that helped both students bring their questions and

grasp the course content. Both participants attribute much of their success to their

relationship with the faculty.

The results of this study suggest the need for additional training for those working

with developmental education students. While each participant talked about their positive

experiences with faculty and how it benefitted their work in the course, a few also

discussed previous instructors that did not possess these attributes. Students two and eight

dropped developmental courses because they had instructors that offered the bare

minimum, leaving them lost in the class. Student two, in particular, discussed examples

of both poor and excellent faculty. This student dropped out of a developmental math class because the faculty member offered little to no help. When they returned the following semester to retake the same course, they had a different instructor that demonstrated a desire to help them succeed. Not only did they pass this course, but they also went on to complete a college-level math class with the confidence and skills they obtained from the invested faculty member. The findings suggest that developmental education faculty need to work with their students providing a space for students to feel comfortable seeking assistance which may require training opportunities to help them understand their crucial role in fostering student development.

Peers

Study participants also found that working with their peers was helpful. While not every student mentioned their peers, some participants found it essential to study and complete assignments outside of class. Additionally, they would ask each other for help when they were confused about an assignment. Student six preferred to reach out to their classmates for help before contacting their teacher and found they frequently got the answers they needed.

The social nature of these relationships provides help via study groups or working on assignments together and as a sense of belonging with their classmates and the overall college community (Daza, 2016; Li et al., 2020; Zhou & Zhang, 2021). The participants talked about the social aspects of these connections and their abilities to relate to one another's challenges with school and their personal lives. Student five would meet their

classmates outside of class to practice their English skills. These meetings also allowed them to share the challenges of being in a new country and learning a new language with others in the same circumstances. These conversations helped student five realize they were not alone in their situation and the support from their colleagues helped them push forward.

Students five and six relied on the support of their classmates in their developmental education courses. Student six created group chats with their classmates where individuals could bring their questions to the group for help and check due dates for classwork. Both participants found this helpful and also created lasting relationships with their classmates. Additionally, student six is still taking classes with the same students to continue their working relationship. Their stories showcase that connecting with peers can foster academic and social success in college. Developmental education courses can foster these relationships by providing opportunities for students to work together or allowing students to work with others on assignments. This practice could help build a student's connection to peers for individuals that would benefit from building these relationships.

Overcoming Challenges

Community college students face challenges relating to their preparedness for college-level work, socioeconomic challenges, and personal demands (Finn & Avni, 2016; Flink, 2017). Some cases, including this study's participants, may require their education to take a back seat (Quarles & Davis, 2017). These findings correlate to this

study as several participants had to leave school to organize their lives before returning. Students who are successful in their developmental education courses work to find ways to overcome these challenges, even if they had to leave school and return later.

Students may bring external challenges to school. Quarles & Davis (2017) and Shields & O'Dwyer, (2017) indicated that financial barriers and personal challenges play a pivotal role in a student's ability to remain in school and be successful. The participants of this study provided some stories highlighting how difficult it can be to balance school with the demands of work and family. These challenges become more complicated when there are health issues that must be addressed. Several students in this study (students one, two, and eight) had to stop out of school to handle their outside challenges. They returned once they had dealt with these issues and made contingency plans for any additional challenges. While the participants faced obstacles, they found ways to overcome them and remain on track with their education goals.

Students are more likely to withdraw or leave school when faced with outside challenges as school becomes the least significant priority (Lei & Lei, 2019). Xu and Dadgar (2018) found that students are more likely to persevere despite their challenges when focused on their goals and see the value of pushing forward to earn a degree. This point was highlighted in the study participants. They faced personal or family illnesses, learning English, and needing to work but still found a way to continue their developmental courses. They were driven by their desire to earn a degree in a chosen

field to make a better life for themselves and their families. Their goals allowed them to see the value in their courses to keep going and be successful.

Students in this study agree with the provided research as they needed to find ways to overcome personal challenges to succeed in their developmental education courses. Community colleges might consider offering workshops or sessions to help new developmental education students to identify their overall goals and devise a plan to achieve them, along with information on support services that can assist if they experience external challenges. This added focus to their goals and resources might help future students to overcome obstacles.

