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A Case Study of Student Success in Physical Therapist Assistant Programs: A Systems Approach

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Penelope J Lescher

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Walden University
2017

Abstract

A Case Study of Student Success in

Physical Therapist Assistant Programs: A Systems Approach

by

Penelope J. Lescher

MA, College of Notre Dame, Maryland, 1998

MCSP, Leeds School of Physiotherapy, 1976

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Education

Walden University

November 2017

Abstract

Graduating sufficient numbers of healthcare providers to fill the needs of an aging

population in the United States is a major social concern. To address this problem

physical therapist assistant (PTA) programs need to improve their graduation rates to

keep up with the demand for qualified personnel. Applying Senge's theory of effective

systems, 1 medium-sized community college with an average pass rate of over 90% on

the National Physical Therapist Assistant Examination (NPTAE) was selected to address

the research question: What are the systems factors and how do they operate together to

support student success in an associate degree PTA program? The method was a

descriptive case study consisting of interviews, classroom observations, and document

review using member checking and triangulation of data, with analysis by topic in order

to yield Geertz's "thick description" of efforts toward student success. A significant array

of strategies and cooperative practices within the department were identified that may

contribute to success on the NPTAE. Student success might be further enhanced if PTA

faculty were even better connected to other College departments, and all successful

retention strategies were disseminated throughout the College. While this case study

cannot definitively establish a causal link between college-wide student success efforts

and the high pass rate on the NPTAE, it is possible to conclude that it provides a context

in which the success rate can be understood. The results of this study would suggest that

other colleges that want to improve the NPTAE pass rate might consider this model to

effect social change by meeting the growing health care needs and challenges in society

of all people, especially an aging population.

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Dedication

I dedicate this dissertation to all those who have helped me on this journey. To my wonderful husband who has supported me both emotionally and practically, and to all the supportive faculty members who have encouraged me throughout my time at Walden. Especial thanks to my faculty mentor and dissertation chair Iris Yob for her dedication to my efforts and her unfailing encouragement as I progressed through the dissertation process. Thanks also to Alan Seidman as the expert in student success initiatives on my committee. Most of all I dedicate this to all those Physical Therapist Assistant students who I have taught over the last 21 years. They continue to inspire me and make me strive to improve student success rates to enable them to not only pass the National Physical Therapist Assistant Examination, but to excel in the health care arena.

Acknowledgments

I would like to acknowledge all those who played a part in assisting me with this study. Those people I interviewed at the College who graciously gave of their valuable time to talk to me about their obvious passion, the students they serve. In particular, I recognize the faculty of Walden University especially Dr. Iris Yob and Dr. Alan Seidman who stayed with me during this labor of love. I applaud the administration and fellow faculty members of Mount Aloysius College who were understanding about my preoccupation with my studies and encouraged me to persevere. Finally, I thank my husband who suffered many lonely hours due to both my studies and my focused attention on the research process.

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Chapter 1: Introduction to the Study

Introduction

This qualitative, in-depth case study investigated a suburban community college to discover the systemic factors that might contribute to student success. For the purposes of this study, student success is defined as an average of at least 80% of students who took the National Physical Therapist Assistant Examination (NPTAE) in each cohort and passed the exam. When this study was conducted, the average pass rate required to meet accreditation requirements as prescribed by the Commission on Accreditation in Physical Therapy Education (CAPTE) for colleges with a physical therapist assistant (PTA) program was 80% of those who took the exam (Commission on Accreditation in Physical Therapy Education, 2013a). In early 2016, after the data for this study was collected, this average requirement was raised to 85% (Commission on Accreditation in Physical Therapy Education, 2016). As a byproduct of student success, this study also included some aspects of retention within a PTA program because part of the study revolves around educating sufficient PTA graduates to meet the health and rehabilitation needs of a population growing ever older. The concentration was on the success of students in a 2-year Associate Degree PTA program at one community college, hereafter called "the College." This community college was chosen since its PTA program maintains an overall average percentage rate of more than 80% of graduates who take the NPTAE passing the exam over a 3-year period. The College had a 94.3% 3-year average pass rate from 2010–2012. This pass rate surpassed the national average 3-year pass rate of 83.16% for the years 2010–2012 (Federation of State Boards of Physical Therapy, 2013).

The guiding question for this study was as follows: What are the systems factors and how do they operate together to support student success in an associate degree physical therapist assistant program? Student success in PTA programs with a systems approach has not been investigated yet it has implications for meeting societal needs for healthcare providers in the future. The social change implications are centered on the need for healthcare personnel given that the approximately 76 million Baby Boomers, born between 1946 and 1964, continue to age (MacUnovich, 2002), and the possibility of increasing the percentage of students who graduate from 2-year healthcare academic programs to fill this need. Both physical therapists and PTAs are in demand nationally and the need for PTAs is projected to continue beyond 2050 with an increase of 45% or 51,100 jobs projected between 2010 and 2020 according to the Department of Labor Statistics, *Occupational Outlook Handbook 2012–2013* (Bureau of Labor Statistics, 2013). In the most recent statistics this demand for PTAs is expected to continue through 2026 with a projected growth of PTA jobs between 2016 and 2026 (Bureau of Labor Statistics, 2017).

Areas of focus included in this chapter are a background of the study through literature search, the nature of the study and research problem, the purpose of the study in identifying some key areas of and gaps in previous research that this study aspires to fill, the research questions, the conceptual framework based on the works of O'Banion (1997), Senge (1990), and Wheatley (1999) as an amalgamation of ideas regarding systems thinking, operational definitions, assumptions, scope, delimitations and limitations of the study, the significance of the study and a conclusion and summary.

Background of the Study

In order to provide some context to the development of the role of the PTA in the field of physical therapy, some historical information would be helpful. PTA programs have been in existence since 1967. The need for PTAs was originally determined by the American Physical Therapy Association (APTA) due to the short supply of physical therapists in the 1960s. In 1964, a resolution was submitted by a group of physical therapists, led by Helen Blood, to the House of Delegates of the APTA for developing an educational program for PTAs. These programs started in 1967; the first group of PTAs graduated in 1969 from colleges in Florida and Minnesota (Wojciechowski, 2004). The PTA's role is to assist the physical therapist (PT) in the delivery of physical therapy interventions. PTAs limited scope of practice precludes evaluations or re-evaluations or the development of a plan of care for patients and clients. These functions remain the responsibility of the supervising physical therapist. However, after evaluation of the patient by the PT, the PTA performs day-to-day physical therapy interventions with patients and clients who have a wide range of musculoskeletal, neurological, and integumentary conditions. The PTA is supervised either directly or indirectly by the supervising PT as determined by the Practice Act of the state in which the PTA works. Since PTA programs are 2-year allied health programs that result in an associate degree, they naturally fit best into the community college system, although some programs are located within 4-year colleges and universities. All PT and PTA programs in the United States are accredited by the CAPTE. Currently there are 309 PTA programs in the United

States with another 66 programs in the developing stages (Commission on Accreditation in Physical Therapy Education, 2013b).

According to data from the National Employment Matrix of the Bureau of Labor Statistics (2013), employment opportunities for PTAs are expected to rise sharply over the next 20 years. The growth in the need of PTAs between 2010 and 2020 is estimated to result in an additional 30,800 jobs nationwide, an increase of 45.7%. The largest need for PTAs—a 65.7% increase—is projected to be in services for the elderly and those with disabilities. This increased need supports the assumption that the people of the Baby Boom generation, those born between 1946 and 1964, will expand the need for qualified PTAs. Although the projected increase by 2020 and beyond varies between the Department of Labor's, *Occupational Outlook Handbook 2012-2013* (2013) (51,100 jobs) and the National Employment Matrix (2013) (30,800 jobs), the future need for PTAs into and beyond 2020 is established. Most recent data from the Bureau of Labor statistics (2017) and the National Employment Matrix (2017) continue to indicate an increase in need up to 2026.

As a context for this study, the following section describes the current nationwide statistics about enrollment, retention, and pass rates on the NPTAE. According to the CAPTE's 2011-2012 Fact Sheet (Commission on Accreditation in Physical Therapy Education, 2012), of the 280 PTA programs throughout the country, the mean graduation rate per year in 2005 was 69.7% and by 2011 it had improved to 75.02%. The mean pass rate on the NPTAE for all graduates was 76.2% in 2006 (Commission on Accreditation in Physical Therapy Education, 2015), by 2011, this had improved to 93.1%. However,

within this mean of 93.1%, the range of scores across all the schools in the United States was 58–100%. Many schools in the country remain at a lower than 70% first-time pass rate. Note that all PTA program graduates must pass the NPTAE to work as a PTA and be licensed, registered or certified in the state in which they wish to work.

In 2007, the number of students admitted to PTA programs was 9,045 and by 2010/2011 it had increased to 10,598 (Commission on Accreditation in Physical Therapy Education, 2012). Most PTA programs in the community college setting are comparatively small (a mean of 28.3 student admissions per year in 2011) and the dropout rate tends to be high, at 25-30% (Commission on Accreditation in Physical Therapy Education, 2012). Across all schools in the United States the mean employment rate for all graduates in 2011 was 97.3% within 6 months of passing the licensure examination (Commission on Accreditation in Physical Therapy Education, 2012). CAPTE no longer reports the aggregate employment rates of graduates so updated information is not available. This indicates that there is no shortage of jobs for current graduates from PTA programs. Since the U.S. Department of Labor statistics projects an increased need for PTAs up to and beyond 2020 (Bureau of Labor Statistics, 2013., Bureau of Labor Statistics, 2017), it appears that PTA graduates will continue to be in demand.

Several reasons this study was needed have been identified namely assisting student success and serving the needs of the community. One of the reasons is that assisting the success of students in PTA programs, while maintaining high academic standards that meet accreditation requirements, is extremely important. This is an

ongoing process for chairs and program directors. At the time the current study was

conducted, to remain in good standing for accreditation the CAPTE required that

individual programs maintain an average of 80% of graduates who take the NPTAE pass

the exam over a 3-year period (Commission on Accreditation in Physical Therapy

Education 2013). In 2016, this requirement was changed to 85% over a 2-year period

(Commission on Accreditation in Physical Therapy Education, 2016).

CAPTE looks at retention statistics demonstrated by college programs as part of

the criteria for accreditation. In 2011, the mean graduation rate was 75.02% and the range

of graduation rates across programs was between 50% and 100% (Commission on

Accreditation in Physical Therapy Education, 2012). No standard deviation was provided

for 2011 graduates, but programs are expected to be close to the 75% mean rate. The

graduation rate is calculated according to the number of students who graduate within

150% of the usual time to graduate. The length of 99.7% of PTA programs is 2 years so

the graduation rate is based on students who graduate within 3 years of commencing the

program (Commission on Accreditation in Physical Therapy Education, 2012). If

sufficient programs are to be maintained nationally to provide the health care workers of

the future, higher student success rates and lower attrition rates in PTA programs must be

achieved in all programs across the country.

Another reason this study was needed is that serving the needs of the community

with appropriately educated health care para-professionals is part of the community

college mission. Students drop out of PTA programs for academic, personal, and

financial reasons (Commission on Accreditation in Physical Therapy Education, 2012).

The identification of potentially unique sets of factors within colleges leading to success for students in the health care fields would assist in retention and success efforts for students throughout the United States. These factors could help community colleges and other colleges and universities meet the needs of their communities.

Individual aspects of college and their impact on student success such as identification of at risk students and financial issues leading do non-completion of college have been well researched in the literature (Community College Completion Corps, 2013; Ziskin, Hossler & Kim, 2009; O'Keefe, 2013). The general topic of student success has also been well documented in community colleges, 4-year colleges, and universities, but little has been researched on 2-year associate degree, healthcare programs and, in particular, PTA programs. Those concerned with healthcare programs mainly focus on nursing programs (Rogers, 2009; Reinhardt, Keller, Summers, & Schultz, 2012; Seago, Keane, Chen, Spetz & Grumback, 2012), although some have focused on pharmacy (Maize et al., 2010; Moser, Berlie, Salinitri, McCuistion, & Slaughter, 2014), dental hygiene (Sanderson, 2014); and health programs in general (Caruso-Holgardo et al., 2013; Pearson & Naug, 2013). Much attention has been given to the prediction of attrition rates and success on national examinations resulting from student characteristics. However, little attention has been given to college-wide factors that influence student success in these areas (Carrick, 2011; Gohara et al., 2011). Some research has focused on academic predictors, college-wide services, orientation programs, and levels of family education (Brock, 2010; Diaz-Booz, 2011; Galard, Albritton & Morgan, 2010; Jenkins, Smith-Jaggars, & Roksa, 2009).

Some of the main topics to emerge from the literature review in relation to student success were access to the college (Brock, 2010; Knapp, Kelly-Reid & Ginder, 2012); retention issues (Mayhew, Vanderlinden & Kim, 2010; Offenstein, Moore & Shulock, 2010; Pittendrigh, Borkowski, Swinford, & Plumb, 2016); remediation problems (Maize et al., 2010; Reinhardt et al., 2012; Boggs, 2011; Hagedorn & Kuznetsova, 2016); and first-generation college attendees (Brost & Payne, 2011; Coffman, 2011; Woosley & Shepler, 2011; McClean, 2013; Burrus et al., 2013). Other factors included college readiness (Diaz-Booz, 2011; AACC report, 2016); student characteristics that predict student success (Crosta, 2013; Maring & Costello, 2009); other factors that predict student success (Waugh, 2016; Goldstein & Perin, 2009; Clark, 2010; Jenkins, 2011); the role of support services (Johnson, Rochkind, Ott, & DuPont, 2013; Tinto, 2012; Seidman, 2012). These areas are described in more detail in Chapter 2.

Student success strategies in the community college setting have been described in general (Waugh, 2016; Houchen-Clagett, 2013; Jenkins, 2015). However, success rates in healthcare-related programs have not been covered as extensively (Jacobs, 2016). Student success in the literature is frequently described in terms of graduation from college, but this study focuses on graduates successfully passing the NPTAE, a more demanding standard. In addition, most of the research has revolved around individual departments and their role in student success, whereas this study examined the connections between college departments and how they worked together to encourage student success.

In conclusion, very little has been researched on success of students graduating from PTA programs—the focus of this study. The topic of student success as measured by the pass rate on the NPTAE, and related to the college-wide systems in place that may contribute to this success, adds an additional dimension to the literature. This study provides a different look at a health-care program student success story by approaching the topic using a qualitative study through the lens of a systems approach.

The Nature of the Study and Research Problem

The research problem was to identify connections between college departments that work together to promote student success in a PTA program. This was achieved through a case study based on the systems thinking approach. In addition, the case study was to provide a "thick description," as described by Geertz (1973), in which I made observations and gathered data through interviews of college personnel, observations of classroom and laboratory teaching, and review of documents pertaining to student success, retention, and graduation rates. Using this gathered data I formulated interpretations.

Although student success has long been a topic of interest in the college community, it is becoming increasingly an essential component of assessment for colleges. Both healthcare program accreditation and college-level accreditation are focused on retention and student success. The main topics in the area of student success are described above, but the research literature of the last 5–10 years has homed in on several areas: (a) how academic remediation or the need for remediation due to lack of student readiness for college-level work impacts student success (Center for Community

College Student Engagement, 2014; Hagedorn & Kuznetsova, 2016; Harney, 2011;

Jenkins et al., 2009), (b) the impact of orientation programs, and (c) the impact of

preentry or first-semester seminars on student success (Houchen-Clagett, 2013: Jacobs,

2016; Pittendrigh et al., 2016). The issues related to first-generation college attendees

were also addressed (McClean, 2013; Woosley & Shepler, 2011). Other areas included

success in healthcare programs (Maize et al., 2010; Maring & Costello, 2009; Reinhardt

et al., 2012), and the importance of the use of support services to encourage student

success (Johnson et al., 2013).

The gaps in the literature that were identified through the literature search

included the lack of information regarding student success in PTA programs in general.

Specifically, there was a lack of in-depth investigations of a systems-wide approach to

discover the impact of how connections within the system affect student success in

specific academic programs, such as the PTA. To explore the depth of information

needed to answer the research question for this study, a qualitative case study approach

was determined as the most suitable.

Quantitative research provides evidence of the effectiveness of individual student

success initiatives singly and in combination, but there is need for an exploratory study to

discover which factors were present and how they operated together. A case study

approach can be designed to accomplish this goal (Creswell, 2012). In the field of student

success many quantitative studies have demonstrated levels of student success in colleges

by using statistical data about graduation rates (Boggs, 2011; Seago et al., 2012). Some

qualitative and mixed methods studies (O'Keefe, 2013; Mertes, & Jankoviak, 2016) have

identified specific characteristics of individual college departments that contributed a

general note for all college students. However, very few studies have approached the

topic of healthcare program student success from a total systems approach and none have

identified the role played by individuals within these departments on student success in

PTA programs.

The Purpose of the Study

The purpose of this descriptive case study was to describe the links in the systems

within the College that may suggest an influence on the student success in a PTA

program. This study examined a community college with a 2-year associate degree PTA

program, which has demonstrated a high level of success by its students in passing the

NPTAE. The intent was to determine how the college supports this PTA program and

brings about this level of success for its graduates. In the context of this study the term,

systems means the interconnection between all college departments with respect to

student success. These departments could include admissions, advising, tutoring,

financial aid, registrar's office, PTA department faculty and staff, vice president for

academics, college president, and library.

Although considerable research has been conducted regarding student success and

retention at 4-year colleges and community colleges (Brock, 2010; Burrus et al., 2013;

Hagedorn & Kuznetsova, 2016; Jenkins, 2015; O'Keefe, 2013; Pearson & Naug, 2013;

Boggs, 2011; McClean, 2013), little to none has been researched about PTA programs,

although other health studies programs have been studied (Maize et al., 2010; Pearson &

Naug, 2013; Reinhardt et al, 2012; Seago et al., 2012). Most of the current health care

studies on retention focus on nursing programs (Reinhardt et al., 2012; Rose, 2011; Seago et al., 2012; Tower, Walker, Wilson, Watson, & Tronoff, 2015). Health studies programs are, by nature, academically rigorous so that students can pass the national licensure examinations and work with the public in their chosen field.

Research Question

The guiding question for this study was as follows: "What are the systems factors and how do they operate together to support student success in an associate degree Physical Therapist Assistant program?"

Conceptual Framework

The conceptual framework of this study was predicated on the concepts of the Learning College proposed by O'Banion (1997), those of Senge's Fifth Discipline (1990), and Wheatley's (1999) ideas concerning systems theory. A consensus of the meaning of systems theory is that what happens in part of a system affects the way the whole system works. For the purposes of this study, the "system" is the college as a whole, comprised of many departments within that college.

Perhaps the most crucial idea for this study originated with Senge (1990), who's Fifth Discipline represents systems thinking. Senge postulated that systems thinking can break down the barriers in a world that is intimately connected; no matter how far apart the individual components seem to be. A world in which people are so focused on their own ways of doing things breaks down because each change and decision that is made affects so many other aspects of an organization or entity. Senge was concerned with change as a catalyst for improvements within an organization, not for change for its own

sake. The creative tension that he indicated comes about from knowing the difference between the current situation of the institution and the vision of where it needs to be. O'Banion (1997) expanded on Senge's ideas on systems theory into the concept of the "Learning College," in which the focus on the learner turns education on its heels and turns students into active learners. For the purposes of this study and in order for the ideas to bear fruit, this translates into the need for student learning and success to be incorporated as basic tenets in the vision, goals, and strategic plans of colleges.

O'Banion (1997), Senge (1990), and Wheatley (1999) all described concepts that revolve around expanding systems thinking in colleges and the workplace. These concepts encourage employees and employers to see beyond fixing the immediate problems that invariably create future issues, and instead to consider the far-reaching effects of even small changes. This expansion of systems thinking includes creating an environment in which discussion and open communication between different departments help to increase reflection on the possible impact of changes in other areas of the education system. In the area of student success, these concepts make student learning the focal point of the discussion and focus for the colleges' efforts.

Wheatley's ideas about systems thinking were crucial to this study since they encourage the use of connections across the system in order to build an atmosphere conducive to innovation. Wheatley (1999) proposed looking at a system for its interconnections, a principle that guided the search in this study for relationships in the education system that affect student success. O'Banion (1997) expanded the systems thinking concept to incorporate his "learning college." This additional concept fitted

nicely with the concept of looking at the overall college system to identify key

components that might be contributing to student success in the PTA program. In this

study, looking at the overall college system included identifying common factors

concerning approaches to student success in the departments of admissions, advising,

financial aid, health studies coach, library, outcomes assessment, PTA department faculty

and staff, registrar's office, and tutoring services. Such key components included the

level of communication between departments, both formally and informally, availability

of tracking systems for student progress by all constituents, a sense of community, the

commitment of all personnel at the college to student success, and a free exchange of

ideas between all departments.

Finally, Kline and Saunders (1998) placed systems thinking into the educational

context by allowing errors as a means to improve the system as a whole. Both Kline and

Saunders and Wheatley (1999) emphasized the importance of the people in an

organization and a comfortable work environment, for without this, the systems approach

is not going to produce practical results. If people are not able to make mistakes then

there can be no innovation or change to improve the system. The connections across

departments in the community college that make a difference in student success

exemplifies the interweaving of the ideas about systems thinking that may lead to the

identification of the components that can bring about the environment that supports such

success, even when it occurs through learning what not to do.

The conceptual framework provided by Senge (1990), O'Banion (1997), Kline

and Saunders (1998) and Wheatley (1999), described previously, was the basis for the

current study. Using a systems approach to explore the connections between college departments and how they work together to promote student success in a PTA program using a qualitative in-depth case study allowed for a detailed look at these interactions and insight into the way systems can work for the betterment of all involved. The more recent research literature on student success is described in Chapter 2.

In this study, the PTA program becomes part of the overall College system leading to student success within the program. The interconnections between the program faculty and the personnel in other departments can be visualized as an interlocking system. For purposes of this study, the PTA program can be considered the central component of the system with all the various associated departments surrounding the program and interlocking and interacting with it. The various departments include admissions, advising, financial aid, health studies coach, library, outcomes assessment, PTA department faculty and staff, registrar's office, and tutoring services.

Operational Definitions

For the purposes of this study, the following definitions were used.

Commission on Accreditation of Physical Therapy Education: The national accrediting body for physical therapy and physical therapist assistant education in the United States CAPTE accredits all Physical Therapy and Physical Therapist Assistant programs in the United States and its territories (Commission on Accreditation in Physical Therapy Education, 2016).