Self-Efficacy

Self-efficacy is a critical factor in the success of community college students in developmental education as it predicts success and higher academic performance (Evans et al., 2020; Peaselee, 2018; Thomas & Verdino, 2019). The findings of this study demonstrate self-efficacy as a critical factor for student success. Every participant demonstrated self-efficacy in their interviews. They had confidence in their ability to succeed or worked hard to develop learning strategies and skills necessary to pass their courses.

According to Zientek-Reichwein et al. (2019), self-efficacy is not a set characteristic built within individuals but can be developed. This fact was evident in study participants. While some of them came into their classes with a plan and knowing they would succeed, others developed it along the way. Students one and two, in

particular, talked about their growing confidence as they continued to practice their math skills and saw their potential in building their self-efficacy and confidence along the way.

This study showcases how some participants started their journey with high levels of self-efficacy, while others developed it during their developmental courses. All eight participants discussed how they came to trust in their abilities to learn the material, identified different learning strategies that worked for them, and became determined to succeed. Every participant worked to establish confidence in themselves to push past their fear of failure. In some cases, it was working with their professor, using additional resources, or finding new ways to learn. The link between success and high levels of self-efficacy is evident in this study.

Findings Related to the Conceptual Framework

This study highlights the importance of students having or developing self-efficacy as they complete their developmental courses. The participants in this study highlighted this as they described their class experiences. Some participants felt confident from the beginning, while others grew as they worked through their classes and connected with their faculty, peers, or additional resources. Each participant talked about their strategies to succeed in their developmental classes and how this allowed them to feel more confident in their ability to pass the current and future courses. This success was part of navigating the college resources and finding strategies that worked for them in learning new content.

Braxton et al. (2004) reviewed Tinto's student departure theory and related it to students at two-year colleges such as the study site. While they provide great detail regarding the challenges these individuals face concerning social and academic integration, they also discuss how this theory relates to students' self-efficacy. Community college students, especially those from underprepared backgrounds, need to be self-motivated and believe in their ability to succeed and persevere (Braxton et al., 2004). Reason (2009) also considered this theory and found that students must have a high level of self-discipline and self-confidence to persevere in college. The need for students to have or develop high levels of self-efficacy is supported by Tinto's student departure theory and highlighted by the stories of the participants in this study. Self-efficacy is a significant component of academic and social integration for students in developmental education at the community college level.

This study's conceptual framework is built upon Tinto's student departure theory. This theory relates a student's likelihood for success in college to their academic and social integration to the institution (Aljohani, 2016; Distefano et al., 2004; Tinto, 1988). The academic integration relates to a student's connection to faculty, learning preparedness, and self-efficacy, while the social component focuses on interaction with peers and extracurricular activities (Distefano et al., 2004; Oseguera & Blackmon, 2012; Tinto, 1997). Their dedication to completing a degree will help them overcome challenges and barriers that may come while in school (Braxton et al., 2004; Tinto, 1997).

The findings of this study showcase the importance of a student's academic and social integration into the college community.

Tinto (1997) identifies that a student that can connect with both the academic and social aspects of an institution is more likely to succeed. The students in this study integrated into the academic aspects of school by using additional resources to aid them in understanding course material and completing assignments. The participants also connected and worked with their faculty and developed their self-efficacy to be successful. Additionally, they integrated into the social components of the college as they worked with peers and used additional resources with other students while overcoming personal challenges. The participants did integrate with the academic and social components of the community college to aid them in completing their developmental education courses.

Tinto's theory also considers external challenges that students may face and how they can affect student's ability to persevere. Students with external obstacles such as family, work, or other obligations may not integrate effectively with the college (Aljohani, 2016; Braxton et al., 2004). These points are especially valid for underprepared and underserved students that must balance external pressures with future goals (Aljohani, 2016; Braxton et al., 2004). Their external challenges may lead them to stop out or dropping out of school. At least two of the study participants stopped out of school previously because of external challenges. They returned with a plan and completed their developmental courses. The student departure theory and this suggest

that community colleges should consider ways they can assist students in planning for external challenges and providing resources for these individuals so they can remain in school.

The themes identified correlate to the participants effectively integrating into both the academic and socials aspects of the college community. Two themes were identified; using additional resources and self-efficacy relate to academic integration. Tinto (1997) explained that a student needs self-efficacy, motivation, confidence, dedication, and focus on developing academic integration (Braxton et al., 2004; Reason, 2009; Tinto, 1997). While the students may not have had confidence in their ability to succeed initially, they worked diligently with faculty office hours, tutoring, library resources, and the writing center to build their skills with class content. These factors helped them develop success strategies and confidence that allowed them to succeed in their developmental courses.

The participants also integrated with the social components of the college as they connected with their faculty and peers. The students in this study discussed how their faculty made them feel comfortable in reaching to ask questions and seek assistance. This led to building their confidence within the course. The student's comments in chapter four of this study highlight the positive impact of approachable faculty on passing their developmental education classes. This connection was essential for the participants.

Additionally, some of the participants worked with their classmates and formed bonds that extended outside of class. These students worked on assignments together and had group chats to ask each other for help which improved their success. Tinto (1997)

highlighted the importance of students bonding with their peers and how it assisted students in connecting with the college community. This connection fosters a student's overall success in developmental coursework through degree completion (Aljohani, 2016; Braxton et al., 2004; Tinto, 1997).

Limitations of the Study

The limitations of this study hold to those expressed in chapter one. The eight participants represent one community college in the mid-Atlantic region of the United States. The findings of this study may relate to other institutions or be unique to this setting. Additionally, the study institution offers accelerated developmental education, co-requisite enrollments, and learning communities. Some of the participants completed their developmental courses in one of these formats. If another institution does not offer these options, the results of this study may not apply to their developmental education program.

The study faced unforeseen challenges related to the global pandemic, which developed after the initial limitations. When participant recruitment began, all of the college's students were off-campus learning remotely. This hampered recruitment efforts as it was challenging to obtain interest from students at home. While participants were obtained over a few months, it is essential to note that the global pandemic may limit the study's findings as all participants were from developmental mathematics and English for non-native speaker's courses. No students from developmental reading or writing participated in this study which may have affected the overall results.

Additionally, some participants completed their developmental course before the pandemic, while others completed them during the pandemic. Moreover, some participants that completed multiple developmental classes had courses before and during the pandemic. This point is an important limitation because those taking courses during the pandemic had to complete the developmental classes online regardless of their learning style. Students that learn best in person may have experienced challenges with the online environment. The study did not address this as it was not the focus of the research.

Recommendations

While the findings of this study provide insight into the strategies of academic and personal success for students in developmental education, additional research is recommended. The study identified strategies used by participants that align with the research and conceptual framework, but more work is necessary. As previously stated, the study was limited, with no participants from developmental reading or writing courses. It would be beneficial to repeat this study with students from all areas of developmental education to see if the findings are validated.

Additionally, future research may break down the different developmental subjects into separate studies to see if the success strategies vary between developmental reading, writing, mathematics, and English for non-native speakers. Additional studies in each area may provide findings tailored to these areas that could benefit future students. Some

of the research used in the literature review for this study focused on challenges in specific disciplines; therefore, research on success strategies could build on those studies.

Another recommendation is to examine the different developmental education solutions presented in chapter two. These include bridge programs, accelerated learning, modularization, learning communities, and corequisites. While the literature review looks at both positive and negative attributes of each approach, additional study on the success strategies of students in these courses may help identify their overall effectiveness.

Lastly, it would be prudent to repeat this study when a global pandemic does not affect the delivery of developmental courses. The faculty and students were pulled from their in-person classrooms in March of 2020. They were forced to take in-person courses online without preparation time which may have affected the quality of instruction and content. Most of these courses remained online for the following fall, spring, and summer semesters. It might be beneficial to repeat this study in the future when students are taking classes in the manner they chose, not because it is the only available option.