Federation of State Boards of Physical Therapy: The organization that develops

the NPTAE. This organization works for all the state boards of physical therapy in the

United States and its territories whose mandate is to protect the public (FSBPT, 2017a).

National Physical Therapist Assistant Examination (NPTAE): The examination all

graduate physical therapist assistant students have to pass in order to practice as a

licensed/registered/or certified PTA (FSBPT, 2017b).

Physical Therapist Assistant Program Director/Chair: The terms program

director and chair are synonymous for the academic leader of the PTA programs in the

higher education system. The designation depends on the faculty and administrative

structures of the individual colleges. In some cases, the academic leader may even be

called the Coordinator of the program. In this paper the leader of the academic program

studied is called the Physical Therapist Assistant Program Director. (Commission on

Accreditation in Physical Therapy Education, 2013a)

Physical Therapist Assistant Program Academic Clinical Coordinator of

Education (ACCE): This is the term used for the faculty member in the PTA program

designated to oversee the clinical aspects of the program (Commission on Accreditation

in Physical Therapy Education, 2013a).

Retention rate: The percentage of students who graduate from the PTA program

within 150% of the total time normally allotted to complete the program. The usual time

for completion of the program is 2 years consisting of 5 semesters, including a summer

semester and thus 150% of this time is 3 years (Commission on Accreditation in Physical

Therapy Education, 2013a).

Student success: For the purposes of this study student success is defined as PTA students who have completed a 2-year associate degree program and have passed the NPTAE. This is measured by the percentage of students passing the exam from a particular college program. CAPTE defines an appropriate threshold to remain within accreditation compliance as an average 3-year pass rate on the exam of 80% for the numbers of graduates who have taken the licensure examination in each year and passed the exam (Commission on Accreditation in Physical Therapy Education, 2013a).

System: Laszlo and Krippner (1998) define a system as a "complex of interacting components together with the relationships among them that permit the identification of a boundary-maintaining entity or process" (p. 7). In the context of this study "system" or "systems" refers to the college wide system of departments and personnel such as academic affairs, administration, admissions, advising, ancillary services, controller's office, PTA department faculty and staff, and registrar's office associated with the topic of student success for the PTA program.

<center>**Assumptions, Scope and Delimitations, and Limitations**</center>

Assumptions

This study was based on three assumptions. (a) All community colleges are looking to improve student success and graduation rates and to reduce the attrition rates. This is exhibited by the focus on student success in college strategic plans, mission and vision statements, and college publications. (b) Focusing on an appropriately representative college with a high retention and student success rate may provide some insight that is helpful to other colleges. In learning about best practice in an area of

interest, the results of studies in similar educational settings can be used to verify and

challenge current concepts and practices in other colleges. Knowing what does and does

not work well reduces the learning curve for other institutions. (c) Departments working

together with common goals, open communication, shared decision-making, and

cooperative and mutually supportive strategies to achieve those goals are more likely to

achieve them.

Scope and Delimitations

The scope of the study was an in-depth case study of a specific community

college using thick description. This strategy was chosen in order to gain an in-depth

understanding of the systemic relationships between college departments in relation to

student success. Other qualitative approaches were ruled out from use as not being of

sufficient depth for the current study.

Three delimitations of this study are described. The first is that it was set within

one specific community college that offers a PTA program with a high pass rate on the

NPTAE. A high pass rate, in this case, means that the percentage of students who take the

NPTAE in any year and pass the exam is over 80%. Choosing just one college facilitated

an in-depth case study appropriate to the qualitative approach. Here, the aim was to

determine the system factors that are working together to create this success.

The second delimitating factor is that of the definition of "student success." For

the purposes of this study, success means passing the NPTAE. This study does not take

into consideration the subsequent employment of the PTA graduates or the success within

such employment for graduates who pass the NPTAE and are licensed by the state to

work. Nor does it consider the graduates who graduate from the program, but do not pass the NPTAE and therefore cannot work as a PTA. The attrition rates within the PTA program prior to graduation are also not a consideration of this study.

The reason for these delimitations is to focus on one of the main factors associated with the compliance of PTA programs with CAPTE accreditation, which up to 2016 was the maintenance of an 80% average of takers passing the NPTAE over a 3-year period. Since 2016 this requirement has changed to an average of 85% of takers passing the exam over a 2-year period.

The third delimitation is that students within the PTA program were not interviewed. The perspectives for the study are based on the system rather than perceptions of students.

Limitations

Two limitations of this study are described. The first limitation of the study is that it was conducted at one medium sized community college on the Eastern Seaboard and the results may not be valid for all community colleges of other sizes. However, determining the possible systems factors related to student success within the college would be of interest to other colleges housing a PTA program for efforts to improve student success.

The second limitation of the study is that the investigation of the systems factors was of those in place at the time of the study and accessible to the interviewer. Those factors previously in place or that may occur in the future could not be identified. In addition, other community colleges may not have similar systems in place to replicate the

study. The target PTA program has selective admissions policies in place that may not be available at other community colleges with PTA programs who have open enrollment procedures.

Significance of the Study

As the need for health care personnel continues to rise to meet the needs of an aging population in the United States, the role of colleges in providing these health care workers is paramount (Woods, 2013). If the student success rate in these programs can be improved—resulting in more graduates who can fill these crucial positions—the health of the communities served by the colleges will be enhanced and generate positive social change . This study is expected to add to the previous literature on student access and success by focusing on a particular health care program, namely PTA, which has not previously been documented. Providing the communities with qualified, effective PTAs can create positive social change by improving public health and contributing to the better rehabilitation of the population who are injured, have undergone surgery, or have a medical condition requiring physical therapy services to return to full function. Specifically, the effectiveness of PTAs in addressing the rehabilitation needs of the health care population is tied most closely to Walden's concept of social change, change that results in "improvement of human and social conditions" (Walden, 2016) and promoting the well-being of local communities (Mason, 2016).

Summary

The concept of improving student success brought into awareness by Tinto in 1987 is one that continues to be of prime importance to all colleges and particularly to

community colleges (Rob, Rios-Aquilar, & Deil-Amen, 2014). Determining some of the system-wide influences that may affect student success in a PTA program is the basis of this study. The need to identify factors that impact student success from a systems point-of-view was expected to uncover strategies that may help to increase the number of successful graduates from PTA programs and assist in meeting the healthcare needs of an aging population.

This study focuses on student success from a systems approach by looking at the way in which college personnel from a variety of departments work together to promote student success. Based on the concepts of O'Banion (1997), Senge (1990), and Wheatley (1999) the study examines a variety of college departments through personal interviews of individuals in those departments concerned with student issues of success, classroom observations, review of College publications and documents, analysis of College and PTA department policies and review of pertinent meeting minutes concerned with student success. Some statistical data is available from the CAPTE pertaining to overall PTA education which informed the study. In addition the pass rates on the NPTAE for the specific PTA program graduates were reviewed. However, this study examined beyond the statistical data provided by previous studies in order to identify areas within both 4-year colleges and community colleges regarding the role each department plays in student success.

Chapter 2 explores many of the previous studies pertaining to student success and retention and theories of retention in colleges to determine some of the common identified threads on which to expand through further investigation and research in this

study. This chapter contains the literature review, including strategies used for searching the literature, the conceptual framework and a systems thinking overview, retention issues, remediation's impact on student success, student success for first generation college attendees, college readiness and its relevance to student success, student success in health care programs, factors predicting student success and the role of support services in student success.

Chapter 3 describes the research method. The research design and rationale is described as well as the role of the researcher. The methodology section includes the choice of setting, the participant selection logic, instrumentation and materials, procedures used for recruitment, participation and data collection, interviews, interview questions (located in the appendices), observations and document review. Further topics include issues of trustworthiness, ethical procedures and discussion on the dissemination of findings.

In Chapter 4 the results of the study are detailed. This includes the organization of the chapter, the setting and demographics, results of date collected (a) specifically within the PTA program, (b) from departments working closely with the PTA program and (c) from departments across the College. Commonly identified themes across the College campus related to student success are identified and evidence of quality and trustworthiness is provided.

Chapter 5 details the summary, conclusions and recommendations arising out of the study. This includes the interpretation of the findings from the study,

recommendations for action, and recommendations for further study. Finally the

implications for social change are described.

Chapter 2: Literature Review

Introduction

The research study addressed the question: What are the systems factors and how do they operate together to support student success in passing the National Physical Therapist Assistant Examination in an associate degree Physical Therapist Assistant program? The literature review included a variety of aspects of college administration and academics that are thought to impact student success, including retention issues, remediation's impact on student success, impact on student success for first generation college attendees, college readiness and its relevance to student success, student success in health care programs, factors predicting student success, and the role of support services in student success.

Many studies have looked at various individual aspects of a college community and their impact on student success, but few have looked at the global approach of its systems working together to create an environment for student success. According to the multiple research topics on individual areas of the college in student success, it appears that a variety of different areas of the college community positively influence student success over the last 10 or more years (Culp, 2005; Davidovitch & Seon, 2015; Fowler & Boylan, 2010; Stephan, Davis, Lindsay & Miller, 2015). However, no one area seems sufficient to create an absolute positive effect on student success; rather, a combination of factors and influences is needed (Brock, 2010; Burrus et al., 2013; Center for Community College Student Engagement, 2014; Culp, 2005; Jenkins, 2015; Hagedorn & Kuznetsova,

2016; Hannon, 2014; Lang, 2001; Savitz-Romer, Jager-Hyman & Coles, 2009; Stephan et al., 2015; Ziskin et al., 2009).

As previously shown, the general topic of student success is one that is well researched in community colleges, universities, and 4-year colleges, but the topic of student success in 2-year associate degree healthcare programs is less well documented in the research literature and of these most are about nursing students (Jacobs, 2016; Rogers, 2009; Rose, 2011; Seago et al., 2012; Taylor-Haslip, 2010). Other health programs found in the literature on student success included pharmacy (Maize et al., 2010); diagnostic medical imaging (Borghese & Lacey, 2014; Kwan, Childs, Cherryman, Palmer & Catton, 2009), dental hygiene (Sanderson, 2014) and healthcare programs in general (Casuso-Holgado et al., 2013; Johnson, 2014; Pearson & Naug, 2013). Of the available literature on success in health programs, most is focused on predicting attrition and success on national exams based on student characteristics rather than college-wide attributes that influence student success (Carrick, 2011; Fulton, Starnes, Caouette, Whittaker & Ivanitskaya, 2008; Gohara et al., 2011; Maring & Costello, 2009; Mills & Harmer-Beem, 2008; Rogers, 2009; and Rose, 2011). However, one study related admissions criteria and its link to student retention in a dental hygiene program (Sanderson, 2014), while another study covered remediation programs in pharmacy and other health programs (Maize et al.).

One specific study of interest to health occupation programs, though now rather dated, was that of Bailey et al. (2004), who identified characteristics specific to occupational students in general. Some of these characteristics included a tendency for

lower socioeconomic status, higher percentages of minorities enrolled, a lower percentage of females, more likely to have enrolled into college later than immediately from high school, less likely to have to take remedial courses, and more likely to have enrolled to obtain job-specific skills. More recent studies have continued to identify all of Bailey's identified characteristics as pertinent to health occupations student success (Linderman & Kolenovic, 2013) although early identification of at risk students now seems to be the most commonly identified factor in the literature (Johnson, 2014; Pearson & Naug, 2013) and the need for institution of orientation and other preparation programs for first year students (Davis, 2013: McIntyre, Todd, Huijser & Tehan, 2012; Mellor, Wesley, Gray & Jordan, 2015). Although these identified attributes of occupational students were not specific to any one area of health occupations, they bear consideration for this study.

When reviewing the literature, the general themes are addressed first followed by the specific themes. A look at the various research methods used by other researchers with particular emphasis on qualitative methods regarding the topic of student success tied this in to determining the level which a systems approach affected the overall success of students.

The topic of the research, student success within 2-year PTA programs from a systems approach, involved looking at all aspects of the current literature regarding college student success including overall college retention rates, graduation rates, and methods of encouraging student success. Particular emphasis was placed on looking at departmental specific approaches currently used to promote student success such as

advising, student services, academic tutoring and remediation. The factors affecting

student success such as academic predictors, college-wide services, orientation programs,

and family education levels were also included in the review. These areas are all well

represented in the literature (Brock, 2010; Diaz-Booz, 2011; Gallard, Albritton &

Morgan, 2010; Jenkins et al., 2009; Levin & Calcagno, 2008).

The final piece of the literature review was focused on looking at strategies for

student success in health care related programs, particularly within the community

college setting. Since the definition of student success for this study is based on program

graduates successfully passing the national licensure examination, the literature review

included looking at studies of pass rates in other health care programs since there were no

studies identified that specifically related to PTA programs. However, fine tuning of the

search included looking at the specific statistics available for success within PTA

programs through the APTA and the Federation of State Boards of Physical Therapy

(FSBPT).

The main content of the literature review was conducted with several different

topics in mind, all of which were related to student success issues. The topic areas were

determined from the literature regarding student success issues included a systems

thinking overview; retention issues; remediation's impact on student success; impact on

student success of first generation college attendees; college readiness and its relevance

to student success; student success in health-care programs; factors predicting student

success in general; and the role of support services in student retention.

These topic areas are relevant to this study since they have been identified in the literature and through studies as having an impact on student success in colleges. In considering a total systems approach to the topic of student success all the aspects of such success must be examined for relevance to the current study. Although most of the literature reviewed was published within the last 7 years, a few articles and studies considered to be particularly relevant were included that dated back some 20 years.

Strategy Used for Searching the Literature

Many search engines were used to discover the appropriate supporting research for this study: A-Z in ERIC of Journals and Sources; Academic Search Complete; CINAHL Plus with full text; Ebsco Publications; Education Research Complete; Expanded Academic ASAP; Google Scholar; Infotrac General Science eCollection; Metapress Complete; OVID Nursing Full Text Plus; Project Muse; Basic research Collection; ProQuest; ProQuest Central; ProQuest Nursing and Allied health Science: PsychInfo; Science Direct - Health science; and SocIndex with Full Text.

The following search terms were used: *academic success*, *academic success/college*, *advising/student/success*, *attrition/academic/college*, *attrition/health education*, *attrition/Physical Therapist Assistant*, *attrition/success*, *college success*, *graduation rates*, *graduation rates/college*, *graduation rates/academic/college*, *higher education/student success/nursing*, *higher education/student success/health programs*, *retention/college*, *student retention*, *student success*, *student success in higher education/admissions*, *student success in higher education/support services*, *attrition in higher education/healthcare*, *attrition in higher education/associate degrees*, *retention*

and attrition in higher education, *persistence*, *student engagement*,

success/academic/college, *success/college student/systems*, *student success/health*

occupations/college, *student success/occupational programs/college*,

underprepared/students, *underserved/students*, and *student/success/tutoring*. Some terms

such as *attrition/PTA* and *attrition/health education* did not return any results, which then

required the use of alternative terms such as *retention* and *success*. Searching for specific

articles and research materials regarding health care education was by far the most

difficult of the tasks during the literature search. In addition to the search engines the

Center for the Study of College Student Retention (cscsr.org) website and resources were

used to determine suitable sources.

Conceptual Framework – Systems Thinking Overview

The idea of a systems approach for this study arose from an amalgamation of the

works of Senge (1990), O'Banion (1997), and Wheatley (1999) as described in chapter 1.

Wheatley proposed the idea that without the ability to make mistakes a system does not

progress. Perhaps this is the ultimate type of the "team approach" to management, except

that the flexibility needed for Wheatley's approach requires a considerable amount of

tolerance on the part of managers. Allowing employees to make mistakes that can then

grow and evolve into innovative ideas requires a confidence level that many people in

management do not possess. Making mistakes is more often grounds for dismissal than

congratulation.

Some other studies concerned with the systems approach in education informed

the decision to perform a qualitative study involving systems thinking. Staggs, White,

Schewe, Davis, and Dill (2007) described an "incubation approach" (p. 365) for system

change in working with children who had been exposed to violence. This approach

involved coordination of all the involved services including law enforcement and the

child protective related services to make all the different sections more familiar with the

concepts of child abuse. The concept was that altering the mind set of police by targeting

an individual who would disseminate the information throughout the police department

would result in systems change for people who were the first responders when called in

for cases of domestic violence. These individuals became "incubators" for system

change. The study itself was qualitative in nature consisting of interviews, observations

and group work, with an aside of quantitative analysis of the numbers of children and

support services people involved. The results of the study were encouraging for a change

in police management of cases of "children's exposure to violence" (CEV) and it was

noted that the concept probably appealed to the "nurturing, caring personalities of people

who work in public and social service systems" (p. 376). Since the education system is

typified by similar personalities it suggests that such social change may be stimulated

through qualitative, systems thinking studies in this area as well.

Another systems thinking approach study by Hirsch, Levine and Miller (2007)

looked at system change through "system dynamics modeling" (p. 239). This approach

was from a psychology perspective to note how systems changed by identifying the

individual components that work together to create the change rather than looking at one

component and focusing on that. Again, this has an impact on the structure of this study

through looking at the whole system rather than an individual component for creating

positive results of a good pass rate on the NPTAE.

One study in particular by Harper (2007), looked at student success from a

systems point of view using a qualitative case study. However, this study focused on

students' perceptions and insights and deduced that many factors were evident in

assisting with student success, or in many ways interfering with it. Such problems were

found to be students not having financial support from home and having to work to

support their way through college. Another factor was the lack of support for academics

from home due to being the first in the family to attend college. The results of the study

found that the institutions attended had never asked about the home backgrounds of the

students interviewed and had no idea of the difficulties of balancing college, work, home

life, and commuting long distances experienced by the students. This study will focus on

the systems-wide issues. Hirsch et al. (2007) commented that system change to benefit

the group is part of the draw towards systems thinking. More specific to the area of

student retention and success is that the long-term effects of college-wide retention

programs may result in attraction of more students to the college and programs, which

enhances the financial effects of student success programs (Tinto, 1987). Although Tinto

indicated that college-wide retention programs only effectively improved student

retention up to approximately a maximum of 20%, this increase could make a difference

to the viability of programs and the institution.

Another seminal work was that of Kuh, Kinzie, Schuh, and Whitt (2005) who

identified several system-wide factors. They felt that for a more systems-wide approach

to student success to work it depended on the concept being integrated into the mission

and vision of the institution. The policies and practices should support this goal and the

leadership should be committed to the mission. They emphasized the importance of early

academic and social intervention for at-risk students and financial and moral support for

college programs. Overall they stressed the need for a culture that encouraged turning

problems and challenges into opportunities for improvement and a system that worked

together toward a common academic mission and student assessment of learning.

Overall, a combination of O'Banion's *Learning College* (1997), Senge's *Fifth*

Discipline (1999) and Wheatley's ideas regarding systems thinking create a reformation

of systems thinking into a method for looking further than immediate problems. They

look to an environment in which discussion and open communication within an

organization lead to the breakdown of barriers to success. Allowing mistakes to become

catalysts for change and innovation rather than cause for blame and ridicule creating a

positive environment for the development of new ideas.

Retention Issues

Retention rates in higher education have long been a cause of concern. According

to Lang (2001) the search for solutions arising out of the concerns over high attrition

rates for African American and Hispanic students revealed that the general attrition rates

for all students was lower than previously thought although Lang did not provide

statistics to demonstrate this point. A statistical report from the National Center for

Education Statistics (2014) shows that for a beginning cohort of students in 2010 the total

graduation rate, defined as students who completed an associate's degree or certificate in

150% of the normal time to complete such a degree, across all 2 year institutions

countrywide, was only 29.4%. These statistics have varied very little from the statistics of

the year 2000 when the graduation rate was 30.5%.

As far back as the 1980s it was recognized that attrition rates depended on many

different variables that included characteristics of student academic and personal issues,

and attributes of the environment within the colleges attended (Lang, 2001). Lang (2001)

outlined six key areas of focus for student retention within colleges. These included: the

use of programs that introduce high school students to college work or a college

environment such as summer programs and co-enrollments between high school and

college; faculty mentoring of college students; developmental and remediation courses;

first-year student programs; counseling; and student tutoring. These student retention

efforts continue to be areas of interest in current literature supported in other studies by

Brock (2010); Burnett and Larmar (2011); Davis (2013); Houchen-Clagett (2013);

Mayhew et al. (2010); Offenstein et al. (2010); Petty (2014); Pittendrigh et al. (2016);

Savitz-Romer et al. (2009); Tinto (1987); Williamson, Goosen and Gonzalez (2014); and

Zhou et. al. (2015).

Of Lang's (2001) six key areas of focus for retention the use of programs

supporting transition from high school and college through the use of bridge programs

was found to be successful by Petty (2014). Faculty mentoring of college students has

become a popular method of approaching the improved retention of students especially

during the first year at college. Burnett and Larmar (2011) provided an example of how

the use of a "First Year Advisor (FYA)" (p. 22) for all first year students assisted in

improving persistence and success for these students. In helping these students with the academic and social aspects of college life the FYA was able to positively affect the first year experience in encouraging specific learning and making use of college resources for tutoring and orientation. Williamson et al. (2014) also described a faculty advising program in which students met with their advisor on at least a twice semester basis. The results of the study indicated that 70% of students who met with their advisor twice in the first semester of college achieved grades between an A and C compared to only 30% of those students who never met with their advisor in the same semester. The results of the second semester were even more dramatic with 76% of those meeting with faculty advisors achieving success compared to 21.5% of those who did not meet with advisors. The implication would seem to be that students, especially first years, should have to meet with their faculty advisor at least twice during their first and second semesters. Undoubtedly this is more of a challenge for faculty at larger institutions, but Williamson et al. indicated that the faculty members are committed to the faculty advising program.

Lang's (2001) key area of first year student programs to help with student success include the use of specific community college success courses addressing academic persistence as described by Houchen-Clagett (2013) who identified a correlation between first year students who attended such a course and the retention of these students through the following semester. Another study by Pittendrigh et al. (2016) showed that an academic seminar designed for first-year college students increased the persistence rate for students and was even more effective for "at-risk students". While Mayhew et al. (2010) concluded that having an actual office, "A visible space", dedicated to first year

orientation had a positive impact on student success. Davis (2013) also reported a positive outcome for students who attended an Academic Orientation Program by tracking attendees over a two-year period and finding that they consistently earned more credits and had a higher overall grade point average than those who did not attend the program.