Implications

The community college system in the United States has an open access policy. These schools serve as the gateway to higher education for students from underprepared, underserved, and underrepresented students (Bahr et al., 2019; Crocker & Mazer, 2019; Quarles & Davis, 2017). Community colleges enroll 45% of all college students in the United States (Crocker & Mazer, 2019). While these open-access policies allow opportunities to a larger audience, students are frequently not prepared for the academic

rigor of higher education (Quarles & Davis, 2017). Approximately 50% to 80% of students enrolling in a community college will be placed in developmental education courses to prepare them for college-level coursework (Barhoum, 2018; Boatman & Long, 2017). Furthermore, current data shows that only 20% to 37% of those placed in mandated developmental education classes will complete them and move on to the next semester (Xu & Dadgar, 2018).

The need to identify strategies to assist these students in completing their developmental education courses is paramount because it serves as a route to earning a degree and a higher salary (Quarles & Davis, 2017). Goudas (2018) found that students who can complete their required developmental classes are more likely to earn a degree and head to a career or continue to a four-year institution. Students that can overcome their education challenges and earn an Associate degree will earn at least a 17% higher salary throughout their career (What Works Clearinghouse, 2019). Additionally, 65% of jobs available in 2020 require employees to have at least an Associate degree to be eligible for hire (Howell et al., 2019). The need to have a degree is becoming essential to career growth and opportunities.

The completion of a degree does not only provide a higher salary but may lead to a higher socioeconomic status and a more remarkable ability to contribute to society (Weisburst et al., 2017; What Works Clearinghouse, 2019). Degree earners also can continue with their education either through a traditional route or by earning certificates or stackable credentials that increase their job opportunities and salary ranges (Audant,

2016). A degree earner is more likely to continue their education through formal or informal learning that will continue their career growth, changing their economic situation's landscape (Audant, 2016).

While this study is focused on the success strategies of students completing developmental education at the community college level, the strategies articulated serve as the gateway for degree completion and forward movement. Identifying ways to help the 50-80% of students in mandated developmental education across the United States persevere through these courses to degree completion opens the door to more significant opportunities (Barhoum, 2018; Boatman & Long, 2017). The implications for social change are evident by impacting an individual's ability to earn higher wages and have more significant career opportunities.

The benefits to society are also visible, as developmental curriculum is mandated for students who were underserved in their prior academic settings. Emerging careers are often dependent on credentials, and the current statistics show that 65% of jobs in the United States require a college degree. To remain globally competitive, more students must successfully complete college to meet this need (Carales, 2020). To ensure a diverse and inclusive workforce, more individuals from underrepresented groups need to be supported in their goals to earn a degree to fill these positions. Students from these marginalized groups are also more likely to be underprepared and require developmental education courses (Carales, 2020; Fink, 2017; Finn & Avni, 2016; Xu & Dadgar, 2018). One example is the Latino population that continues to grow in the United States,

currently making up 29% of the population while degree completion is lower than their white counterparts (Carales, 2020). The need to help these individuals prepare for the academic rigor in college-level work to assist students in earning a degree is paramount to filling vacancies in the job market.

Conclusion

This study sought to identify academic and personal success strategies that assisted students in completing mandated developmental education courses in a mid-Atlantic region community college in the United States. Developmental course requirements are widespread, and the literature revealed the prevalence of developmental coursework as between 50% to 80% of community college students nationwide that must take at least one developmental course, yet only 20% to 37% are successful (Barhoum, 2018; Boatman & Long, 2017; Xu & Dadgar, 2018). Students are mandated to complete these classes to prepare them for the academic rigor necessary in higher education and degree completion, yet success in these courses are low.

The literature review indicated various challenges many underprepared students face both in their personal lives and previous education. Some current strategies used to increase completion rates might be further complicated due to online learning during Covid 19. Despite all of the research and new strategies, many students struggle with completing mandated developmental education. Identifying new strategies to foster a student's social and academic integration to their community college is one of the reasons I embarked upon my study.