Remedial education, another of Lang's (2001) key areas is a mainstay of many community colleges in order to better prepare students to succeed with 42% of student freshmen enrolled in one or more remedial courses (Brock, 2010). Brock spoke to the development of Learning Communities in remedial education that placed students in groups that were progressed through several courses together where they were able to be a cohort of support for each other. Results indicated that those students in these Learning Communities were "more likely to feel integrated at school… [and] passed more courses and earned more credits during their first semester" (p. 117).

Indeed Tinto (1987) was concerned that lack of academic preparation for college level work and poor social integration of students into the college environment were the major reasons responsible for many students dropping out of college. However, Tinto was convinced that both the academic and social aspects of college needed to be well integrated so that students would be more likely to stay the course. In this respect, Lang's (2001) ideas are supportive of Tinto's key areas of focus for student success especially first–year student programs and new student orientations which would seem to be effective in promoting student interest and investment in the education process. Savitz-Romer, Jager-Hyman, and Coles (2009) expanded on this idea in providing both

academic and social support for students within the college at all levels of the college experience. They recommended that multiple support strategies needed to be provided for students in order to boost confidence and motivation and support student achievement. Fowler and Boylan (2010) also recommended that increasing the persistence of students who were underprepared for college included addressing the nonacademic and personal needs of these students.

However, one key area was the identification of students at risk of failing or dropping out of college (Community College Completion Corps, 2013; Savitz-Romer, Jager-Hyman, and Coles, 2009). One main reason identified that supported Tinto's (1987) and Lang's (2001) ideas, was that of the lack of preparedness of students for college-level work. According to a report on higher education statistics there continues to be discrepancy between levels of college readiness and enrollment for students from low income backgrounds compared to those of higher level income families (Harney, 2011). Another study by Stephan et al. (2015) identified that predicting which students would drop out of college included low income students. They also found that statistically students could be predicted to have higher levels of drop out if they had lower achievement levels in high school and were absent regularly during high school. Both these predictors were indicators of dropping from the first year of college.

Hannon's (2014) study examined several factors as predictors of student success including SAT scores, social, personality, cognitive and learning factors. The results of this quantitative study demonstrated that there was a strong correlation between SAT scores and cognitive and learning factors, but that higher grade point average (GPA)

correlated with a combination of the social and cognitive factors. Thus, although importance should be given to academic skill sets, especially in the first year of college, the social aspects should not be overlooked. The results of this study indicated that student success relied on more than just academic skills and that a mixture of academic and social attributes should be taken into consideration during the first-year student experience.

A point relevant to the use of information regarding retention methods and reasons is that higher retention rates at colleges are a positive factor when government and non-government funding issues arise. In addition, published higher education retention rates attract more students to the college, and result in better reports from the accrediting bodies due to the ever-increasing need for accountability in higher education. According to the Community College Completion Corps (2013) and Johnson et al. (2013) 65% of students drop out of community colleges and of those 38% return to complete their degrees. According to the National Center for Education Statistics (NCES) Digest of Education Statistics through the Department of Education (2014) using the Integrated Postsecondary Education Data System (IPEDS) in 2014 the trends for graduation rates from community colleges has remained about the same over the years from 2000 to 2010. This data looks at the percentage of students who earn a certificate or associates degree within 150% of the normal time to complete which is considered to be three years. For the cohort starting in the year 2000 this rate was 30.5% and in 2010 it was 29.4%. Little overall change was noted in the intervening years. In comparison, statistics from the American Association of Community Colleges (AACC) (Juszkiewicz, 2015) using the

National Student Clearinghouse (NSC) statistics which looks at community college

graduation rates within a 6-year time period states a 39.1% completion rate at either the

community college or another institution. Regardless of the statistics used, the overall

trend seems to have remained about the same over the last ten or more years.

Since income levels are positively associated with the level of education, those

who drop out from college are likely to have lower levels of income during their lifetime

which may impact society. Many students who attend community colleges are from low-

income families and have issues with the affordability of a college education. According

to the Community College Completion Corps (2013) and Johnson et al. (2013), lack of

finances was cited as the main reason for the high level of dropping from college with a

total of 54% of students in all colleges needing to work to pay for their education. In

contrast, 60% of students in the community colleges have to work to support their

education costs. These community college students work at least 20 hours per week and

25% of them work more than 35 hours per week. Both sources cited working while

attending college as the main reason for dropping out of college. Similarly, according to

Torres, Gross, and Dadashova (2010), students who worked more than 30 hours per week

at the same time as trying to attend college full-time were also shown to have difficulty in

courses and be more likely to drop out of college. Although, the Torres et al. study also

indicated that there was progressively more likelihood of poor GPA and perseverance in

college the more hours per week students worked over 10-15 hours. This factor is

important for this study because many PTA students work many hours per week in order

to support their progression through college.

Another area of concern is that statistics may capture college retention issues as the quantitative accountability outcome reporting, but does not look at the reasons for non-completion of degrees. Particularly in the community colleges, students may attend college for reasons other than degree attainment, may have to leave college due to financial difficulties, or may take considerably longer to complete their degrees than just 2 or 3 years (Bers & Schuetz, 2014). The standard for looking at student achievement of a degree is currently set at 6 years for 4-year colleges and 3 years for 2-year colleges by the U. S. Department of Education through their National Center for Education Statistics (NCES) and the Integrated Postsecondary Education Data System (IPEDS) (Juszkiewicz, 2015; U. S. Department of Education, 2014). However, for many students who have either academic or economic difficulties the attainment of a degree may take longer (Offenstein et al., 2010). Of note is that Brock (2010) stated that more financial aid is available than may be thought for students. However, he acknowledged that performance-based scholarships played an important role in student success in college.

Due to the nature of this study focusing on success in associate degree PTA programs and the paucity of literature regarding PTAs, most of the literature search focused on attrition and retention within the community colleges. However, the data is equally relevant to the 4-year colleges and universities, many of whom house 2-year PTA programs. For the purposes of this study the main focus of the literature on retention issues was on community and 2-year colleges.

Students who are interested in their choice of major should, one would think, be more likely to be successful in their studies. However, this point was undermined in one

rather dated study of students in education programs who had an "epiphany" when they

realized the difficulty of the course material (Watson, Johnson and Austin, 2004).

Although a more recent study providing an example of this phenomenon was not found

this may also be the case for students who enter PTA programs since many students

neither fully understand the degree of difficulty of the courses required to complete a

program nor the actual work required of a PTA. The general statistics for graduation from

PTA programs across the country stands at a mean of 85.4% for graduates of 2016

(Commission on Accreditation in Physical Therapy Education, 2017) with a range from

45% to 100%. This has risen from a mean of 69.7% in 2005. The accreditation standards

require at least a 60% graduation rate over a two-year period. However, it is difficult to

determine how many of the students who drop from PTA programs do so for personal

reasons or academic deficiencies.

A qualitative study by Johnson (2014) demonstrated an improvement in student

retention and success with students placed in learning communities within healthcare. In

this study students were placed together in several courses to do with healthcare

administration and management and the effects were perceived as positive for retention

and perceived benefits by 80% of the participants. The social interaction of the learning

community or cohort constituted a positive learning factor as indicated on a survey by

80% of the participants.

Harney reported (2011) that only 16% of associate degree-enrolled students in the

United States actually graduated within a 3-year time period. The CAPTE criterion for

graduation in PTA programs is also 3 years, or 50% more than the usual length of the 2-

year PTA programs. However, as Attewell and Lavin (2007) pointed out, the reports may be somewhat misleading since the majority of students are now adult returning students rather than straight out of high school and thus take fewer credits per term. These adult students tend to take longer to graduate because they are juggling work, family and school. Perhaps a more accurate assessment would be to see how many students actually graduated, regardless of the time taken, and how many achieve the goals they set for themselves when they started college.

Remediation's Impact on Student Success

One of the major areas studied regarding student success is that of at-risk or underprepared students who require remediation, also termed as lack of college readiness, or as Levin and Calcagno (2008) termed it the "remediation crisis". Students who have diminished skills in mathematics and English require interventions to enable them to be successful in college-level courses. Once remedial courses are completed students' success rate was found to be comparable to non-remediation students (Goldstein & Perin, 2008). Community colleges play a huge role in administering remediation courses to bridge the gap between high school and college since community colleges and similar colleges offer admittance to students for the first 2 years of college work. Since more than 50% of all public community college students in 2016 required some level of remediation courses the impact on these colleges for resources is great. The effects of remediation courses have both negative and positive effects. The negative effects are that approximately 50% of students enrolled in remedial courses will never complete the courses and will not gain a degree due to students feeling they do not belong in college.

The positive results are that 50% of students do go on to complete degrees (National

Conference of State Legislators, 2017).

The impact of remediation courses on student success is controversial since

studies do not always agree on the efficacy of such courses. A Virginia study by Jenkins,

Jaggars and Roksa (2009) looked at developmental courses designed to prepare students

for college-level courses. Students are generally required to take placement tests to

determine their readiness for taking college courses and are placed in

remediation/developmental courses to better improve their chances of success. Some

colleges require that they take and pass these courses prior to enrolling in other college

courses, while others allow a minimal number of college credits at the same time as these

developmental courses. However, as Jenkins et al. indicated not all colleges require

students to take remediation courses. Students who demonstrated need but did not take

developmental courses were not shown to have better success rates than those who took

remediation. However, the general pass rates were from between 67% and 85% for

students who took college level English courses. The study was inconclusive for the

effectiveness of remediation courses since the groups of students who took remediation

and those who should have taken remediation demonstrated similarly poor results in

college-level English courses.

This, then, begs the question of whether the groups of students who needed

remediation in general were indicative of a population who will perhaps not do well in

college. On the other side of the argument was that many students were successful

despite the fact they should have taken remediation courses and did not do so. The

Jenkins et al. (2009) study resulted in more questions than answers to the topic of

remediation courses. All the studies previously described regarding student success after

taking remediation courses used quantitative methods to track cohorts of students who

took remediation courses and then graduated. None of the studies approached the topic

from a qualitative perspective to identify reasons for pursuing remediation courses within

the community colleges.

Another approach to addressing the needs of underprepared students was offered

by Shaffer (2015). In this study students were enrolled in a reading support course and an

environmental science course in addition to their academic remediation courses. These

were structured to improve reading skills and foster lifelong learning as measured by

success in the environmental science course and increased scores on the Effective

Lifelong Learning Inventory (LLI). The results of those students who participated in the

study were a higher rate of retention and a higher score on the LLI at the end of the

semester than those who did not participate. This continues the theme of addressing

social and personal issues as well as academic ones and emphasizes the importance of the

level of reading skills. This combination of addressing both academic and social issues to

improve student success was re-iterated by Marra, Tsai, Bogue and Pytel (2015) in a

study with two-year engineering students in which a correlation was noted between the

interaction between students and other students and students and faculty members and

their ultimate successful completion of the program.

An aspect of remediation at the college level that cannot be overlooked is the cost

of offering such remediation to a large proportion of students and the effect that has on

the students themselves. Gallard et al. (2010) described the deterrent for many students in Florida of having an additional 2 semesters of work taking remediation courses before enrolling in college-level courses. The cost of prolonging the start of college both for students and the institution was not positive.

Another aspect of remediation is a balance between maintaining accessibility while protecting the college standards and encouraging student excellence. If educational standards in college are to be upheld, remediation must be effective. There is often a philosophical disparity between the two topics, although in theory remediation prior to taking college courses should help to improve overall academic standards. Shnee (2014) described a qualitative study that indicated the positive aspects of community college students enrolled in remediation English courses as part of a learning community. Even though some of the students did not achieve a degree she suggested that there were other very positive factors including increased confidence in writing and expressive skills that made the remediation courses of value for the students who participated.

Another study by Grubb, Scott, and Good (2017) described the impact of dual enrollment between community college and high school as an alternative pathway to remediation courses. This study reported that only four percent of the dual enrolled students required completion of a remediation course once they entered the community college compared with 11% of those who were not in dual enrollment. However, the statistics in this study would seem to be a little slanted since usually the students who dual enroll in high school with a college are the students with higher academic achievement.

Bahr (2010) also reported very positive outcomes of remediation courses especially for those students with either moderate or severe skill deficits in either math or English. Bahr indicated that severe reading deficiencies correlated with lower grade point averages (GPA) at the beginning of the college experience while remediation courses were being taken. However, these GPAs were corrected after successful completion of the remediation courses.

Goudas and Boylan (2012) reminded the higher education community that the evidence regarding remediation course successes must be placed in the context of the intent of such courses. The intent of remediation courses is to raise the level of skills in math and English for those students with deficits in these areas to the same level as students who are not in need of remediation. The authors suggest that evidence points to the fact that remediation courses are achieving that goal. Goudas and Boylan pointed out that although some authors may consider remedial courses a barrier to timely completion of a certificate or degree, without such courses the students would be unlikely to be successful in college-level courses. Such conflicting findings on the topic of remediation may be indicative of other factors that have not been previously considered – suggesting that a systems approach to the issue proposed for this study may be beneficial.

Brock (2010), felt that although student access to higher education had improved during the last 40 years, there was still a long way to go for student success to improve. The challenges for impacting student success and degree completion continue. According to Knapp et al. (2012), data from the U.S. Department of Education, National Center for Educational Statistics in 2-year colleges for the cohort of 2007 the completion of a degree

or certificate within 100% of the usual time for completion was 21.4%. Expanding

completion time to 150% of usual time increased completion to 32.9%; and within 200%

of the usual time was 37.3%. Seidman (2016) indicated that the 2-year college average

first to second year retention rates have remained fairly constant between 1983 and 2005

with the highest level of 53.1% in 1983 and the 2005 rates at 51.6%. Brock indicated that

remediation may actually have negatively impacted student success since it discourages

many students from attending college by nature of lengthening the time for degree

completion. The need for revision of college policies and a focus on student success is

paramount. Even Tinto (2006) averred that student retention efforts have a long way to

go in practice to change the level of attrition in colleges. Tinto inferred that we have a

better understanding of the issues impacting retention, but that the numbers of students

dropping out of colleges for the most part remains high with very little alteration in

graduation rates since 1996.

Although rather dated the Illich, Hagan, and McCallister (2004) study highlighted

some interesting points. The study showed that students enrolled in remediation courses

at the same time as other college-level courses were more likely to be unsuccessful in the

college-level courses. Although remediation courses are directed at mathematics and

English proficiency, students have difficulty with courses in other subjects due to a

general lack of college-readiness. Illich et al. recommended that remediation be targeted

more specifically to students' individual needs. This idea was reinforced by Fowler and

Boylan (2010) in their study which indicated that for students with already weak

academic skills, especially those with an ACT score of 15 or less, the affective skills,

non-academic and personal issues must be taken into consideration when formulating a program for student success. Illich et al.'s suggestions for further research included looking at other factors that were components of student success, which will be assisted through the proposed research of this study.

Prince and Jenkins (2005) performed a longitudinal study about the success of low-income, low-skill, and English as a second language (ESL), adult students at community colleges and the relationship between low income and education levels. Such students in 2002 comprised 35% of the students at community colleges nationwide. The data for degree completion tracked students from 1996-1998. Only approximately 5% of those students who entered ESL courses obtained more than 45 college credits or earned a degree or certificate; 29% who had a GED; and 18% who had a high school diploma over the 3-year period of the tracking (p. 14). The direct correlation between education and earnings is no surprise, and is upheld by numerous studies. Since part of this study's focus was on low-income students it demonstrated a link between college and earnings. Looking at college student success is of significance for social change in raising those students in lower socio-economic status to a better future. Again, this study did not investigate the reasons for the success, but merely the numbers.

In contrast to Prince and Jenkins (2005) study the longitudinal, qualitative study by Schnee (2014) demonstrated a positive effect for 15 students who were placed in a special cohort in the community college in which they were enrolled in the lowest level of the developmental English course at the same time as taking both introduction to psychology and a student developmental course. All of the students initially were

displeased at being placed in this English developmental course, but over the three year period of the interviews displayed an understanding and appreciation for the reasons for the placement. Most of the students agreed that once they realized the rigor of the reading and writing required at the college level they appreciated having been in the developmental English course. One thing highlighted by the results of this study was that the intention of developmental courses should be more clearly explained to students at the onset to ensure their understanding and reduce their anxiety.

An area well studied is that of college accessibility. This study does not look at access issues, but the link between accessibility and student success cannot be ignored. Community colleges offer open admissions to all students regardless of prior academic success thus increasing access to college for an academically diverse body of people. As colleges, particularly community colleges continue to offer open enrollment to students from all walks of life and all levels of academic achievement the impact of that decision on the need for assistance to students for success cannot be overemphasized (Bailey, 2016). The accessibility to college brings with it concerns for achievement of student success highlighted by a body of students who are not well prepared for college-level work, and may have financial issues. One approach suggested in the literature was an intensive five-day program that was run immediately prior to the college orientation week (McIntyre et al., 2012). This took a cohort of students through workshops aimed at helping students with time management, writing skills, reading skills and a general introduction to college life and academic expectations. The results over the 3 years of data collected for the study showed that the overall first-year success of the students who

participated in the program was greater than those who did not participate. The pass rates and GPAs for all participating students were improved.

Student Success for First Generation College Attendees

Another aspect of the underserved student issue is first-generation college attendees. Petty (2014) inferred that motivation plays a large part in the retention of first generation college attendees. This motivation has to come from within the person, but needs to be encouraged through programs and services offered to these students. The topics covered by Petty included helping to raise students' levels of self-esteem, providing opportunities for social integration, and offering multiple venues for academic support. The suggestion was also to improve the transition from post-secondary education to college-level education through enhanced systems supporting co-enrollment and activities that better introduced secondary students to college expectations. The importance of attitude resulting in persistence was further detailed in a study by McClean (2013). McClean's dissertation findings were that many factors, both academic and non-academic, impacted the persistence of first generation students to return to the college after the first year or to continue successfully through the first year. These academic factors were identified as students developing a rapport with both faculty and staff, having a positive attitude toward completing their degree, and a high level of support services offered through the college. Non-academic factors found to be important to encourage first year completion were the level of support from the student's family, positive peer interactions and attitudes, and developing a sense of belonging on campus by becoming involved with extracurricular activities. Although persistence is one of those

elusive qualities difficult to identify in students the importance of a positive attitude

towards learning and commitment to success cannot be ignored. Once again, this study

focused on a quantitative analysis of 168 first generation students at five institutions

rather than on looking at success from a systems approach as proposed for this study.

Ramos-Sánchez and Nichols (2007) noted that problems with first-generation

college students adjusting to time-management issues and study skills resulted in

generally lower grade point averages than non-first-generation students. Similar findings

were found by Brost and Payne (2011) who surveyed first-generation college students

who were academically dismissed from college and were asked to reflect on their

performance and experiences. Some of the identified difficulties leading to dismissal

included problems with time management, lack of attendance in class, academic

difficulties coupled with not seeking tutoring or advice, and having to work a job to pay

for education. In response to these ideas Coffman (2011) suggested that colleges should

attempt to provide support networks specific to the first-generation college student. The

fact that there is no experience of college attendance in the family should not hamper the

aspirations of students who wish to overcome the socioeconomic barriers to achieve

career success.

In addition, Woosley and Shepler (2011) described the need for a positive first-

year experience for first-generation college students. The effects of creating first-year

orientation and programmatic connections for students was found to be directly related to

better retention and a higher grade point average. The first-year experience was described

as creating a solid foundation for the rest of the college attendance leading to better student success rates.

College Readiness and Its Relevance to Student Success

College readiness is of prime importance when studying student success. The transition from high school to college is the topic of many research studies. Burrus et al. (2013) enumerated several factors that correlated with college success for high school students among which were high school grade point average and scores on standardized tests such as the SAT and ACT. The academic rigor of high school programs was also an indicator of college persistence and success with correlation between the level of high school mathematics achieved and success in the college environment.

One study by Varlejs and Stec (2014) demonstrated that despite efforts by high school librarians to improve the information literacy of high school students hoping to enter college there are many obstacles in the way of success. In some cases the interaction between high school librarians and teachers is lacking. In others there is a distinct problem of understaffing within high school libraries making it logistically difficult for librarians to act optimally in respect to assisting students with information literacy.

In an effort to better prepare students for college-level work co-enrollment, sometimes called dual-enrollment, with high school and college courses has led to considerable research. Early on in 2003 Berry noted that the quality and rigor of high school courses was a direct determinant of whether students would be successful in college. In addition, Berry demonstrated that there was a correlation between the highest

level of mathematics successfully completed in high school, not just the grade received, and the success rate of students in achieving a bachelor's degree.

Dual enrollment is historically reserved for high school students with outstanding academic achievement. A paper by Karp, Bailey, Hughes and Fermin (2005) suggested that the option should be available to those students less academically prepared. The paper was inconclusive about whether dual enrollment was appropriate for any student, pointing to the many discrepancies such as need for funding and state objectives to be consistent with the ideas of offering the option to a wider range of students.

Diaz-Booz (2011) subsequently described the "fast-track" system in California which effectively mirrored the ideas of Karp et al (2005) in allowing all interested students to be in a co-enrollment situation with the local colleges. Another article by Lochmiller, Sugimoto, Muller, Mosier, & Williamson (2016) looked at dual enrollment offered across all academic abilities in Kentucky between 2009 and 2013. The findings included that of the one in five students who enrolled in the program from grades 11 and 12 most were female and living in rural areas. Between 83 and 86% of those enrolled completed the courses and 22% of those enrolled earned an average of 7.8 college credits before they actually graduated from high school. However, the data also showed that higher completion rates correlated with those high school students with higher ACT scores of between 28 and 36, with those having lower scores between 10 and 18 being less likely to complete college level courses. This example adds to the data that may suggest that those who seek dual enrollment tend to be students with higher level

academic skills and that the hope for all high school students to enroll in college-level courses while in high school proposed by Karp et al. is not yet close to fruition.

Conley (2008) examined college readiness from a broader perspective focusing on the levels of cognitive ability, problem-solving and critical thinking required of students for success in college courses. The emphasis of focus on these areas in high school to prepare students better for college entry was determined, though no specific strategies were provided other than a closer working relationship between colleges and feeder high schools regarding college expectations.

Student Success in Health Care Programs

Several studies refer to the attrition and graduation rates and characteristics of students within health care programs both in general and within specific disciplines. A variety of studies were examined regarding success rates in nursing programs. These are of significance to this study since both students who complete a 2-year nursing program and those who complete the PTA program must pass a national examination. A study by Tower (2015) used many factors including the first generation students as part of the development of a program to identify students at risk of dropping from a nursing program. The Tower study was performed with 223 nursing students. Results of the quantitative study indicated that student persistence was improved by several factors including attendance at an orientation session, utilizing early tutorial opportunities, and academically passing initial assignments. Another factor associated with failure was taking a large number of different classes in a full-time credit load. The students who maintained a high work load were found more likely to fail at least one subject during the

semester. The discussion regarding the findings indicated that passing early assignments in a course of study was important for improving levels of motivation and thus indicated improved student persistence.

Another nursing study by Reinhardt et al. (2012) stressed the importance of not just the pass rate on the national nursing examination, but on the retention rates within nursing programs. One strategy they noted was applied as a result of poor student results on an exit examination given prior to taking the national exam. This "crisis management" (p. 307) approach was developed when as many as 20 students out of a cohort of approximately 200 failed to pass the exit examination. No previous remediation plan was in force prior to this. In this case 13 students had to remediate because of failing the exit exam three times. All students who failed the exam were enrolled in a one semester remediation class led by a faculty member with over ten years of experience, that included academic content on areas of identified weakness for each student as well as test taking skills, overcoming test anxiety, and multiple practice exams of the type seen on the national exam. Of the 13 students who underwent remediation 12 of them subsequently passed both the exit exam and the national exam.

The results of a 2009 qualitative study by Rogers suggested that faculty in nursing programs should determine the unique needs of their students when determining appropriate remediation and assistance for students. However, general findings revolving around student success regarded student perceived skills such as level of motivation to become a nurse, academic abilities including test taking skills, stress management, and previous experience in health care. One overarching quality was that of the ability to be

able to think critically. Some of this may be present prior to nursing school attendance, but otherwise the need within nursing programs to teach this ability was determined very important for the success of students.

According to Maize et al. (2010) up to 15% of students in health professions programs require some sort of remediation due to having academic difficulties. Although this study was performed within pharmacy academic programs the relevance to other health care programs is valid since all these programs, whether at a community college level or other institution, have specific requirements about the attainment of academic specific levels in order to graduate. Some preventive measures are obviously those of screening applicants for admission which community colleges are not always in a position to do. However, other characteristics for success were noted as non-cognitive and included motivation to be in the profession, taking responsibility, and good communication skills. All of these characteristics were relevant to anyone in a health care program. The identification of students at risk included within course grades on tests and assignments, and course grades that were becoming close to the lower end of that required to either remain in the program or remain at the college. Individualized remediation plans were developed with the student including self-directed and tutor assisted and the possibility of reducing the credit load per semester. Overall, Maize emphasized the need for early detection of student academic difficulties to maximize the possibility of student graduation.

Another study addressed the issue of student retention as related to admissions criteria in a dental hygiene program (Sanderson, 2014). Dental hygiene programs have an

accreditation body that monitors the success of students in much the same way as the one

for PTA programs. The indicators that correlated most with student retention included

overall high school grade point average (GPA), overall college GPA and personal

interviews prior to admission. A previous study by Wilson (2005) demonstrated a

positive correlation between pre-professional GPA and American College Testing (ACT)

scores and passing the licensure exam for 95 dental hygiene, nursing, and radiation

sciences students. She was unable to demonstrate any correlation for results on the

Problem-Solving Inventory (PSI). Yet another study regarding predictors of student

success in community college nursing programs (Seago et al., 2012) identified that a

strong indicator of student success was a higher GPA in prenursing and science courses.

One quantitative study by Maring and Costello (2009) related directly to PTA

student success on the NPTAE. Program specific characteristics cited as having the most

correlation with student success were the number of hours spent in clinical education,

rigorous admissions standards, and the number of professional credits within the

associate degree program. The general education credits in private institutions tended to

be higher than those of public institutions and this seemed to correlate with lower pass

rates for the private colleges' programs.

Two studies were found regarding the role of self-esteem and the ability to

complete a nursing program successfully though these were rather dated and no

subsequent studies were found. Hulse et al. (2007) demonstrated a link between students'

anxiety levels and their ability to complete a nursing program, although their quantitative

3-year study consisted of only 42 students and defined student success as completion of

the nursing program and not success on the national examination. Conversely, Peterson (2009), found no positive correlation between students' level of self-esteem and success in a nursing program, although students were interviewed upon entry to the program and their self-reported self-esteem may be exaggerated.

Factors Predicting Student Success

A number of studies have identified predictors of student success, but most refer to success as completion of a degree or progression/retention from first to second year of college. Although not focused on health care programs, these studies are relevant for the overall topic. The link between academic success, particularly in mathematics and English, and student overall success at college was identified by several studies (Fike & Fike, 2008; Goldstein & Perin, 2009). High school grades and grade point average were identified as pertinent factors in students' degree attainment (Bridgeman, Burton & Pollack, 2008; Clark, 2010). The number of credits taken by students in the first year of college was also a factor, since higher numbers of credits in academically weaker students may result in college attrition or the failing of at least one course during a semester (Tower et al., 2015). Additional factors identified by Tower et al. (2015) that contributed to student attrition were working more than 17 hours per week and those who had carer responsibilities

A study conducted in Indiana (Stephan et al., 2015) showed that both behavioral issues and good high school preparation played a part in student success during the first year of college, although much remains to be discovered about the reasons for students dropping from college courses. The results of another study by Davidovitch and Soen

(2015) showed that predictors of student success varied by academic program. In health

sciences they found that "psychometric scores and /or matriculation grades are the

dominant predictors [of student success]" (p. 139). Surprisingly, the study by

Davidovitch and Soen showed that many admission criteria used by colleges and

universities were not necessarily predictive of first year college success and completion.

Standardized testing was not found to be a very good predictor of student success.

Articles specific to student success on national professional examinations were

difficult to discover. However, Gohara et al. (2011) determined that grades in college-

level medical courses and pass rates on the Medical College Admission Test (MCAT)

were reflective of success on the United States Medical Licensing Examination

(USMLE). Carrick's (2011) study identified several factors that related to improvement

of success on the National Council Licensure Examination for Registered Nurses

(NCLEX-RN) examination, namely: high academic admission standards; prevention of

multiple readmissions to nursing programs resulting from academic failure; having higher

passing scores for nursing courses; and achieving certain levels of scores on practice

NCLEX-RN exams. Other factors included teaching methods that incorporated active

learning, support groups, tutoring, test-taking strategies, and mentoring. Reinhardt et al.

(2012) also showed that remediation procedures for academically at-risk nursing students

had value in preparing them to pass the NCLEX exams.

Although looking at program completion rates and not licensure examination pass

rates a study performed by Herrara (2013) at Arizona State University in the clinical

nursing program demonstrated that Black and Hispanic students had lower completion

rates of the program than other ethnicities. Interestingly Native American students exhibited generally lower math and reading scores than others, but a higher completion rate with the two-year time span. A correlation was also determined between completion rates for the program and student grades in a healthcare ethics course and human pathophysiology.

Some general, college-wide processes and factors were found to have a positive effect on student retention and success. These included: orientation programs for new students (Mayhew et al., 2010); smaller to medium college sizes of between 1,000 and 2,500 students and 2,500 to 5,000 students coupled with a high faculty to student ratio with a low percentage of part-time faculty especially for the most academically challenged students (Goble, Rosenbaum, & Stephan, 2008). Other factors were the amount colleges expended on equipment and student related resources and effective student counseling, advising and mentoring including less reliance on part-time faculty who do not hold office hours (Khalil & Williamson, 2014; Strayhorn, 2015; Williamson et al., 2014). Additionally the campus environment including collaboration across college departments and ease of finding student support services offices on campus was a positive factor. A final factor positively impacting student success was focus on the first year students to maximize the possibility of them returning for a second year (Marra et al., 2015).

Perhaps one of the most significant studies regarding student success from a systems approach was conducted by Culp (2005). Although this is a rather dated study it relates directly to the subject of the current study. Culp focused on support services in

student affairs offices in community colleges and identified 11 "essential factors" (p. 77-80) that were considered essential in order to encourage student success. These included: "supportive leadership; mission-driven organizational structure; data-based culture; adequate resources; collaborative institutional culture; learning-centered policies and procedures; student engagement; valued and well-trained staff; effective partnerships; intelligent use of technology; and emphasis on quality" (pp. 77-80). Some of these factors, such as a college driven by its mission with sufficient resources and supportive leadership, and one that encouraged collaboration between departments and valued all staff are apropos for my study. These topics may well be factors in looking at a college through a general systems approach in a detailed case study which is the basis for this study.

Sharing responsibility across campuses for student success as part of a college mission is important for an environment conducive to lowering attrition rates. As Savitz-Romer, Jager-Hyman and Coles (2009) indicated, all students need both academic and social support to help them to be successful. This Savitz-Romer et al. assertion is consistent with Tinto's (1975) concept of academic and social integration in 4 year colleges. Karp, Hughes, and O'Gara (2010) emphasized that Tinto's integration framework was applicable to the community college student and not just to the colleges with resident students. Karp et al. asserted that community college students identify with their college and those in their classroom. Such academic and social support needs to be of a systemic nature. A systems view provides the opportunity to observe some of these characteristics not noted in previous studies.

The Role of Support Services in Student Success

One part of the college system impacting student access and success is the financial viability of the educational institution. According to the U.S. Department of Education, National Center for Education Statistics report on Postsecondary Institution Revenues (2016b) the total financial support from government funding, both state, local and federal has reduced by 7% between academic years 2008/09 ad 2013/14 for public institutions. In the same time period revenues from tuition and fees for each full-time equivalent (FTE) student at these institutions, including community colleges, rose by 17%. When funding is cut, colleges have to respond by either cutting services and staff or increasing tuition and fees which can result in fewer services to students.

A large proportion of community college students are underfunded and therefore are most at risk when college budgets are reduced. The trend toward state and local government budget cuts to the community colleges continues as more and more states struggle to balance their own budgets. According to the U.S. Department of Education, National Center for Educational Statistics (2016a) the percentage of 2 year, first time, full-time students receiving financial aid has increased from 71% in 2008-2009 to 78% in 2013-2014. Although 78% of community college students receive financial aid and grants or scholarships/awards many of them also must work to pay for their education. According to Johnson et al. (2013) 60% of community college students who drop out of colleges had to pay for their own education. Of those students who completed their degrees, 60% of them had parental or other types of financial assistance. In order to fund their college education, which is often their own responsibility, 60% of community

college students work more than 20 hours a week and more than 25% of them work over 35 hours a week. The likelihood of these students dropping from college due to the conflict of financially necessary work and study is very high. Thus, financial aid offices bear a large responsibility for keeping accessibility a reality especially for low-income students and their families.

Although Princeton University is not representative of community colleges a study of the Princeton University financial aid programs by DesJardins and McCall (2010) showed that financial aid assistance to students both reduced the incidence of students taking time off from college and also increased their chances of graduating. They also determined that taking time off and graduating were negatively correlated so that by reducing the incidence of taking time off from college the possibility of graduation was increased.

As early as 2006 Ashburn, Bartlett and Wolverston indicated that advising services, especially on community college campuses are likely to be underutilized The most susceptible population according to this study seemed to be the part-time students who rarely availed themselves of support services. This places part-time students at greater academic risk than the full-time students. Since students, especially part-time, seem to underutilize advising services having faculty advisors would be beneficial. In addition, advertising the availability of such advisors would be helpful. Perhaps part-time students fall through the cracks in the college system. Although the majority of PTA students are full-time there are those that enroll part-time for whom this information may be appropriate.

The more recent literature has placed focus on the role faculty advisors play in promoting the success of students. The efficacy of faculty advising was supported by Williamson, Goosen and Gonzalez (2014) who determined that faculty advisors were important to the retention efforts of students particularly during the first year of college attendance. They determined that intentional faculty advising encompassing efforts to steer students for helpful resources was helpful in retaining students. A requirement that students meet at least twice a semester with their faculty advisor as part of the overall advising was part of the initiative at this college. Training of faculty in advising techniques was provided and the faculty advisors worked with the on campus student advising services. Faculty advising was seen as an effective method of linking the course and program objectives and subject specific course requirements to encourage student success. Strayhorn (2015) called this process of faculty advising as transforming academic advising into helping the student to culturally navigate the college system.

As Tinto (2012) indicated, even though much has been researched regarding student attrition there remains a lot to be done to put some of the theories into practice to effect a change. The process of continual assessment of changes and policies aimed at student success must be performed and acted upon. The focus of colleges now needs to be on achieving a greater student success and defining what policies and practices actually make a difference in this endeavor. Seidman (2012) averred that all the attempts to improve retention and graduation rates over the last few years may be helping, but can still be improved. He emphasized the need for early intervention for all students regardless of academic ability, with a focus on reading and writing preparedness. The

Seidman "Retention Formula" includes identification of student basic academic abilities early, preferably prior to college admission, with a concerted and intensive degree of intervention that is administered through modules providing the skills necessary to be successful. According to Seidman, retention equals early identification of skill necessary for student success, plus early, intensive and continuous intervention. This formula makes sense because many students are discouraged from college attendance when they have to take non-credit courses for a whole semester.

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

The present study will add to the body of knowledge about what it is about educational institutions, specifically the community colleges, which creates an environment that results in student success. For those factors determined in PTA programs this may be translated into system-wide factors that have a positive impact on student success in all health-care programs and may even relate to all students. The topic of student success is quite well researched in community colleges, and 4-year colleges. However, the topic of student success in 2-year associate degree healthcare programs, other than nursing, is less well documented in the research literature. Several studies have focused on student perceptions of their success, whereas the present study focuses on the systems-wide issues that impact the topic. Many studies have looked at various individual aspects of a college community and their impact on student success, but few have looked at the global approach of the systems working together to create an environment for student success in the way that this study was intended to do. According to multiple research studies of individual areas of the college in student success it appears that the

impact of no one area is sufficient to indicate the absolute positive effect on student

success. A systems look at a specific college with individual interviews provided the

opportunity to observe some of these characteristics not noted in previous studies.

In addition, many studies focused on student success in the first year of college

attendance as determined by progressing into the second year. The definition of success

for this study is passing the NPTAE which means students must spend at least 2 years

with 5 semesters and not only graduate from the program, but pass the external

examination. This study therefore looks at success in a more total way than many

previous studies. In addition, this study will look at institutional systems rather than

individual student issues, thus covering a gap in the understanding of student success.

The topic of remediation courses, although very relevant to overall student

success, is not directly applicable to PTA studies. Most PTA students must complete all

remediation courses prior to matriculating into most PTA programs. Rather the relevance

is in students being accepted into PTA programs.

Finally, much of the research on student success has relied on quantitative studies

which do not reach to the heart of the reasons for the results. While it is beneficial to

understand, the statistics involved in student retention, to gain a deeper understanding

that will lead to increased efficacy of solutions for student success requires the use of

qualitative studies. This study adds to the body of qualitative knowledge on the topic in

order to determine strategies that may enhance student success for future PTA students

and those students in other health care programs.

In Chapter 3 I cover the following topics on the research method: The research design and rationale is described as well as the role of the researcher. This methodology section includes the choice of setting, the participant selection logic, instrumentation and materials, procedures used for recruitment, participation and data collection, interviews, interview questions (located in the appendices), observations and document review. Further topics include issues of trustworthiness, ethical procedures and discussion on the dissemination of findings.

Chapter 3: Research Method

The purpose of this case study was to describe the links in the systems within the College that may suggest an influence on the student success in a PTA program. This study examined a community college with a 2-year associate degree PTA program, which has demonstrated a high level of success in students passing the NPTAE.

In this chapter, I will describe and detail the research approach for addressing the question: What are the systems factors and how do they operate together to support student success in an associate degree PTA program? I will cover the topics of the research design, the role of the researcher, and the methodology. Included in the methodology will be the choice of setting for the study, participant selection logic, instrumentation and materials, procedures for recruitment, participation and data collection, interviews, interview questions, observations and document review. Issue of trustworthiness, ethical procedures and dissemination of findings will also be included.

Research Design and Rationale

The research question to be addressed for this study was as follows: What are the systems factors and how do they operate together to support student success in an associate degree Physical Therapist Assistant program? In determining the research paradigm most appropriate for this study, I considered the concepts of systems thinking and the depth of information needed to determine overall success in a 2-year associate-degree PTA program. The use of statistical data—for example, numbers of students who enrolled and subsequently graduate from PTA programs—is readily available from the licensing body, but in-depth information about the reasons for student success is not

available. The use of a qualitative, multiple faceted in-depth case study approach for this study with a variety of stakeholders is a different approach to discovering reasons for student success: It looks at multifactorial reasons for student success from a systems approach.

Other studies have looked at this topic from many perspectives: students' point of view, academic requirements, admissions and specific program requirements for remaining in the program, course grading; and student services (Alexander, 2001; Ashburn et al., 2006; Cofer and Somers, 2001; Wessel, Bell, McPherson, Costello, & Jones, 2006; Dougherty & Reid, 2006; Sheldon, 2003; & Dougherty, Marshall & Soonachan, 2006). Only one study was found that looked at student success in a PTA program from a quantitative viewpoint (Maring & Costello, 2009). None of the studies investigated student success from a variety of different perspectives, as in this study, using a systems approach. However, Maring and Costello (2009) performed correlation analysis and regression analysis of specific programmatic characteristics identified as study variables, such as admissions standards and ACT scores in relation to pass rates on the NPTAE. The discovery of connections across the College campus in a systems-wide investigation, including those specific to the PTA program itself, shed light on the variety of factors that influenced student success other than specific, programmatic factors.

In order to investigate the topic of student success to determine if the systems within the college working together can contribute to such success it was necessary to take a detailed look at many of the departments within a specific, successful college. In this case the choice of a qualitative in-depth case study was chosen as the most

appropriate method of research study. The quantitative approach would merely add to the

plethora of studies that already have analyzed the statistical data regarding attrition,

retention and graduation rates in colleges. The choice of a qualitative approach was the

likely decision when seeking to answer the research question: "What are the systems

factors and how do they operate together to support student success in an associate degree

Physical Therapist Assistant program".

Other qualitative methods were considered before choosing the in-depth case

study approach to the research for this study. The "basic interpretative qualitative study"

described by Merriam (2002) also uses interviews and observations to determine "how

participants make meaning of a situation or phenomenon" (pp. 6-7). However, this

tradition is more often used with a group of people who have had the same experience

about a phenomenon, rather than looking at an institution with a variety of different

people to discover the factors that may play a part in an area of interest for the researcher.

Accordingly this method did not meet the needs for the current study.

Merriam (2002) and Creswell (1998 and 2007) described the phenomenological

qualitative approach. As Merriam explained all qualitative studies could be considered to

be phenomenological in nature. What seems to make the difference regarding the

phenomenological approach is that it more often focuses on experiences of a more

personal nature. Although the topic of student success as experienced by many

individuals within a college could be considered phenomenology, these individual

experiences are not the focus of this study. Rather, in the present study the focus was on

the cumulative effect of all the experiences and actions across the system that is the

college. Discovering opinions regarding student success from a variety of college personnel in different departments, as this study did, is not the same as asking people to relate experiences on a specific topic common to all the participants such as involvement in a car accident. The topic of student success cannot be said to be a personal issue for the college employees and thus it is not suitable to use a phenomenological approach.

Another of Creswell's (1998) five traditions of qualitative research is grounded theory. This approach builds a theory or theoretical explanation from the data that is collected. Like phenomenology, the situations in which this tradition is used tend to be of a more personal nature. Although this study was looking at the systems reasons for student success, it would not be accurate to say that it was looking for a theory. Rather it was seeking to determine what it is, if anything, about an institution that creates an atmosphere and conditions that contribute to student success. Grounded theory did not fit with the intent of this study.

The last method considered for use in this study was ethnography. Since this study looks at the interaction of systems within the college rather than the culture of the college it does not fit with the ethnographic method. This method has been used more for sociological studies, particularly cultural studies, and relies more on the observations made by the researcher than on data provided by those being studied through interviews, for example. Although some of the data required to answer the research question in this study was collected through observation, these data need to be explained and interpreted by the various stakeholders in the system, and supplemented with information obtained by interviews, document review, retention metrics, and so on. In other words, this study

went beyond simply describing a culture in that it attempted to discover causal relationships between actions and effects.

Overall, the choice of an in-depth case study approach for the current study fit the criteria the best for answering the research question. The opportunities in a case study approach are varied and did not limit the kind of data collected. This method allowed for the use of interviews, observations, and gathering of statistical data and documents that explain specifics related to the topic under study. As Merriam described this approach, the case study entails an "intensive description and analysis of a phenomenon or social unit such as an individual, group, institution, or community" (p. 8, 2002). Since this study was looking at an educational institution with all its functional parts this fit very well with the intent for this research.

The Role of the Researcher

As the author of this study I served as the researcher, interviewer, observer, and analyzer. I was familiar with PTA education, community college and 4-year college academic and administrative practices, and the role of different college departments through my experiences as a faculty member and college administrator over the last 20 years. This means that I was familiar with education terminology and professional jargon and could understand the topics discussed in the interviews and the documents reviewed. I could discuss issues with the interviewees in a knowledgeable manner which made the exchange of information easier and more comfortable for participants. This familiarity with community colleges and higher education in general enabled me to be better able to determine topics to be expanded upon during the interview process and identify

appropriate areas for further questions and information regarding the topic of the study. On the reverse side having an in-depth knowledge of community colleges and PTA programs could have increased the possibility of personal bias and the subjective interpretation of data. I went to considerable effort to remain non-biased.

The specific community college selected for this study was one where I was previously employed. However, since I left the College 12 years ago many of the individuals at the College are no longer known to me and the previous president and academic vice president of the College are different from those in place at the time of her employment. The director of the PTA program is known to me, but there is currently no business or supervisory relationship between me and the PTA program director. As a current PTA program director I am in a comparable position with the program director of the College and we are professional colleagues at the national level.

To maintain as much objectivity as possible I transcribed the interview recordings. I also analyzed the data systematically using a proscribed process to ensure the focus remained on the data rather than on any preconceptions.

Methodology

Choice of Setting for the Study

The choice of a setting for the research was predicated on the college having a PTA program which demonstrated a good success rate on the NPTAE. CAPTE specified at the time of the study that the overall pass rate on the NPTAE for all takers from a program had to average 80% over a 3-year period to meet accreditation standards. The college chosen needed to meet this criterion. Preferably the first-time pass rate would

exceed 80% over a three-year period and the subsequent pass rate even higher. The

general average pass rate on the first attempt of the NPTAE over a 3-year period from

2011 to 2013 was 94% and the subsequent pass rate was 97%.