Four critical success strategies were described by the participants that assisted them in completing their mandated developmental education courses. The students in these studies used additional resources outside of class to help them understand complex concepts, practice their skills, and complete assignments. Successful students also connected with their faculty and peers using these relationships to build their confidence, work with others, and seek additional help. Additionally, the participants found ways to overcome the challenges that may have prevented their success as they focused on their goal of degree completion. Each participant expressed the importance of earning their Associate's degree and described the need to work through difficulties to achieve this goal. Finally, the participants demonstrated self-efficacy in their courses that gave them the confidence to persevere and seek help to succeed in their classes. The important note is that not everyone had self-efficacy initially, but all participants developed it while in their developmental education courses.

My study revealed the importance of providing students an opportunity to develop relationships with others, to have engaging faculty, a focus on degree completion and overall goals, and confidence in their ability to be successful. These are critical strategies for the success of students in mandated developmental education classes. Community colleges across the United States should create strategies that support developmental education students in practicing these attributes to increase success rates. A college degree is essential in today's knowledge work society. The developmental education programs should meet students where they are and provide them with scaffolded support

in to reach their goals to increase their overall trajectory in their personal lives and

society.

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Appendix A: Interview Protocol

Name: _____   Participant

        Pseudonym:_____

In-person or Video interview: _____   Date/Time:_____

Each section will have bullets versus a full script so that it does not appear robotic yet covers all key points.

Introduction

- Introduce myself to the participant including my role at the college and that I am conducting this study, why it is important to me

- Explain the purpose of the study to identify strategies of persistence in developmental education

- Thank them for participating and make them aware that their real name will not be used in the study but rather a code name that protects their identity

- Verify they understood the consent document, signed it and are comfortable with the process. If they did not sign the consent agreement have them do so before going further

- Be sure that the IRB approval number is provided: 02-03-21-0735969

- The interview will take about one hour, and I may take a few notes during the process

- I will make an audio recording of the interview for my purposes only and will not share it with others without their permission

- I will ask a series of questions but may ask them to provide further explanations of their answers at times.

- They are welcome to ask any questions they may have at any time

At this time, I will ask if they have any questions, ask if they are ready to proceed and ask if I may begin recording. Once they agree to recording, I will restate their name and codename and have them verbally state that they understand the purpose of the interviews and that I have permission to record the interview.

Interview Questions:

1. What was your primary reason for enrolling in community college?

2. Did you have a career in mind when entered college? If so, what was it? Has it changed since entering school?

3. Does your family support your goals in attending community college? Please explain how they **might** help or hinder your educational goals.

4. How did you feel about being placed in developmental education? How did this placement affect your educational goals at the college?

5. How would you describe your self-efficacy when it comes to your developmental and college level classes?

6. What factors assisted you in your success in your developmental education classes? Please be specific.

7. Did you form connections with your peers, faculty, or the college community? If so, please describe how these relationships may have helped foster your success in your developmental education coursework.

8. The college offers a variety of resources including study groups, tutoring and faculty office hours. How did the use of these supports help you to succeed in your developmental coursework?

9. Class withdrawal rates at the developmental level are high. What factors attributed to your completion of the class?

10. How did your developmental coursework prepare you for college level classes? Please explain why or why not.

Conclusion:

Thank you for your participation in this interview. I am hoping that speaking with you and other participants will identify strategies of success in developmental education.

- Explain the process going forward with your study reiterating the protection of their identify

- Ask if they have any questions and provide contact information should they want to reach out later with any questions or concerns

- Ask if you can contact them should you have any follow-up questions and how to best reach them if they are willing to speak again

Interview Notes Sheet

Name: _____   Participant Pseudonym:

_____

In-person or Video interview: _____   Date/Time:_____

Notes on the Participants demeanor:

Any additional interview questions added to the interview:

Questions asked by participant:

Any additional items noted during the interview process:

Are they willing to follow-up if needed?