Other factors were taken into consideration for the choice of the College. It

needed to be typical in its demographic statistics to other suburban community colleges

of medium size and therefore the findings are more likely be applicable to other colleges

across the country. The College chosen for this study is a medium sized one with a

combined enrollment of almost 50,000 credit and non-credit students annually. The

College's published data for 2015 indicated that the actual headcount for fiscal year 2015

was 21,705 credit students equating to 9,105 full-time equivalent credit students. The

College is located in a suburban area just outside a major city. According to College

publications there are 225 areas of study and more than 3,500 different courses available.

The median age of students is 26 with a culturally diverse student body including White

60.1%, Black 16.1%, Hispanic/Latino 6.1%, Asian 3.8%, and Native American students

0.4%. The faculty consists of 262 full-time, and 1,008 part-time faculty members. The

College also employs 629 full-time and 47 part-time staff throughout the main campus

and satellite facilities. The PTA program admits 25 students per year, which is

comparable with the country-wide mean of 28.3 in 2011 (Commission on Accreditation

of Physical Therapy Education, 2012) compared to programs throughout the country. The

average annual number of eligible applicants for the program between 2011 and 2013

was 118. This number was a little more than the average country-wide applicants of 73 in

2011, but like the overall average number of applicants in 2011 of 114.7 (Commission on

Accreditation of Physical Therapy Education, 2012). An additional factor related to the choice of the College was that, like other community colleges, it has a declared commitment to students and incorporates student success into its mission statement and strategic plans.

Participant Selection Logic

Since this was an in-depth case study of a specific selected community college PTA program which has a generally good student success rate of more than an average of 80% of graduates passing the NPTAE over a 3-year period, the participants in the study were selected rather than being random. The selection of participants depended upon the departments considered to be both crucial and tangentially responsible for student success. Selection of these departments and participants evolved from consultation with college leaders. The departments included in the study were comprehensive in order to determine any connections across a variety of College entities to uncover potential factors relevant to student success. Those departments included, but were not limited to, PTA program faculty/administrators, admissions, advising, library, college administration personnel to include the vice president of academic affairs, registrar's office, financial aid, and other academic departments as needed. The vice president of academic affairs was contacted by phone, but declined to participate in the study as she did not feel she knew sufficient information about the College student success initiatives as a new member of the administrative staff. She assured me that she backed the study and that I had the support of the President of the College as well. In all cases the head of the individual departments was contacted personally and was asked for permission to

perform the research and also to provide a list of individuals who they felt were most involved with the PTA program. The participants were chosen from this list provided by the heads of department.

The number of participant interviewees depended on saturation of the subject matter, and consisted initially of 10 people from a variety of different college departments, including both academic and student support areas, interviewed for approximately one half hour to one hour each. The number of actual interviewees was 11 excluding the vice president for academic affairs who was contacted by phone, but did not undergo an actual recorded interview. Follow up interviews were anticipated by telephone for clarification or expansion of earlier responses, but were not needed. The 10 initial people who were anticipated to be interviewed included those from the departments considered to be most involved with student success: the vice president for academic affairs who was actually contacted by phone, but did not actually provide an interview that was part of the study; the PTA program director; the PTA program Clinical Coordinator; an additional PTA faculty member; admissions office representative; advising/tutoring services representative; financial aid representative; library services representative; student services representative; registrar's office representative; College outcomes assessment representative; and the Allied Health Coach. Contact with the department for statistical analysis was not needed as originally thought due to the ready availability of some general college and specific PTA program statistics relevant to the study.

Instrumentation and Materials

The materials used in the interview process included a digital recording device with a backup device in case of malfunction. I also had paper and pen to note anything pertinent to the surroundings and the participants' expressions and the non-verbal body language of the participants. I developed the interview questions (see Appendix A) and piloted the questions and re-worked them during the course RSCH 8350: Advanced Qualitative Reasoning and Analysis. Interviews were performed and transcribed verbatim by myself as the researcher. The transcription was done using the recording device and transcribed into a Word document. Each document was labeled according to the name of the interviewee, the position title of the person and the date and time recorded. All transcribed data was backed up on a portable data storage drive as well as on my computer to ensure against loss of data.

Two digital recorders were available for use for the interviews. Only one was used and the other was a back-up. Only the primary recorder was used during the interviews. The recorder used was the Sony ICD-P320 backed up by an Olympus VN-7200. Both recorders were tested during both face-to-face and telephone interviews prior to this study and during the pilot study.

Official documents reviewed for the study included data from the FSBPT which is the administrative body who develop and administer the NPTAE, and from the CAPTE who are the accrediting body for all physical therapy and PTA programs in the United States. Both sources are reputable. Meeting minutes from the College are legitimate documents of the proceedings and were also reviewed.

Procedures for Recruitment, Participation, and Data Collection

The recruitment of participants is described in the previous section "Participation selection logic". All participants were sought after consultation with the College administrators. After consultation and permission from the academic vice president of the College I contacted the heads of each department to ascertain who the most appropriate person from that department would be to interview. Then I contacted each identified individual to set up an appointment for the interview. I identified College documents on the internet or through College archives and received PTA department specific information directly from the PTA program director.

The multi-pronged approach of this research as an in-depth case study to examine the research question: "What are the system factors and how do they operate together to support student success in an associate degree Physical Therapist Assistant program?" included college-wide and program specific open-ended question interviews (described below). I conducted all interviews and other data collection procedures. Other data collection procedures included observations of PTA classroom and laboratory activities; review of College and program meeting minutes; review of curricula, PTA, and college documents as needed; and examination of college structure, hierarchy, and accountability including the college strategic plan and mission. The data collected through interviews was related to participation of the interviewees in the process of student success. Their individual experiences working with students and their perceptions regarding how these student or college related experiences contribute to student success were recorded, compared and analyzed. In addition, a variety of statistical data and documents were used

to support the interview information. Supportive data was sought from college and PTA

program statistics and documents. All data was collected and analyzed in relation to the

research topic identifying pertinent topics that emerged. In looking at the possible

systems nature of student success the specific data and participants could not wholly be

determined ahead of time, since the progression of interviews and collected data

informed the need for further required discovery and examination of other areas of the

data collection process. During the interview process, and document and statistical

review, gaps in the information sought were identified and appropriate departments were

drawn into the study for interview of key individuals. When specific themes were

identified during the analysis process, such themes were identified and further pursued by

interview with an additional key person in the college, a faculty member who gathered

outcomes assessment data for the Health Division, who was deemed necessary to

complete the overall systems analysis of the topic.

Interviews

The interview process occurred in two general phases. The first phase was an

initial round of interviews of already stated departments throughout the college.

Subsequent interviews included those of the faculty member who collected and analyzed

outcomes data for the Health Division and the Student Success Coach were determined as

a result of the analysis of the initial interviews in order to fill in information perceived as

necessary for the study.

I taped and transcribed all interviews. I also compared and analyzed the

interviews to determine common threads, themes and topics. I personally recorded all

observations. All relevant documents used are either included in the appendices or described in detail within the body of the discussion. A journal was maintained of subjective observations made during interviews to identify any possible personal bias. Relevant documents reviewed included specific statistics for the PTA program graduation rates; College Mission Statement; College Strategic Plan; PTA Program Operational Plan; PTA program course sequence with number of credits; PTA program admission requirements; PTA program policies and procedures for dismissal and re-entry; PTA program reports from CAPTE and FSBPT on student results on the NPTAE over the last 6 years. This is not a definitive list and other appropriate documents were determined through the interview process.

As previously described the methods of data collection used in this study were a mix of interviews, documentation review, observation of classroom and laboratory PTA sessions, review of meeting minutes, and review of major College and program policies and procedures. I performed all methods of data collection. The use of different methods of data collection served as a source of triangulation by providing multiple perspectives on the topic of student success. College and program specific details reviewed included, but were not limited to, the College and program mission, vision and objectives, strategic plan, program operational plan, student outcomes data, general college and program statistics regarding academics, advising, outcomes, employment, and classroom specifics. Other sources of data to be reviewed were identified through the interview process such as specific minutes of meetings within the Health Division pertaining to student success

efforts. The individual methods of data collection follow and are described under the

headings i*nterviews*, *interview questions*, o*bservations*, and d*ocument review*.

I personally conducted all interviews. The interviews were conducted either face-

to-face or through telephone. Only one of the 11 interviews occurred by telephone. I

transcribed recordings into Word documents verbatim as soon as possible after the

interview in order to maintain accuracy. I made additional notes on paper during

interviews of key points and to make reference to the surroundings of the interview and

the disposition of the interviewee if performed in a face-to-face manner. As far as

possible, the interviews were held in an atmosphere conducive to relaxation, either the

office of the interviewee or a private room. Initially, one interview of approximately 30–

60 minutes was performed with each person. An additional interview with participants

face-to-face or by telephone was not needed for further information or clarification,

although this had been built into the plan.

The people interviewed included representatives from a variety of departments

within the College. The major departments were identified through the literature review

regarding the topic of student success and were necessary to identify the systems nature

of student success. Such departments included: the PTA department faculty and staff;

advising; financial aid; administration (the President was not available for interview and I

spoke to the Academic Vice President informally by telephone); library and resources;

outcomes assessment; student support personnel; admissions; and registrar's office. The

interviews were tape recorded to assist me in transcribing and analyzing the threads and

common issues raised during interviews. This transcription assisted me in identifying the information into topics for analysis of the data.

During the interview process the interviewer performed *bracketing*. I kept a notational journal to include any subjective observations made during the interview. In an attempt to keep the subjective bias out of the interview process these journal comments served to remind me of the possible bias regarding topics of conversation. I made some additional notes on observations which included those regarding the demeanor, attitude and appearance of the interviewee as well as observations regarding the surroundings in which the interview took place. The time of day, weather, temperature of the room, contents of the space can all have an effect on the results of the interview. The general mood of the interview, although very subjective from the point-of-view of the interviewer, can impact the tone of the responses and the reflections of the interviewer and the interviewee. Tones of voice can indicate whether the interviewee is willing to share information in a comfortable manner.

The information from interview transcripts was also used to further clarify which additional documents were needed for analysis to better identify specific points of interest for the study. For example, interviewee references to specific college-wide meetings resulted in the need for me to review meeting minutes. These were requested of the appropriate departments and in most cases were supplied to me for review. All PTA program documents were provided to me, while some of the College minutes were provided in redacted form to exclude those parts considered to be of a confidential nature to the College.

At the end of the interviews participants were debriefed regarding the timeline for the study results and an offer was made to share in the information gleaned from the study that will impact student success. I gave an explanation about the process of *member checking* to alert participants for review of the transcripts of the interview and ensure accuracy and intent of the content of the interview. The possibility of a follow-up interview by telephone or in person was mentioned to all interviewees.

Interview Questions

The interview questions were open-ended questions intended to elicit thoughts, observations and reflections of the topic of student success situated within the College system as experienced by individual interviewees. In addition, these reflections were guided to consideration of cross-departmental communications and efforts that impact student success system-wide. The specific interview questions are provided in Appendix A. The first group of questions identifies the role and identity of the interviewee and the second group of questions is more specific to both the role of the departments in student success and the inter-departmental communications and cooperations which may support such success. Additional questions were included specific to each department where appropriate. Additional specific questions were needed depending upon the department representative interviewed since each department plays a different and unique role within the College. In particular the questions included for the PTA program faculty included issues related to PTA student success in regard to the experience of the interviewee with a variety of academic and clinical initiatives on the topic (see Appendix A).

Observations

Observations within this study included those during the interview process and classroom observations. College and PTA program meetings were not observed due to the timing of the interview process. Observation of advising and financial aid sessions were not conducted due to concerns about student anonymity.

During classroom observations, the observer tried to be as inconspicuous as possible to prevent impacting the classroom interactions. The presence of a strange person in the classroom can change the dynamic of the classroom experience and stifle student interactions with the instructor. The observer sat in the back of the classroom and did not interact with the students or instructor during the observation session. The observation continued for the full class period to not disrupt the class more than necessary. The focus of the observation was on the interactions within the classroom between students and faculty and student to student that indicate the level of a comfortable learning environment. I took notes about student/instructor interactions, teaching delivery styles, atmosphere, the level of comfort of the surroundings as perceived from students and faculty, physical environment such as comfort of chairs and desks and room temperature, and actual dialogue that occurs between students and the faculty. Notes were not made regarding the actual delivery of lecture and an outline of the lecture was considered unnecessary to the study.

Document Review

Many documents were reviewed for the purposes of this study. Among the documents reviewed were the College and PTA program mission, vision and objectives,

College strategic plan, program operational plan, student outcomes data, general college and program statistics regarding academics, advising, outcomes, employment, and classroom specifics. Other documents included minutes of PTA program meetings such as faculty meetings for both core faculty and part-time faculty, PTA Advisory Committee meetings, PTA Curriculum meetings and some minutes of one Health Professions general meeting that pertained to student success initiatives. Admissions and Advising meeting minutes were not reviewed, but PTA advisory meeting minutes were reviewed. Some communications from the PTA accrediting body CAPTE were reviewed to look at the topic of student success including annual reports. Accreditation letters and intermittent communications were not needed as the PTA program had no communications considered relevant to the study since they had never been placed on probation or had any action taken against them regarding student success or any other matter. College-wide meeting minutes were not reviewed due to concerns of anonymity. Since the PTA program faculty were not currently serving on major College-wide committees due to the recent re-accreditation process minutes of such meetings were not reviewed. Curriculum committee meetings and strategic planning meetings were not reviewed, but the strategic plan and recent additions to the core curriculum for all students was determined throughout the interview process.

Many public documents were reviewed including financial aid information; Fast Facts with statistical data; counseling, advising and retention services information for students; Learning Communities information; Data to Inform Student Success 2020; Faculty Referral System Directions pertaining to student success; Strategic Plan; Vision

and Mission Statements; Middle States Executive Summary; and listings of courses

designed to encourage student success for the College's Student Success Month; and

advertising flyers for the health programs. In addition some specific documents generated

by the student success coach and the College outcomes assessment department were

reviewed as well as Admission Requirements for the PTA program and the PTA program

handbook which contained all programmatic policies and procedures.

The purpose of the document review was to determine the extent to which various

departments within the College interacted and how systemic the topic of student success

was to the life of the College. Since the study was focused on determining the level of

systems influence on the topic of student success, both College and PTA program

documents and meeting minutes were reviewed to determine the level of interaction

regarding the topic. The review included identification of interactions between

departments concerning student success, the level of importance displayed regarding the

topic in public College documents, the extent of the interactions regarding the topic of

student success both at the College and within the PTA program, and the commitment of

all concerned to the area of interest.

Debriefing Procedures

All participant interviewees in the study were debriefed at the end of the interview

regarding the anticipated timeline for the analysis of data and information regarding the

needed review of the interview transcript by the participant to ensure accuracy of intent

and information. The offer was made to share any data or publication pertinent to the

topic of student success with the interviewees if they wish. The need for possible further

interview time was also stated with the likelihood of telephone contact as the method of communication.

Data Analysis Plan

Initial data analysis included gathering all the information from various aspects of the study process and outlining some of the themes determined. Once these themes were identified the chosen method of reporting was through the use of thick description as described by Holloway (1997) and Geertz (1973) to better describe the richness and extensiveness of the material gathered. My identification of themes included themes identified from the analysis of documents. Each interview transcript was analyzed for threads that pertain to the research question: "What are the systems factors and how do they operate together to support student success in passing the NPTAE in an associate degree Physical Therapist Assistant program". Threads that were common to more than one interview were noted as well as those that were specific to only one interview. Member checking was utilized to ensure that comments made by participants during the interviews reflected what they actually wished to say and opportunity provided to rectify any inaccuracies, although no inaccuracies were found. Although several threads were identified through the research process the actual results were discussed using thick description.

If comments in any interview diverged greatly from the rest of the interview results, these were identified. Threads that pertain to any of the associated topics such as attrition, student success, remediation, and tutoring, mentoring, advising or associated terms will be identified and written into the grid as major headings with the specific

interview quotes specified, and the specific interview identified by code. Sub-headings within each category were considered, for example for advising the sub-headings considered were faculty advising and professional staff advising. The coding of information from interviews was determined based on the previously described system using colors in excel to delineate each specific code. I investigated several software programs for qualitative analysis including Qualrus, but was not satisfied that they would enhance the analysis of the data, therefore such programs were not used.

Coding of interviews and documents was initiated by identifying words to be cognizant of during reading and reviewing the transcripts and documents as determined through the literature review of topics implicated in student success initiatives discussed in chapter 2. These words or phrases included: student success; advising; at-risk students; failing grades; low course grades; poor exam scores; behavioral issues; difficulty with test taking; difficulty with writing or reading; poor study skills; student work outside the college; faculty and student interactions; tutoring; finance/money issues; classroom atmosphere; teaching techniques; class size; equipment needs/use; and inter-departmental communications. Coding also identified occasions when college personnel crossed department boundaries to collaborate or confer, when mission or vision documents were referred to, or when collaborative teams around a particular instance or strategy were developed officially or informally. Other themes and threads were identified for coding as the research proceeded. As previously described these themes and threads were then taken into consideration when providing a thick description of the information gathered to report the process and results of the research.

I analyzed the information from the interviews by looking at common threads and topics running through all interviews identified into codes. The threads were chosen taking into consideration the concepts of connectedness among the College departments with ideas manifested by more than one department indicating the level of importance for inclusion into the analysis. However, ideas specific to only one area of the college were also noted. The coding of concepts within larger areas of concern identified as threads depended upon the different areas of focus to arise out of the interviews and other methods utilized. Some threads include such items as tutoring, advising, counseling, financial aid, admissions criteria, interdepartmental communication methods, student engagement teaching methods, use of technology for communication and teaching, student assessment methods, institutional assessment methods, College environment, and collaboration between departments. Within each thread there were subsets of topics that fit into that major thread. As the interview transcripts were analyzed these common threads, themes and codes were identified and examined to discover possible underlying systems mechanisms affecting student success. The choice of thick description in reporting these ideas allowed for a more comprehensive look at the integration of College systems. I have to state that some of the analysis of transcripts was more than just separating into themes, but relied on an overall impression of the interview transcripts and various notations made during the interview process and the observation of classes.

The themes identified from interviews, documents and observations focused on the topic of the research of student success with an emphasis on the interaction between departments regarding this topic. The exact nature of these themes was difficult to

describe fully before the data collection commenced, but examples of such topics initially

included responses by any individual or department to specific instances of student

success or difficulty academically, methods of helping students to succeed academically,

and one-on-one contacts with the students. Advising was subdivided into specific

academic areas whether for general education subjects or PTA specific, financial,

psychological or behavioral, study habits, test-taking skills, technology related assistance,

or social/family issues but again the focus was on how these elements worked together to

support student success. The themes were then developed to identify the frequency of

mention of each category. Particular notice was taken of any mention of cross-

departmental communications or occurrences since the topic of the study is based on the

systems approach. When all this data was gathered an account of the research results was

developed using thick description of the topics and ideas identified.

Issues of Trustworthiness

Institutional Review Board (IRB) permission to conduct research was approved

prior to gathering of data. This included approval of all ethical concerns related to

recruitment, information gathering, and data collection and analysis. Several methods of

ensuring trustworthiness of the collected data were incorporated into the design of this

study as determined throughout the three chapters. As described in the section

"Procedures for recruitment, participation and data collection" the credibility and

dependability of the data was strengthened through triangulation. The use of different

methods of data collection such as detailed interviews, document review, classroom and

meeting observations (if appropriate), and use of statistical data served as a source of

triangulation by providing multiple perspectives on the topic of student success. Credibility was further enhanced through a system of *member checking* for interviews. The interviewees were asked to check the interview transcription for accuracy and intent of the responses. Interviewees were asked to verify their responses for accuracy of their statements and to clarify issues if necessary to ensure that they intended to say what was recorded. If they felt that they did not respond to interview questions accurately or misspoke, they were asked to clarify specific issues to assure accuracy of the data collected.

In addition, I performed *bracketing* during the interview process. I maintained a notational journal to include any subjective observations made during the interview. In an attempt to keep the subjective bias out of the interview process these journal comments served to remind me of the possible bias regarding topics of conversation. An additional factor for reliability is that I audio taped all interviews. No issues of intracoder or intercoder matters occurred since I transcribed and coded all the data.

Ethical Procedures

Confidentiality of Participants

To protect the privacy of individuals participating in the study, names were not used, even though some participants consented. The college participating in the study is not named due to anonymity concerns. Individual departments from which the information was gleaned were mentioned. All transcripts and information gained from interviews is kept in a locked file cabinet in my home and is not available to anyone other than the researcher. No individual data collected will be shared with the institution or

others. All materials are shared anonymously or in aggregate. The privacy of the interviewees and all participants in the study was assured through performance of interviews in a private area. The transcription of the interviews used my own coding system devised to identify the department to which the person belongs in order to make sense of the data gathered. Once the data was gathered and analyzed the identification in the study of the specific comments made by people in individual departments was mentioned, but the individual not identified. Within the PTA program the general designation of the title of the person interviewed was considered appropriate for the study, but not the name of the individual. As the sole person performing the interviews, I was able to ensure a greater measure of privacy of the interviewees than if there were a team of interviewers involved in the process. This also provided consistency of interview technique leading to a more even outcome. Interviewees were ascribed a number designation to protect privacy and a permission release form was signed by each participant outlining the privacy procedures. In the instance of observations of meetings or other events the names of the participants was kept private and no names were provided. Document review was done with the permission of the college administrator involved and information used without disclosing names.

Institutional Review Board (IRB) approval was gained from Walden University (approval number 09-25-14-009185). After this approval the researcher went through the IRB process at the participating college. The participating college provided verbal and written approval to undertake the research based on the Walden IRB approval.

Dissemination of Findings

The goals for disseminating the findings from this research study include presenting at professional conferences and writing up the findings for publication in a professional journal. A series of workshops is planned to share the practical implications of the study with other colleges. The results of the study will be shared with the participating college.

Summary

This study is based on systems theory with the concepts of Senge's Fifth Discipline and O'Banions Learning College. The case-study was performed within a specific community college that has a high pass rate of PTA graduates on the NPTAE. I served in the roles of both gathering and analyzing the data through interviews, observations of meetings and classroom interactions, reviewing of college and program policies and procedures, reading of mission and vision statements, and strategic and operational plans. Common topics that occur across several departments pertaining to student success were identified during the data analysis process to determine the systems nature of such success at this college and described using a thick description technique. The results of the study will be disseminated through publication and workshops.

In Chapter 4 the results of the study are described. The following topics are detailed: chapter organization, setting and demographics, and results of the study. The data collection and analysis are divided into several sections for ease of analysis of the results of the whole. These sections include the data and analysis collected from people within the PTA program itself, those collected from people closely associated with the

PTA program and those from across the College from departments in other areas of the College. All the data related to student success issues related to the research questions and the purpose of the study. Commonly identified themes across the College campus related to student success are identified and evidence of quality and trustworthiness is discussed.

Chapter 4: Results

The purpose of this descriptive case study was to describe the links in the systems within the College that may suggest an influence on the student success in a PTA program. The study was conducted in a community college that was highly successful with students passing the NPTAE. A successful outcome was demonstrated by a consistent 95% average over the 3-year period of all students who had taken and passed the exam. The research question posed by this study was as follows: What are the systems factors and how do they operate together to support student success in an associate degree Physical Therapist Assistant program?"

Chapter Organization

The organization of this chapter starts with a description of the setting and demographics which for this study includes the general College administrative structure and hierarchy and the departments whose representatives I interviewed. This chapter also contains a description of the procedures used to ensure the quality of collected data, and the general progression of the method of the study emphasizing some of the inherent difficulties in the chosen method of interviews with key individuals in College departments, observing of PTA classroom and laboratory sessions, and findings from meeting minutes, College statistical data, and College publications and web-site sources.

In order to categorize the findings in an identifiable manner I chose to organize the findings into several subsections. In the first subsection, I describe the data and findings related to results of data collected specifically within the PTA program. In the second section, I describe the relevant factors identified through discussions with those

department representatives most closely related to the PTA program itself, such as the

health professions admissions office and the office of student success for health

professions. In the third subsection, I discuss the results of data collected from

departments across the College (the whole system) in relation to student success. In each

of these subsections, I identify factors pertaining to student success, both in general and

specifically for students in the PTA program. In the final section of the chapter I describe

how the internal (within the PTA program) and external factors (those from other areas of

the College) that impact student success are related to each other and are interwoven into

the fabric of success of the PTA program. The relationship between both internal and

external factors is central to answering the research question. I also include individual

factors regarding each section of the College community studied to provide an overall

sense of the impact of student success efforts, both implicit and explicit, on the students

in the PTA program. Finally, I describe some of the gaps in the literature that will remain

after completion of this study. While this study filled a gap in the research literature on

student success in health care programs, and particularly in PTA programs, further

studies are needed to confirm some of the findings described in this study.

Setting and Demographics

This study was performed at a medium sized suburban community college on the

Eastern Sea Board. I conducted all interviews in the offices of the interviewees on the

College campus except for one which was conducted over the telephone due to

accessibility issues. I obtained permission for the study to take place at the College

through the IRB process at the College after the Walden IRB approved the study. As the

interviewer I performed 11 interviews of between 30 minutes and one hour in length and personally transcribed all interviews. All 11 interviewees were full-time employees of the College, either faculty or staff, and consisted of individuals from most of the College departments including: admissions; financial aid; registrar's office; student success coach; learning outcomes assessment; counseling, advising and retention services; health technology; and three representatives from the PTA program comprising the director, the academic coordinator of clinical education (ACCE) and instructional specialist. The representatives from each department other than the PTA program were the people who were among individuals identified to me by department heads to be the people who interacted with students from the PTA program the most.

All interviewees were provided with information regarding the study and signed permission forms to interview and be tape-recorded to facilitate the analysis of the interview data through email and/or in person. The interviews took place on November 12, 18 and 19, 2014 on the College campus and December 2 by telephone with the library representative. All interviewees had been in their current position between three and 15 years at the time of interview. The overall longevity of the interviewees played a part in gaining the in-depth knowledge of the College and the individual departments from the participants. The Vice President for Academics was the one person who was not interviewed for this study, although I placed a phone call to ensure that she understood the intent of the study and gain her agreement. The Vice President indicated that she had only been at the College a short time and did not feel she would be of much assistance in providing data or relating experiences regarding student success. She was however

instrumental in encouraging me to contact the department supervisors to gain a list of appropriate people to interview who were most familiar with the role played for the PTA program. In addition, I performed several classroom and practical laboratory observation visits during the same period. In addition, I gathered many published documents from the College web-site and through personal interaction with interviewees at the College.

Although the PTA program is a consortium, the data collection was conducted at the specific community college where the faculty and staff for the program are located. The director of the program oversees the program and all students have access to facilities at the College. For the purposes of this study, after consultation with the program director, I made a conscious decision to keep the interviews within the College and not visit the other two colleges, because all students have access to resources at the College and this College is the home site of the lecture and laboratory for the program as well as the faculty and staff for the program.

To provide a little more detail of the hierarchy of the PTA program the following information is helpful. The PTA program is housed in the Health Studies area of the College. The PTA program staff consists of a program director, an Academic Clinical Coordinator (ACCE), and an Instructional Specialist. All three of these individuals teach extensively within the PTA program. The health studies area is headed by a dean who is the direct report supervisor for the PTA program director. The Dean of the School of Health Studies is supervised directly by the Vice President for Academic Affairs who reports directly to the college President.

Results

The results of gathered data are divided into several sections. Although the study is focused on connections between systems I feel it is important to identify the areas of data collection that contributed to the whole as far as the linkage between systems within the College. The first section includes results of data collected specifically within the PTA Program that I gained from interviews, classroom observations and documents specific to the PTA program. The second section is data related to results of data collected from departments working very closely with the PTA program, both specific to PTA students and generally for health program students at the College. This second section includes data collected from the health professions admissions office and the office of student success for health professionals. The third section is the results of data collected from departments across the College (the whole system) in relation to student success and the way in which interaction between the various departments of the College potentially contributes to overall student success is presented. The third section includes data gleaned from the departments of advising, financial aid, library, outcomes assessment, registrar's office, and tutoring. The first and second parts of the analysis provide a background for the context of the third part which speaks specifically to the system-wide approach to student success which relates more directly to the research question "what are the system factors and how do they operate together to support student success in an associate degree Physical Therapist Assistant program". However, parts one and two are necessary to ensure all aspects of student success pertaining to the PTA program are included in a holistic manner.

In the final section of this chapter some of the common factors discovered during the analysis of the data are described. These general topics are student progress tracking systems available to all College personnel, communication between departments both formal and informal, a sense of community and respect, commitment of all personnel to student success, and the free exchange of ideas between all departments. In this final section the connections across departments become more readily understandable and the research question is addressed more directly.

The following part of this chapter is divided into sections as previously described. Within each section, sub headings are included to provide further clarity. The subheadings for the first section include PTA specific admissions procedures and selection of students, retention issues including advising clusters, tutoring and identification of at-risk students, teaching techniques that may impact student success, examination practices, preparation for taking the NPTAE, and PTA faculty interactions.

Results of Data Collected Specifically Within the PTA Program

Many specific themes relating to student success were identified by me through interviews with the PTA program director, academic clinical coordinator of education (ACCE) and the instructional specialist who are all faculty members in the PTA program. Included in this section are factors identified as specific to the PTA program, as opposed to college-wide, by the director of health studies admissions that are unlike other admissions practices within the Health Studies area or across the College. The themes identified included: PTA specific admissions procedures and pre-admission selection procedures; retention issues including advising clusters, tutoring and identification of at-

risk students; teaching techniques exam practices and preparation for taking the NPTAE; and PTA program faculty interactions and meetings.

Admissions Factors, Pre-admission Selection, and Retention Procedures Identified From PTA Program Faculty and Health Studies Admissions Personnel

The PTA program faculty who were interviewed all described, to various degrees, close involvement with admission and retention issues for the program. All students are accepted to the College, but have a further process to go through to be eligible for entry to the PTA program. Although the general admission to the College is open access, the PTA program has a somewhat selective admissions process. Applicants are ranked according to grade point average, completion of general education requirements, and grade point average and quality points in the general education and science subjects required of students within the program.

Physical Therapist Assistant program publications include an Admission Requirements booklet and a Student Program Handbook. These publications are revised annually. The Admission Requirements booklet was readily available in a public venue on the ground floor of the health professions building outside the admissions office for prospective students or other members of the public to pick up. The Admission Requirements booklet clearly details all the admission requirements for students wishing to apply to the PTA program including the selection process and criteria. The booklet is in a reader friendly format, although the font size is rather small in some areas of the booklet. The Student Program Handbook includes all policies and procedures of the PTA

program and forms that need to be signed by the student. Clinical information is included in the handbook.

The director indicated the push within the College for a focus on retention and student success in general particularly considering President Obama's incentives for community colleges to work harder on retention proposed in 2009. In 2010, the American Association of Community Colleges issued the "College completion challenge" to increase the "number of community college students completing a degree or other credential by 50% to 5 million students by 2020". The director stated that the "pass rates [on the NPTAE] were not really an issue and so we focused on retention. . . [since graduation rates were] in the 50 to 60% [range]. Most of the [student] losses were in the first semester . . . either they were not aware of the rigor of the program or they had no idea what PT was." All three PTA faculty members described that arising from the analysis of the retention issues performed by the Instructional Specialist several things were instituted to reduce the attrition during the first semester of the program including revision of the admission process for the PTA program, adjustments to pre-selection processes for students, and development of advisement clusters.

One aspect of the admission process for the PTA program is a fairly selective admissions criterion. The selection criteria for the PTA program as of fall 2015 consisted of points awarded for completion of general education courses required within the program with more points awarded for higher grades. Also included in this process was consideration given to the grade point average (GPA) of math and science courses and priority was also given to those students who had been enrolled the longest continuously

at the College prior to the selection process. Although these admission requirements are somewhat selective in determining the best academic grades for incoming students, they are not unusual for PTA programs across the country. While some community colleges have a completely open enrollment policy concerning student acceptance into PTA programs, meaning the first students to apply who meet the criteria are accepted, many have a selection process. According to the CAPTE, the mean number of applicants for all U. S. PTA programs in 2015 was 91.73 while the planned class size was a mean of 24.91 (2015). The Colleges' application level is similar to the national mean as is the class size. Such a large pool of applicants may provide a benefit in terms of student success not available to all programs in the country, but is consistent with the mean. However, the admission to PTA programs in general is quite competitive (Commission on Accreditation in Physical Therapy Education, 2015).

An additional method to ensure all students are aware of the requirements of the program and are familiar with the selection process and role of a PTA in the healthcare system is that all students considering applying to the PTA program are required to attend a PTA information session. They are also required to attend a PTA pre-selection meeting in April of the year of entry to the program. All prospective students must meet English, mathematics, and chemistry requirements prior to admission.

Specific to the admissions process the main selection criteria in the past included completion of the most general education courses prior to entering the program which did not take into consideration the specific grades within each course. This was determined to be less than ideal by the faculty of the program about three years ago. The director stated

that "I'll never forget I had a student here that we were doing an interview with who said that she applied with all she had to take was a math and had A's in everything and did not get in [to the program]. So right there that was very clear that that was not a good indicator of student success". In the past, the students who had completed the most credits required on the general education side for the program were given priority for admissions, but it seemed that some students with only one course remaining to be taken were passed over for admissions even though their GPA was very high. After gathering information from the Mid-Atlantic Consortium regarding admission criteria at other colleges and interviewing past and present students it was decided that the new admissions process would be based on a point system with points assigned depending on the grade in each general education course completed, with the maximum points awarded being 92. According to the director: "we have admitted 3 cohorts now [using the new system] and we have not lost anybody in our first semester yet." The Instructional Specialist stated that "changing [admissions] to a point system and giving more points and therefore more of a chance to be selected into the program to reward the higher grades I think has given us a stronger group of students and also therefore maybe more success".

Adjustments were also made two years ago to the procedures for students interested in entering the program. Mandatory meetings are now held for all applicants to the PTA program at the 3 participating colleges at which details are provided about rigor in the program, time spent on studying and group work, and laboratory attendance.

Combined with the changes to the admissions process the director stated that "our

retention rate has gone up, we're in the high 70s and 80s [percentages] consistently now."

Retention issues identified from PTA program faculty and health studies

personnel. As part of the attempt to improve retention within the PTA program

advisement clusters were instituted approximately 8 years ago. According to the

Instructional Specialist "a third of the class is randomly assigned to each one of us as a

core faculty. And so we work with the students on developing in general some of their

overall skills, affective behaviors, [and] professionalism. Meeting with them at least once

a year at a minimum and guide them through structuring an academic portfolio". She

indicated that most students who sought her advice usually had problems with financial

issues or test-taking and study skills. "I think having somebody on staff or on faculty that

they feel they can go to initially as a bridge to something maybe more formal is a good

step…I always try and make the students realize that we want them to be successful and I

think that's a help to them that they feel we are in their corner versus looking to get them

out of the program, we're looking to keep them in". In conjunction with the advisement

clusters the director pointed out that the PTA faculty has an open-door policy that

encourages students to see their advisor. The program faculty also "developed a very

formal mechanism for identifying students at risk at mid-term . . . we have a form that is

filled out and they have to meet with us within a week after receiving that form." The

faculty then set in motion the necessary resources to help the student succeed which can

include: open-laboratory sessions to review skills which may be conducted by full-time

or part-time faculty; referral to tutoring in the program or on campus; referral for test-

taking or study skills workshops; or referral to the Student Success Mentor for the Health Studies School who works on affective behaviors. The tutoring specific to the PTA courses was originally funded by Perkins Grant money, but is now funded through the PTA annual budget. The director stated that "I think since we changed our admissions I have not had to tap into our tutoring money at all."

Another aspect of student retention and thus student success is through the identification of academically at-risk students both in the didactic and clinical portions of the PTA program. The ACCE is mainly responsible for identifying students at-risk in the clinical courses. As she stated, "When I say at-risk that does not necessarily mean that they are failing the experience, but there may have been specific areas that have been identified that need improvement". The ACCE works with clinical faculty (clinical instructors who are designated as student supervisors and work for the specific clinic) by telephone or personal visit to the clinical site to understand the deficit and start a "lab referral" process. This process entails the student returning to the College to work with faculty on the issue whether it is skill based or affective behaviors. The ACCE also teaches some key academic courses within the PTA program. During the introductory course the ACCE introduces students to the APTA "Values–Based Behaviors for the PTA" to start them thinking about affective behaviors and how they impact the clinical situation. This also initiates students into self-evaluation which is so critical to clinicians. Preparation of students for taking the NPTAE, exam practices, and teaching techniques to encourage student success identified from PTA program faculty and health studies personnel.

Specific things done within the program as part of the teaching and learning process to improve both student retention and the pass rate of the NPTAE were identified by the director and the ACCE. One of these was the inclusion of a 2-day course by Scorebuilders held in May each year for the past 2 years, and another was the institution of National Exam type questions in the courses within the program to provide students with practice on this type of question. The Scorebuilders course is paid for through the PTA program budget and although students are not mandated to attend both days of the course they pay a deposit of $25 which seems to have worked to ensure attendance on both days. This deposit is given back to the students who attend both days of the course. As the director stated,

> It's very interesting because the first year we did it, where we paid for it, we had probably five students who came for the first day and they didn't come to the second day. Of those five students . . . two of them did not pass [the exam] on the first attempt. For the past two years we have had students come to both days and we've had a 100% pass rate on the first attempt.

As far as the exams administered within the program courses go, "by the time we get into their second year I would say 80% of their written exams are multiple-choice" similar to those questions found on the NPTAE. As the director indicated "we haven't done that with 100% of the exams . . . because I don't want to teach to the exam . . . but I like the idea that we're . . . trying to mix a little heavier in preparation for that exam". The ACCE similarly stated that in the neurology course NPTAE style sample questions were included so students could get "a sense of the type of multiple choice questions that

would require problem-solving…[thus] helping them with being more successful with the test-taking strategy and therefore focus[ing] my efforts more on the understanding of the exam material." This consistency of intent across the faculty members within the PTA program demonstrated a cohesiveness of thought about student success preparation.

Additionally, in the capstone course the director goes over the FSBPT Candidate Handbook and sets an exam on the contents of the handbook to ensure that students have at least looked at the information to apply to take the NPTAE. Also within the capstone course one of the presentations researched and given by a student "is how to prepare and sit for the national licensing exam and get licensed". Within the same course students attend a Maryland Physical Therapy Board meeting open session at which they receive their exam packets and "then one group of students will be assigned to sum up so they'll have a nice Power Point when they graduate".

The ACCE indicated that one of the things that have had a direct impact on student success, especially in the clinical component of the program, is the use "of standardized patients in their final competency [in the Neurology course]". This involves using alumni of the program as the standardized patient who can more realistically mimic an actual patient's symptoms and behavior. In this way according to the ACCE:

> We're seeing the product of what our students should be looking like as they're getting to entry level. We want them to home in on their clinical reasoning and problem solving skills and critical thinking skills . . . . It's been such a positive reinforcement for [the students] and a confidence builder . . . . It turns out having to think on their feet, they may have this concrete plan on their mind about what's

going to happen, but then they have this patient that's actually acting like a patient and they have to say "Oh wow. That might not work as well. I've got to modify that". So I think that's been very helpful . . . . [We're] now trying to implement this in all our second year courses.

Both the ACCE and Instructional Specialist spoke about the policy that a full-time, core-faculty person coordinates all major courses within the PTA program even if the course is taught by part-time faculty. This means that the core faculty can ensure consistency throughout courses in the program and develop syllabi, learning objectives, set exams, and develop the forms used for competency testing. This coordinator is responsible for the oversight of these courses and is there to assist part-time faculty as needed. In some cases they even develop the PowerPoints for the course.

During my observations of the two PTA classroom on November 11, 2014 certain specific teaching techniques were identified pertaining to encouragement of student learning, and student success. See Appendix B for the forms used to detail the observations made in these classes). I observed a variety of strategies in the classroom that emphasized and facilitated student learning specific to the PTA program and course objectives. Some of these included: review sheets provided to students on-line for study of the lecture material; review of prior lecture material to orient students to the current class topic; a pre-published booklet of handouts purchased by students for the specific class; reference to prior lectures to enhance the clinical picture; the use of Power Point with graphics; a video of spinal surgery; and a post-class review with questions and answers using color-coded response cards. In the laboratory observation I noted further

evidence of enhancement of learning techniques including: hints on the content for the

upcoming competency test; handouts regarding the subject matter of the class session;

demonstration of techniques used in physical therapy interventions; case studies worked

on by groups of students who then demonstrated what they had developed; and many

questions from the instructor to stimulate critical thinking about the topic.

PTA Program Faculty Interactions and Meetings Identified From PTA Program

Faculty and Health Studies Personnel

Within the PTA program the director holds at least two part-time faculty meetings

a year to keep these people up-to-date on new ideas and share aspects of teaching in the

program including letting the core faculty (full-time) know when they are having an issue

with a student. In this way the core faculty can intervene, particularly if that student is

also having issues in other classes. Agenda items for these meetings include: Program

Updates including program assessment and tutoring issues as consistent headings in the

meeting minutes and agenda. Regular monthly core faculty meetings and/or retreats are

held to ensure good communication within the PTA department. Regular agenda items

include: program assessment; student issues including at-risk students; and clinical

issues. At these meetings information is shared about strategies that seem to work to

encourage student success. As the Instructional Specialist stated "I think we're pretty

well oiled over the past few years that [the three core faculty] have been together" in

identifying at-risk students and referring them for appropriate help. Through regular

meetings and data collected from the FSBPT on the National Exam, the faculty identified

that the kinesiology and neurology courses were the ones in which students had the most

difficulty. An elective functional anatomy course was added, not mandatory for students, but a helpful addition in preparation for the kinesiology course. The Instructional Specialist also indicated that the grading for the kinesiology course was shifted to totally exam based for the didactic section of the course. Students have to pass both the didactic and the laboratory sections of the PTA courses to pass the course. This focus on exams in kinesiology helped to minimize grade inflation due to projects and other graded assignments.

Students who fail a PTA course have the chance to re-enter a second time and are required to take a special topics course developed by the core faculty. This includes the course that was failed and the courses that the student previously passed that were taken prior to the failed course. All exams and competency tests have to be passed in all the courses included in the special topics course. This prepares the student to continue in the program. The Instructional Specialist stated that "when they enter a course the second time through special topics . . . let's say it's kinesiology that they're re-taking, we'll take down the requirements in another course [previously passed] so they're not doing . . . the research paper . . . and not having to do a lot of the group projects . . . that maybe took away their focus. And that seems to bring them up just a notch, enough so that those students really make you feel good like that was hard for them in another year, but now they're out and have passed the exam and they're practicing PTA".

Other meetings held in PTA include annual consortium/curriculum meetings and advisory meetings. Agenda items addressing program assessment, changes made to the

program, and attrition issues/student success are an integral part of these meetings. In addition these topics are covered in faculty meetings.

Some barriers to student success were identified by the director in response to a request from the Dean of the School of Health Professions to note items that potentially interrupted the flow of student success through programs within the school. Those items identified that impacted the PTA students were that in the specific building in which the PTA program dedicated laboratory resides there was "not a place to meet any more towards working on projects . . . there's nowhere for them to congregate to work on those". The building has one computer laboratory when it previously had three, so an issue for students was accessibility to computer labs. This computer lab had classes scheduled in it which meant that students could often not access this lab. In the fall 2014 semester this identified problem was fixed by not scheduling any classes in the computer lab. Students can now access the lab at any time.

Finally, the transcripts/graduation verification certificates from the College have to be sent to the state board with a very fast turnaround time in order to meet the deadline for application of early June to take the NPTAE in July. This is not entirely an internal program issue because the Registrar's office has to expedite the process, but the director personally delivers the transcripts to the State Board to ensure they are received in time for students to take the exam in July.

Results of Data Collected From Departments Working

Closely With the PTA Program

Perhaps the most closely related departments to the PTA program in relation to

student success and retention were the admissions office for the health professions and

the Office of Student Success for health professions. Both of these offices are housed in

the same building as the PTA program. The admissions department works closely with

students before they are admitted to the program and the Student Success personnel assist

with retention efforts of students when concerns are non-PTA studies related including

affective behavior problems.

Admissions Office for Health Professions

The Admissions representative reiterated the change of admission requirements

for students to a point system which has already been described and reinforced that this

seems to have made a positive difference to the retention of students within the program.

She also indicated that she and the rest of the staff worked with all students entering the

health programs regarding advising of students unsure about their major. In this respect

she indicated that PTA students were not usually among those undecided about their

choice of career and commented that this is probably due to the amount of time the PTA

faculty spend on meeting with prospective students to explain about the program and the

profession. She also coordinates transcript evaluations with the College's main

admissions office, monitors and keeps files on all health requirements for students, and

assists with planning job fairs for graduating students. She stated that for the 13 available

seats in the PT program each year at the College there were a total of between 80 and 90

applicants. The other places in the program were taken by students from the other two

consortium colleges. An annual meeting is held with admissions representatives from all

three colleges to discuss admissions issues in order to keep all parties well informed and

discuss any necessary changes to the admissions process.

Other connections across the College deemed important by the Admissions

representative are those with the Office of Academic Advising who perform the

evaluation of transcripts from other institutions so that students do not have to repeat

unnecessary courses and also with the College Admissions, Records and Registration

Office. The whole College uses a computer system for tracking student information

called Datatel. She stated that "academic advisors have notes within their computers in

Datatel and I have access to the notes . . . because it's easier to see what other advisors

have said" to students previously as students tend to get a little mixed up. Another

important piece of the retention efforts is the tutoring office which is available 24 hours a

day at no charge to the students. The Admissions representative is included in the chairs

and directors meetings and thus can be informed about issues regarding admissions and

retention. After the admission process is completed there is minimal interaction between

the Admissions office and the PTA faculty unless health record reminders have to be

transmitted to the students. She stated that the PTA program applicants and the program

faculty "are very nurturing" as people and she has fewer problems with prospective PTA

students than she does with other program's students. She also feels that the meeting with

all applicants to the program prior to admission that is held with program faculty is very

helpful in identifying students who are not certain they want to be in the program.

Student Success Coach

The Student Success Coach who works for the allied health programs was the other person most directly linked to the PTA program in regards to retention of students. The nursing program has a separate student success coach. The coach's role lies more on the side of affective behaviors that interfere with student achievement and not with the professional course content. She acts as a resource for students in addition to the tutoring for specific course content offered at the College.

She said that students arrive at her door "by referral from the instructor" at a place that is "a very visible area in this corridor". The corridor in question lies outside the main division office on the second floor of the building. The coach's office resides in the central block of offices with a window to the corridor, but no external window. The window to the corridor may be closed off with blinds. The coach relates that the "biggest experience has been the growth and development of each student that comes in here . . . . They view coming in here as a failure [but] once their confidence starts to elevate we can see miracles". She also stated that she has started to see students who have been referred from the clinical setting and believes that "we'll be seeing more and more referrals from clinical [because] the student doesn't really have a lot of experience in that world". She believes that part of her interaction that influences student success and builds confidence is that the "inspirational office that I have sets the stage for what I expect of every student that comes in here…You can't sit here very long and look around my office without being inspired. And that is what the students have not been to begin with. They don't see an inspirational guiding light if you will to where they need to be at the end of the PTA

program". She sees inspiration as the start of her role which turns into one of helping students build their study and reading comprehension skills, developing a "working memory", how to study better and "how to learn the parameters of studying" and thus what their strengths are "which they have not realized".

One of the greatest success stories related by the student success coach was the improvement of a student's confidence in the clinical setting using role playing. This specific PTA student lacked confidence in the clinical setting and failed the clinical course. After intervention, the student returned to re-take the clinical assignment and received "tremendous accolades" from [the student's] clinical instructor and is now practicing as a PTA. She stated "I stress exercise so that the brain is happier so oxygen will get up to the brain". She emphasized the active nature of her coaching rather than just giving students a book to read. If I can get them "confident in their own skin…at that point academics just start flowing better". She indicated that she speaks to faculty at faculty orientation sessions about the concept of students' lack of confidence when they send students to her who are failing tests. She said "I can talk about reading comprehension and I can give them my learning quiz, I can give them my time management quiz, I can talk about test anxiety, I can do everything under the sun, but if this student still feels like they can't do it or they can't approach a patient…they're not going to make it as a physical therapist [assistant]".

The Student Success Coach connects with a variety of people at the College including the President. She has spoken to the president about the great need to build student confidence, but admits that this is difficult "when we are losing faculty". This

comment about "losing faculty" was one not made by any other interviewee and since the

PTA faculty has been stable for the last few years I did not follow-up on this as I expect it

was not significant for the PTA program. The coach also has suggested that she be able to

speak to all students in various health programs during orientation sessions to let students

know the services that are offered through the College as soon as they enter the College.

She tells students that if they feel uncomfortable coming to her office she will meet them

in the library. She stated that she sees about half of her students in the library because

they feel more comfortable. Her office is very "visible . . . . It's the most visible office on

this entire floor, because it's right next to the Dean's office . . . [and] the director of

nurses' office".

Other departments that the Student Success Coach communicates regularly with

are the people in the counseling office who are with student services. She stated she is

currently collaborating with the new Dean of Student Services to see "what we can do

better here in Allied Health for our student services and student success because it truly

encompasses so much more with how the student can be helped…if they have the

freedom and confidence to go into a group, into more group study sessions". She stated

that she often accompanies students to the disability services office when they have an

appointment. Also, once she gets a student referral, the College system also alerts the

counseling and advising areas of the referral. Some students start in a program and do not

like the chosen major so the Student Success Coach works with counseling to try and find

an alternative program for them. She offered the insight that "it would be great if

registration and counseling were close to each other and if students had to see a counselor

before they registered". So often what the "student needs . . . [is] a connection, and I call it my caring connection and creativity". In many cases if the connection is not made the student would drop form the College rather than transferring to another program of study and this would neither help the retention efforts of the College nor the success of the student.

The comparatively new President of the College brought in the Student Success 20/20 initiative and the theme for the academic year 2015-2016 was student retention. The Student Success Coach serves on the Faculty Organization and the Student Association and has attended board meetings of both organizations. She serves on these organizations with many other faculty members, but stated that she is not currently serving with any of the PTA faculty. She interacts with the PTA faculty through School of Allied Health meetings and one-one-one interactions with the faculty when a student is referred to her. She does not sit in on the PTA faculty meetings. She does however talk frequently to the PTA students as they sit in the corridor outside their classroom waiting to have a laboratory competency test. She indicated that in a morning when she comes into work she climbs the steps which bring her up outside the PTA classroom where she can ask students how they are doing and encourage them about their abilities to pass the test. "They say we're never going to get through this comp [competency test] today and I say I bet you do. I know you can do it, you're going to get through it today, don't even think about tomorrow".

The Student Success Coach's interaction with approximately 10 PTA students each semester mainly revolves around questions such as "how they can truly understand

the very difficult and complex material that they did not realize was going to be as difficult as it is . . . [and] how they can sort out the information and digest it and transform that material" so they can demonstrate their knowledge to the PTA faculty. She states that the competencies PTA students perform are different from those in other programs. They are more specific and "the PTA program has competencies that will unnerve the student, to unnerve to the point of such anxiety that I've never seen…It's anxiety to the point that…it is altering their performance". She obviously enjoys the student interaction very much and believes that "student success . . . is [not just] their academic improvement and their academic growth and development, but it's truly the growth and development of every aspect of their being" and that it is her job to make sure this occurs.

Materials gathered from the Student Success Coach in addition to the information gained from the interview included a publically published Executive Summary of the Middle States accreditation visit in 2014 which contained no recommendations for Standard 7: Institutional Assessment, Standard 9: Student Support Services; or Standard 14: Assessment of Student Learning. However, Standard 1: Mission and Goals did have a recommendation for "assess, study and strengthen communication and collaboration throughout the college community". This information supported the findings of the interviews thus far that points to the fact that the College as a whole is supportive of student success initiatives. An instruction sheet for faculty for referral of students to Counseling, Advising and Retention Services at mid-term explained the referral procedure to follow for those students not meeting the expectations by mid-term was also

in the packet. Another form was a Student Success Month Unsatisfactory Grade

Intervention for completion by the advisor which included recommendations for the

whole range of services available at the College for students to improve their success. A

schedule of Pathways to Success Workshop Series for Fall 2014 detailed all the one hour

sessions available to students on such topics as time management, testing success, test

anxiety and surviving finals week. Other materials related to student success included the

Strategic Plan FY 2015-2017 in which strategic issue number one is Access and number

two is Success. This is known internally as the Student Success 2020 Strategic Plan. The

mission goal objectives within the Strategic Plan included both student achievement and

success objectives and access and affordability objectives. Also published on the College

website was a list of Measures of Success that detailed some of the statistical data about

the College's programs which demonstrated student success. In accordance with the

Student Success 2020 an internal document was supplied to me as the researcher

regarding the data that was to inform the strategy to improve student success. A brochure

of the Maryland State Department of Education Division of Career and College

Readiness detailed the College as receiving the award for "Outstanding Change Agent-

Postsecondary" with its Student Success Initiative in the School of Health professions,

Wellness, and Physical Education demonstrating considerable increases in retention for

many health programs. This award and associated data may be a factor in showing that

the systems in place for student success within the health professions at the College do

actually have an impact on the overall rate of student success. Finally, a handout provided

to students by the Student Success Coach was provided to me to show the types of advice given to students.

Results of Data Collected From Departments

Across the College (the Whole System) in Relation to Student Success

I interviewed a variety of people from other departments at the College who were integral in assisting the PTA program students with student success or who were involved in some way with College initiatives for student success. These departments included the Registrar's office, the Financial Aid office, Counseling, Advising and Retention services, the office of Learning Outcomes Assessment, the person responsible for data gathering, planning, aggregation and interpretation of data on student success for the School of Health Professions, Wellness and Physical Education, and a library representative responsible for most of the interactions with PTA students. All the interviews lasted between 30 minutes and one hour. All interviews except for the one with the library representative were conducted face-to-face in the office of the interviewee. The library representative was interviewed by me over the telephone due to her lack of accessibility when I was on campus for the interviews.

In order to provide clarity for the investigation of connections across the departments of the campus with the PTA program, the following section is divided into sub-sections according to the departments interviewed. The identified key components as discussed in chapter one of the connections between the College departments and the perceived relationship with student success in the PTA program are then discussed. These key components are communication, common student tracking systems, a sense of

community, a commitment of all personnel to student success and a free exchange of ideas across departments and individuals.

Evident from the transcripts of all interviews across the College departments was the fact that each department interacted in some way with the officials of the PTA Program. In addition, each of the departments interacted in some way directly with students, except for the representative of the Learning Outcomes Assessment office who only interacted with the PTA program director and did not have any direct student contact. Each department also interacted with multiple other departments and offices across campus on a regular basis.

Registrar's Office

The Registrar's Office seemed to be pivotal to the communication across the College, especially in matters of student success. The representative described the department's commitment to encourage student success. The office manages the mid-term grade reports by faculty and subsequent communications via e-mail with students about academic jeopardy due to their low grades at mid-term. The office also communicates with the advising department through the College data system regarding failing grades. An effort has recently been made to have mid-term grades submitted slightly before the middle of the semester in order to provide for early intervention for those students at risk. "Interim grades by faculty are put in the system as an early alert/intervention and we are responsible for communicating that to the students . . . . Faculty automatically gets a reminder if they're late on submitting the interim grades". This change in reporting came about through a College-wide effort about three years ago

to improve student success and was discussed at Academic Forum. Previously some of

the courses held in an accelerated format were not optimal for catching those students

who were at risk, but due to the new reporting system of mid-term grades, this has

improved. "The student gets an e-mail if their [grades] are unsatisfactory . . . and also

gets a robot-call, and they get a mailer". The advisors receive an e-mail with a "list of

students that they try to reach out to them as well". "Once the faculty passes us the

football we do our job and then pass the ball on to advising. And then it's touchdown"!

Another aspect of the early alert system is a new system of benchmarks built into the data

system that identifies those students who have a low GPA or are not at the percentage

they should be for completion of their degree. The College also has a special program for

high risk students who are first generation college attendees or minority students.

Through this program these students are placed in a cohort to improve the socialization

and ensure they receive help with College resources. The interviewee reminded me that

"retention is one of the College's priorities and is part of one of the goals. Especially we

know it's better to keep the student". She indicated that the faculty are currently looking

into the "add period" which currently allows students to start a class up to one week into

the semester. Of note is that I did not hear anything from the PTA faculty about this issue

and since all PTA students have to attend an orientation session it seems they cannot start

as late as during the first week of classes. The importance of student attendance on the

first day of class as a part of the student success initiative and a possible change to the

"add period" is being looked at to improve retention rates. Also, "we're trying to find a

way to accelerate the developmental courses [because students] tend to not get through

those developmental requirements. We are coupling developmental English with the first

English 111 course so they have the same teacher and they're in the same classroom, I'm

really excited about that". Students at local high schools are encouraged to co-enroll at

the College to take College-level courses which gives them an advantage when they

graduate from high school. These students enroll at half-price tuition while still in high

school.

Additionally, the registrar's office encourages early registration of students to

avoid late enrollment after classes have started. Other functions of the registrar's office

include handling requests for transcripts, recording incomplete grades for those students

dropping courses, helping military students who are deployed to transition back to the

College smoothly, withdrawals from the College and programs, and monitoring the

students' grades and percentage completion of degrees in association with the financial

aid office. The interviewee described a specific system set up for the PTA program at the

College that ensured inclusion in the College system of students at the consortia colleges

to enable students to partake in advising and academic programs designed for student

assistance in academic success. The office also set up an accelerated system of transcript

preparation after graduation from the PTA program to enable the state board to receive

the transcripts in a timely manner. The registrar's office member stated that the PTA

program director actually hand delivers the transcripts to the Board to enable the

graduates to make the deadline to ensure registration for the NPTAE. This information

was a clarification of the program director's explanation of delivering the transcripts to

the PT State Board.

Financial Aid Office

Another department that is integral in coordinating student success and accessibility at the College is the financial aid office. Of the 25,000 students who attended the College last year approximately 8,000, approximately 30%, received "some sort of financial aid". Students must make satisfactory academic success in their chosen program of study in order to retain federal financial aid and the financial aid office tracks this progress. The interviewee stated that by federal regulation this tracking must occur each year, but that about two years ago the financial aid office personnel decided to change the policy at the College to review student progress each semester "in an effort to better help students, to retain them, [and] help them persist and complete". Students must retain a GPA of 2.00 and at least a "67% success rate of everything they are attempting" in order to remain eligible for financial aid. This change in procedure has had several beneficial effects on student success. Students who do not meet the performance standards are notified through the Financial Aid office and "they are also required to meet with an academic advisor [and] develop and submit an academic success plan. Then the Appeals Review Committee looks at this plan and "makes a decision as to whether to reinstate the financial aid eligibility". "By making the change we have seen students actually do better because they know that they have a short window in order to establish themselves academically . . . . Previously when we were only looking at them at the end of the first academic year if they didn't do well in the fall . . . they were still eligible for the spring with no intervention. So we realized that we were doing them a disservice because by the time the end of May came, basically many of them repeated what they had

done in the fall as there had been no intervention and they had dug such a deep hole for themselves . . . that, turning that around at that point became much more difficult. So early intervention allows them to take the steps to be successful".

A comparatively new federal program allows students who are homeless to receive federal financial aid even if they are not 24 years of age, which is the usual age to have independent student status. "In addition to that . . . in spring of 2014 . . . a bill submitted [to the state legislature stated that] . . . if a student is determined to be homeless, if they're 21 or younger and considered to be an unaccompanied minor, at risk youth, they also, if we determine they meet these qualifications also qualify for tuition waiver". Students who apply for this status are directed to "licensed professional counselors in academic advising" who may also be social workers and their assessment helps in making the determination to offer the student tuition waiver.

Although the interviewee indicated that students in the PTA program are not specifically targeted for assistance with financial aid issues, there has been a recent focus on allied health students in general to make sure that students are "completing the program with a minimum amount of student loan". Students who are taking 12 credits are eligible for both federal and state financial aid. Since many students in the health programs are not taking 12 credits they miss out on the state aid even though they receive some federal grant money. The financial aid office tracks these students and ensures that they are included in the state system that provides some part-time grant money "to help offset their costs".

Evidence of coordination between the financial aid office and academic advising was supplied by the interviewee.

When the financial aid office changed their satisfactory academic progress approach, academic advising partnered with us to make sure that the students that are getting financial aid were also a priority for them. So when we find those students that are getting financial aid that are not doing well mid-term, academic advising is also sending them an e-mail requesting that they come in to see them to see how they can help them turn around their poor performance. So partnering with financial aid they're getting a double message and understand their financial aid eligibility is in jeopardy and then that encouragement for them to then contact academic advising to get the help that they need.

Regular contact with students is part of the function of the financial aid office. Meetings occur personally with students who appeal the decision to remove them from financial aid eligibility. Other contact is with those students who "have met what we consider to be an excessive student loan debt threshold. We look at the ratio of [loan debt to number of credits completed] and if they have borrowed more than half of their federal aggregate amount, which is $57,000 and they don't have a two-year degree or close to it we then consider that they have excessive debt for the programs of study". In this way when identified students apply for a further loan the financial aid office declines the request. This causes the student to make an appointment and have a discussion about educational goals. The idea is to help students "accomplish [their goals] without incurring any more additional debt than they absolutely have to". Another aspect of personal

interaction with students and the financial aid office staff arose about four years ago when it was decided that this office needed to ensure students were attending classes. They set up "an affirmative attendance process [in which faculty] are required to record that [students] have attended the class . . . [and also] when a student has totally stopped attending". This process has been "totally embraced by the faculty" and helps to meet federal loan, Title IV financial aid, PELL grant and Veteran's Administration requirements.

All of this contact with students and follow through to assist with student success requires additional manpower and the interviewee stated that "the administration has been fully supportive of our staffing needs [and] programming needs . . . . We haven't always gotten everything that we've requested, but when we've been able to provide the data to the administration they then have made the effort to get us the staffing and other things that we need in order to help the students persist and complete".

As for the PTA program is, a representative from financial aid meets with incoming students each year to review financial aid issues. Individual students from the PTA program do contact the office with personal financial aid questions. The PTA students, much like other allied health students seem to be "very focused, they're very driven, to persist and complete . . . I think because it is a selective admissions process". One student in particular was three years into a degree at a private college and had accrued significant debt, but realized that she wished to become a PTA. The financial aid office had a prolonged discussion with her and recommended that she complete her degree prior to applying for the PTA program since she would be better to do so for

financial purposes. The interviewee stated that "students who start at a four-year state school, or more significantly at the private schools . . . that are borrowing a lot of money and then realize after a year or two that they are really heading in a direction that they don't want to go. They realize through family or other resources that physical therap[ist] assistant is a great opportunity for them to get into the job market and they come to us at that point rather than right out of high school".

Counseling, Advising and Retention Services

Perhaps the other most significant College department that interacts with students concerning academic success is that of counseling, advising and retention services. The interviewee indicated the College has four different locations at which they provide "personal counseling, academic advising, disability support, various employment services, educational planning, and help for students who are undeclared or undecided . . . and also the major College-wide retention initiatives are run through [this office]". The enthusiasm for student success initiatives was evident throughout the interview. She stated they have about 10,000 referrals per year through their faculty referral system. This automated system allows faculty to check off a list next to students who are having academic issues and also give a recommendation to withdraw from the College or that it is still possible to complete the course successfully. Another bonus is that anyone using the College data system "can see for that term every referral they got, from which class, and what the issues were". This means that all advisees, both faculty and College, can view what other people have said to the student. The student receives an e-mail with this information and links to all resources on campus to assist them with their success and

also a hard-mail letter to their home with the same information. As the interviewee stated "often times students aren't coming to class and also not checking their College e-mail. So we figure that by sending it to their house we know they get it and a lot of the time with our traditional age students we also know that their parents get it". One of the conveniences of the automated system is that whoever is working with advising the student can pull up information on all e-mails sent to the student and track the student's progress, or lack of progress. The advising department "have a whole set of workshops designed to help students succeed such as "comprehensive test taking, note taking, test anxiety, math anxiety…and time management". Sometimes an instructor will ask for someone from the advising department to give a presentation to their students who are having issues with a particular aspect or students can attend workshops given to any student who wishes to attend. The advising interviewee reiterated the information about the mid-term reporting system from faculty that is transmitted to all students and anyone included in the advising-retention loop and explained it as "a partnership between the Division of Learning with our faculty". The people in advising make appointments with all students who have unsatisfactory grades at mid-term and also have a "stroll over Saturday" when all advisors are ready to see students and the student sits down with the advisor and "draft[s] a success plan". Referrals are then made to any necessary resources on campus such as peer tutoring. A copy of the recommendation is sent to the Financial Advising department who have "really partnered with us on this" and the Financial Aid department representative follows-up with the student to tell them they are expected to act according to the recommendations. This allows financial aid to track students when

future financial aid issues occur to see if the student is "making an effort" to address their deficiencies. This amounts to a bombardment of the student with communications regarding their unsatisfactory process that serves to spur them to seek out their advisor both at the College and within the program with their designated faculty advisor.

A Student Success Week is scheduled every semester, which actually lasts a month, during which workshops are scheduled at the time of interim grade interventions so that many things are available to help students be more successful. A College-wide initiative determined through interdepartmental meetings and the Faculty Forum has resulted in this previously mid-term intervention being moved up sooner to allow more time for student intervention. As with the other representatives interviewed the one from advising agreed that the College is very supportive of retention efforts. "I think they see it as a huge big deal and over time, I think it's always been on everyone's front burner, and over time it's become even more and more important to the College for many reasons". "While we want students to be successful obviously we do understand that it's not always the right time for every student. Some students will be better served by stepping out for a month or two, getting their life together and then coming [back] in [and knowing they have] College support to really be able to make it work". She explained that the College administrators are generally supportive of new ideas that may improve student success.

Within the division of Counseling, Advising and Retention Services the Advising Department has regular interaction with the Learner Support Services Department through leadership meetings of all the managers of the areas within the division. At these meetings they discuss division goals and report progress on these goals through the

College Trackstat system. In addition, a monthly meeting occurs each month of all the people who work for the division at which exchange of information occurs and a speaker is provided on a currently important topic. A department meeting is also held every week. College-wide committees where all departments are represented include the Coordinating Council on Developmental Education at which advising issues are also discussed. "It's a way for us all to be on the same page knowing what each other is doing and to make sure that we're promoting the things that work for students". Through this council a new strategy to accelerate the students through the educational development courses and "encourage students into Learning Communities" is currently being devised and implemented. A Learning Community is comprised of "two courses that are very different topics that are linked together . . . . They are usually back to back on the same day. They have different teachers because one might be English and the other might be history, but the instructors are working together . . . the content they are learning in history becomes what they write about in English . . . and the same students are in the two classes . . . so students really get to know each other so they feel they are a cohesive group". In these classes the instructors coordinate tests times and work assignments so as not to overwhelm students with work. The advising representative reinforced that within the College "no-one ever hesitates to pick up the phone and say 'this is the student problem and this is what I'm trying to figure out with them. What do you think'?" She feels that the Division of Learning and the Division of Support Services have good communication and do not see themselves as separate.

Manager of the Student Success Coach

Another interviewee, who has a lot to do with the student success initiatives at the College, is the manager of the Student Success Coach who collects data concerning outcomes regarding student success for the whole of the School of Health Professions. This position was funded initially by a Perkins Grant in 2010 to meet the College-wide implementation of the Achieve the Dream initiative. In 2014 the job was changed to a College funded permanent position. She explained that all the programs have to develop outcome measures that align with the College competencies. Each degree program, and many certificate programs, has to create Learning Outcome reports reflecting the College initiative. She related close communications with the Learning Outcomes Assessment department and a "clear alignment from a College-wide level . . . all the way down to what's happening in the classroom". She is involved in several committees across the College "that are looking at how to improve student success . . . [in] the hybrid, blended, and on-line course offerings". The interviewee also talked about the College on-line learning system. She indicated that considerable time is taken to teach faculty how to use the system and "how to look for red flags in students on-line . . . and how to manage things, how to have a conversation with the student that helps the student . . . . The instructor needs to have the tools to say 'a student didn't submit their work this week, I need to address it now', not wait until it gets to a point of no return'". She reaches out to both full and part-time faculty to ensure they are reaching out to students. In her words "student success is not a broad thing, it is looking at each student individually . . . . There needs to be a tapping into College resources, there needs to be collaboration from all the

people involved, and there needs to be an individual approach to it". Her supervisory

relationship with the Student Success Coach is that the Coach interacts with the other

departments at the College that can help the student, and relays the information about

what department she has referred the student to for help.

Advising and Tutoring Department

The advising and tutoring department personnel play a large part in the promotion

of student success at the College. A one-credit course on Student Success is offered to all

students as a means of setting the students up on the road to a successful college

experience. Students are assigned a faculty tutor and are eligible for tutoring and advising

through the library. The resources offered through the library are varied and include

assistance with information literacy, writing, reading and math skills, and time

management. Library staff members are often also faculty members and thus are current

on student issues through their work in the classroom. Many faculty members in

academic programs at the College, including the PTA program, invite library

representatives to speak to their classes about library resources at the beginning of their

education process. The PTA program faculty includes this library presentation as part of

the student orientation day. Return visits are requested as needed to assist students with

academic paper writing and citation of resources. The library staff is also available to

speak to students individually about any of the subjects offered through the library. In

addition, short lecture sessions are provided on a variety of topics throughout the

academic year to support student success. The library representative I spoke to sits on a

variety of College-wide committees related to student success including the Teaching and

Learning Committee and the Educational Policies and Curriculum Committee. She related that "the library in our College actually sits with the academic departments in our organizational system" which she felt was a definite benefit. Despite this she related having a lot of interaction with the director of learning outcomes assessment and that all these committees are in regular communication with members of the administration.

Learning Outcomes Assessment Office

One of the key departments at the College is that of Learning Outcomes Assessment. The fact that the College employs not only a director, but several support personnel, as well as "assessment fellows", is indicative of the amount of support given to Learning Outcomes at the College which is part of the overall retention strategy. The person interviewed has been in position for three years and before that a full-time faculty member coordinated in this role. The interviewee does "all the coordination of all the documentation and assessment practices of student outcomes at all levels. I work across the College. I work across the schools. I work across and with particular programs . . . I also disseminate all the information and coordinate implementation plans and track the progress of those, and then measure impact of those as well". She related that many departments "have their own assessment and sub-committees". Since she works with all the programs that have their own accreditation she has a lot of interaction with the PTA program director. The work of the PTA program is shared and entered into the College tracking system "so that other people can learn . . . [and we can] foster collaboration". She works with the PTA program director and other program directors to "align their outcomes" with the 10 College Core Competencies. This includes "mapping [of] courses,

mapping their program, ensuring curricular alignment . . . making the data available so that data driven decisions can be made and interventions can either be scaled back or improved or enhanced". She is also involved in the interviews by accreditation visitors for the individually accredited programs such as PTA. Each year the Outcomes Assessment Department assesses two of the College Core Competencies. These core competencies are evaluated in rotation every 2 years so that at any one time four Core Competencies are evaluated. Personnel from outcomes assessment have contact with students by e-mail requesting participation in surveys and permission to review student work as part of the assessment process. All data including retention and graduation rates is tracked with a comprehensive review performed of each degree or certificate program every four years. The three themes at the College this year are retention, innovation and inclusivity. The goal is to collect data from all departments so that commonalities can be determined and better coordinated across the College. During the process of all this assessment the interviewee has contact either personally or through e-mail with all academic departments at the College on a daily basis and with none academic departments at least monthly. She stated she serves on "more than 10 committees many of them standing and it's written into the charters. So the nature of my position at the College, I guess the value that the College puts on data and assessment in learning that they've infused it throughout the structure". She indicated that "the people at the College are very open to collaborative efforts . . . . I know departments pick up the phone . . . or call someone in student services or our registrar. So the personal relationships are very strong and . . . it is very difficult to capture [the degree of interaction]". She indicated that

even though there is a lot of interaction across departments at the College both formal and informal, there is always room for improvement. She feels that student retention has become a collaborative effort among the academic and non-academic sides of the College. The whole endeavor is summarized within the College Learning Outcomes Assessment website. In addition an assessment newsletter is published four times a year which details all the projects occurring at the College. The interviewee stated that "our Learning Outcomes Assessment Plan is probably our most comprehensive document" at the College. The whole effort is very complex and constantly evolving. Most of the outcomes data is public record although rather difficult to access unless you are made aware of the specific URL. She also stated that "we hold a very firm line about how the data will be used internally . . . . It's never used in teacher evaluations . . . . We don't use it to cut programs. So it's not used in that punitive way and I think that really helps our culture here. It's very safe . . . and it's used as a conversation starter".

None of the interviewees from other departments across the College related serving currently on a committee with members of the PTA faculty. Some indicated they may have served at some point with one of the PTA faculty. The director of learning outcomes assessment served on the Institutional Assessment Team with the PTA program director for several years. However, all related that they had interactions with PTA program faculty to some degree regarding the students in the PTA program prior to entry to the program, or while in the program. All interviewees were highly complementary about the PTA program faculty members in their efforts on behalf of the students to encourage student success. Varying degrees of communication were indicated between

the faculty members of the PTA program and each of the College-wide interviewees, the

general consensus being that close communications occurred regarding student success

initiatives. The coordinator of student success data for the School of Health Professions

especially stated that the PTA "program director is very dynamic and very positive and

very supportive of the students and that always is a key that there is a kind of buy-

in…[and] has taken full advantage of working with the Student Success Coach". Another

interviewee stated that the PTA faculty "are incredibly invested in their students and

being good colleagues . . . and all the interactions I've had with them have been positive".

The library representative I spoke to stated that "in general our students in all of our

health professions are better prepared students and they're generally not right out of high

school so they have some life experience and I think some other experiences that better

prepare them for their course work and generally they're very polite and they're very

grateful and they are very pleasant". The librarian also related a story about a PTA

student who was a little disruptive during one of her presentations to the class. She was

very impressed that one of the PTA faculty members pulled the student aside and spoke

to her and that the student came to the library a few days later to personally apologize for

any disruption she may have caused. She said that the "level of respect and expectation

that you'll be respectful to other people, that's a really high standard that they have in the

PTA program and something I definitely appreciate".

As far as the College being supportive with student success issues, the

interviewees were in agreement overall that the College administrators were very

supportive of initiatives to encourage retention, whether it were to support requests for

additional personnel and resources, or allow staff and faculty to take calculated

innovative risks in providing student support. One comment was that a lot of energy and

resources were used in the effort, but that although a lot of data were gathered it did not

seem as though identified issues were necessarily followed through to a resolution. One

of the exceptions was the On-line Writing Center that was instituted to assist students in

on-line courses and programs, and that has won state awards. The thought was that action

may be taken about collected data and identified issues, but that the resolution of the

issue was sometimes addressed quietly without involving the College as a whole and this

resulted in a lack of dissemination across the College about some of the good things that

were being done by departments to address areas feeding into student success. Another

comment was that retention efforts at the College may be undermined by some of the

admissions policies, particularly those that allowed students to enroll in two week

condensed courses. The interviewee indicated that "many students have no idea what

kind of work that's going to entail" when they take a two-week course covering material

normally taught in 15 weeks. However, the College is working on reducing the number of

these compacted courses.

In addition, the faculty is looking at the "Add period" which is currently one week

into the semester. This discussion is a College-wide initiative to determine if allowing

students to add classes after the first week of the start of classes is in the best interest of

students as far as academic success in courses is concerned. Another initiative is that of

accelerating the process of developmental courses so that students do not become so

frustrated that it is taking a long time to actually start courses that have grades that could

toward their degree. A pilot study has already started in which the developmental English course is run alongside the first College English course using the same instructor for both courses. The interviewer stated that it is too soon to determine the efficacy of this, but the results seem to be promising. As with other colleges high school students are encouraged to co-enroll in courses at the College while still in school. These courses then count toward the degree once students enter the College after graduation from high school. This reduces the overall time in College spent on their associate degree.

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Commonly Identified Themes Across the College Campus

Related to Student Success

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The most commonly identified themes across the departments within the College identified through the interview process, review of documents, meeting minutes, and observations are described in the following section. These main themes, also referred to as the key components, provide evidence in relating the analysis of this study to the research question. These key components that provide the connections demonstrating the systems approach are communication, common student progress tracking systems, a sense of community, a commitment of all personnel to student success, and a free exchange of ideas across departments and individuals. These key components are discussed in separate sections.

Communication

Communication between the departments as described by interviewees of these departments clearly demonstrates that communication plays a large part of the general every day operations within the College. The communication occurs along two main

avenues, both informal and formal. As far as the informal communication is concerned several of the interviewees described that they are able to "pick up the phone" and talk to people in other departments of the College. This allows for direct communication without having to go through an intermediary. This method reduces the risk of errors in communication and allows issues to be resolved in a timely manner.

Additionally, at a more formal level, each department described regularly scheduled departmental and interdepartmental meetings. Regular communication was described by the representatives in the library and all the support services to make sure that each department coordinates their efforts and that each area is updated about both ongoing and upcoming changes or improvements to system-wide policies and actions.

Within the PTA program the director holds formal monthly faculty meetings where sharing information about student issues and outcomes assessment is a set agenda item. On a less formal basis the faculty often hold impromptu meetings when issues arise that need to be discussed and acted upon immediately. The location of the offices of the PTA program faculty is conducive to this frequent interaction. The program director and the ACCE share an office and the instructional specialist has an office adjacent to that of the director and ACCE. In addition, the director holds meetings with all part-time faculty and full-time faculty at least once each semester in order to keep part-time faculty members updated on current policies and procedures and matters of interest and concern within the program, especially regarding student outcomes and student progress. This includes addressing ways to approach student lack of progress and identifying those at risk of failure.

At a Health Studies School level, meetings are held several times each semester where the various department heads meet to discuss College-wide initiatives. When the interviews were conducted some of the most recent minutes from these meetings reflected the focus for the College on student success. Although full minutes were not made available to me I was assured that outcomes assessment and student success were regular items on the agenda for these meetings.

Common Student Progress Tracking Computer Databases

Another common theme I discovered was that communication across departments of the College regarding student progress was enhanced by the use of the Datatel database system. This is a system used by many colleges to track all aspects of the student experience. The system tracks admissions, departures, student grades, student graduation information, as well as pre-admission personal information and transfer credits from other colleges. The College had just updated to the most recent version of Datatel which enabled everyone concerned with a student to monitor the interaction of the student with various department personnel. In this way the person meeting with the student could write up the content of the meeting and state the recommendations made as well as the advice and any other pertinent information provided to the student. Thus when another person logged into the student file the information was available from previous meetings with other departments.

Most of the people I interviewed mentioned the use of this Datatel system and how it ensured that each person meeting with the student was aware of what others had communicated to that student. This meant that misunderstandings could be avoided and

the student obtained consistent information from all departments. The tracking also allowed for the monitoring of those students who were having difficulties. Within the PTA program if a recommendation was made to seek tutoring, the faculty member could track whether the student had actually attended tutoring and followed through on the recommendation. The Datatel database also enabled personnel to directly e-mail a student. This gave an extra dimension to monitoring student progress and allowing the sharing of information regarding student advising and ensuring students were seeking and receiving the help they needed.

A Sense of Community

Another of the key components identified was that of a sense of community among all departments at the College. This was evident of course within the PTA program itself among the faculty members who all identified the close connection they maintained to assist student success and keep each other informed about individual student progress. At the health professions level regular meetings were identified that included each program providing updates regarding student success. One of the things that I noted was that all the people I spoke to from each department were personally familiar with each other. Each person knew the individuals within the PTA program and all talked about the people in other departments on a first name basis indicating they all knew each other. In discovering that each department communicated with other departments at the College it became apparent that although this was a fairly large college, the interaction between the departments made it a total working unit. Several of the people interviewed said that they often just picked up the phone to speak to someone

if there was an issue that needed immediate attention or if they thought that another department needed to be consulted or involved in a discussion regarding a student issue. Very little discussion about hierarchy of contact occurred during the interviews. I did not hear one person say that there was a formal procedure to follow where they had to clear with a department head or someone in higher administration before they contacted someone in another department. The only time I heard about specific formal procedures were when interviewees were talking about documenting contacts with students so that other people could look up the student record and determine what interaction had occurred previously with the student. This level of communication leads to the commitment of all the people I interviewed to success of the students at the College.

A Commitment of All Personnel to Student Success

Without exception all the people I interviewed talked about student success and how their job position entailed helping students to be successful in completing college or an area of study. The PTA faculty members were directly related to providing advice to students regarding strategies to be successful. They kept track of students at-risk of failing and closely monitored individual student progress. Referrals were initiated or recommended by the faculty for those students who needed additional help from other departments at the College such as tutoring, the student coach, or financial aid. In many cases the PTA faculty members were able to provide direct advice to students through their role as faculty advisors. However, the faculty all stated that they referred students to appropriate resources as deemed necessary. If the problem was an academic issue related to PTA courses the faculty would provide intervention through one-to-one tutoring and

study assistance. Tutoring across the College was also available through the library for subjects other than PTA courses.

During the interviews with representatives from financial aid, the registrar's office, the Student Success Coach, the advising, counseling, and tutoring services and the library it was evident that all these people worked to offer help to students who needed assistance whether academically, financially or personally. In some cases tracking of students at-risk was through the Datatel student system, while in other cases it was disseminated through direct requests from one department to another.

The Student Success Coach was uniquely placed to provide assistance with personal issues interfering with student study habits and frequently intervened at the request of the PTA faculty members with issues of self-esteem, confidence, and affective behavior problems. In some instances this involved issues occurring through clinical placement or during competency testing within the classroom.

The central area for coordination regarding student success initiatives through the Datatel system seemed to be the Registrar's office. The representative from the Registrar's office talked knowledgably about the way tracking of student issues and success was achieved using the Datatel system. People from all departments who had any contact with students documented their interactions with the student in Datatel. When several interactions took place for one student the registrar's office were the people who identified multiple instances and seemed to coordinate efforts on behalf of the student. When this occurred efforts were made by an individual in the Registrar's office to follow up through e-mail, personal phone call and by mail regarding the issues involved. The

efforts were recorded in Datatel and in the case of students in the PTA program, contact was made with the student's academic advisor, who would be a faculty member within the PTA program.

As a continuation of all these efforts the final key component of the collection of the data was that of the free exchange of ideas between departments and individuals. This key component was connected to the other components of communication and a commitment of all personnel to student success. However, I feel it stands as a separate component due to its unique association with systems.

Free Exchange of Ideas Across Departments and Individuals

An overall impression that I received from all interviewees was that of mutual respect of people for others across the college campus in all departments. This mutual respect was reflected in the way interviewees spoke about people in other departments and freely related personal contact with individuals in all departments. The sense that "picking up the phone" was the easiest way to communicate important information was reflective of the culture of cooperation and collegiality across the college campus. This did not mean that e-mail and documentation of student interactions did not take place, but it meant that people were concerned enough about student success to build relationships between departments that enabled direct accessibility to those in other departments related to student concerns. I think this level of individual interaction speaks a lot to the culture of communication at the College and to the lack of top-down formal hierarchy that can hamper such communication and build barriers to the open exchange of ideas and concerns.

Evidence of Quality and Trustworthiness

The accuracy of the data collected was enhanced in several ways. The interviewees were selected from a list provided by each department of the people who were most involved with working with the students in the PTA program. In this way I could be assured that the knowledge of the interviewees was sufficient to provide meaningful input for the study. As the researcher and interviewer I transcribed all the interviews personally from the tapes of the interviews and then sent them to the interviewees to check for accuracy of intent of the content and additional information that might not have been thought about during the interview. The forms used during observation of classroom activities are also provided in Appendix B to demonstrate how notes were taken regarding observations and tied into the main themes of student learning to encourage success.

The triangulation of data was achieved through performing interviews, classroom observations, and reviewing College public documents and specific meeting minutes pertaining to student success topics as well as PTA program documents and statistics. Field notes were not specifically taken except in the classroom observations. Some notes were taken regarding the environment in which the interview was held, which in most cases was the office of the interviewee.

In addition to the triangulation of data the interviews provided a means of ensuring saturation of information. Even after the first four interviews it became clear that certain themes recurred pertaining to student success and the role of the College as a whole in the support for this initiative. After the completion of 11 interviews I

determined that it was not necessary to continue to interview further individuals within the departments included in the study as the information received was both extensive and provided cross-tracking information regarding many of the systems both in place and in the proposal phase at the College. By the completion of the interview process I was almost able to anticipate some of the general issues that would be raised by each interviewee regarding student success.

Summary

This study is based on the research question: "What are the systems factors and how do they operate together to support student success in an associate degree Physical Therapist Assistant program?" The research approach including a search of College documents, observation in classrooms, and interviews of the PTA program faculty and representatives from many College departments, was designed to provide answers to this research question in this in-depth, case study of systems.

The systems factors discovered during the research were many at this medium sized suburban community college. The main themes identified that pertained directly to the research question were communication between personnel in all college departments, common student tracking systems, a sense of community evidenced by the ease with which all people interviewed regularly contacted other departments and knew people at the College by name, a commitment of all personnel interviewed to student success and a free exchange of ideas across all departments and individuals. In addition, the College obviously takes student success very seriously as evidenced by the funding of specific positions and departments devoted to working with student success and student outcomes

such as the School of Health Student Success Coach, the School of Health Professions supervisor of data collection, the Department of Learning Outcomes Assessment, the Advising Department, the Financial Aid Department and Library services. In addition, several interviewees particularly in the Financial Aid and Advising Departments indicated that funding has been provided for extra personnel to assist with the work emerging from the additional efforts needed to improve student success. Since retention is one of the Core Competencies at the College, this in itself indicates the emphasis placed on student success at all levels of the College hierarchy.

As a part of student success the Learning Outcomes Assessment Department gathers, analyzes, disseminates and formulates action initiatives for assessment data from both the academic and non-academic departments. As the interviewee from the Learning Outcomes Assessment department states, she "guides strategic assessment particularly of core competencies, program learning outcomes and course learning outcomes". At a College with approximately 25,000 students this is no small task.

Within the School of Health Professions the Student Success Coach works with students from all the health programs except nursing. Another coach is employed to work with nursing students. This coaching is complemented by the use of faculty members as individual student advisors, tutoring provided through the Student Support Services departments, close scrutiny of student progress through the Financial Aid and Registrar's offices, and a College computerized records system that enables all interested parties to have access to and share student information that aids in the provision of assistance for student success. Overall the interviewees indicated a comfort level with being able to

pick up the telephone and talk to anyone at the College about a student issue. Regular communication across departments was considered the norm rather than the exception and the atmosphere at the College seemed to facilitate these interactions to benefit the students.

Within the PTA program the level of communication between the program faculty and other departments appeared to be substantial. The program faculty appeared to work closely as a team and have a good understanding of student success issues and the appropriate resources at the College for assisting students with any difficulties that arose.

Even though many findings have been identified through this study that speak to a systems approach supporting student success, at least one deficit exists. This deficit is that the PTA Program faculty seems to be rather insulated from the rest of the College by not being members of any major College-wide committees as noted in many of the interviews. Although, it was stated that PTA faculty members had been involved in committees in the past, they were not participating at the time of the interview process. One of the identified reasons may have been that the program had just gone through the 10 year reaccreditation process which takes up a great deal of time and effort on behalf of the program faculty. This lack of direct contact through committee membership could have the potential to isolate the faculty of the PTA program from the College as a whole.

On a larger scale gaps still exist in the literature. This study is only one of a few qualitative studies that exist regarding student success in any health care program. More studies of a quantitative nature exist, but the evidence for the system approach through qualitative studies would be of considerable benefit to the Community College system.

Continuing to clarify and understand the system approach and its relationship to student

success can only enhance student success efforts in the health care fields of study. As far

as a gap in this current study, I would suggest that not interviewing the President or Vice

President of the College left a gap in the overall system. Both the President and Vice

President were intended to be part of the research process, but both declined to be

interviewed as they were comparatively new to the College and felt they did not have

significant input to offer.

In Chapter 5, I will provide a summary, conclusions and recommendations of the

findings stated in Chapter 4. Topics will include interpretation of the findings, limitations

of the study, recommendations for action, recommendations for further study, and

implications for social change.

Chapter 5: Summary, Conclusions, and Recommendations

This qualitative, in-depth, descriptive case study of a medium-sized suburban community college grew out of my interest in student success as a director of a different PTA program and long-time supporter of student success initiatives. The need for a deeper understanding of student success in this area of health care is driven by the continuing need for PTAs into the future as the population of the United States continues to age. The study question was as follows: What are the systems factors and how do they operate together to support student success in an associate degree Physical Therapist Assistant program. The intent of the study was to describe the links in the systems within the College that might suggest an influence on student success in a PTA program. The study was based on the conceptual framework of the systems approach by Senge (1990), O'Banion (1997), and Wheatley (1999) as described in Chapter 1.

The success of the program chosen for the study was defined by the fact that it maintains an overall average percentage rate of more than 80% of graduates who pass the NPTAE in a 3-year period. In 2012, the College had over a 3-year average pass rate of 90%. This pass rate surpasses the national average 3-year pass rate of 83.16% for the years 2010-2012 (FSBPT, 2013). As defined in reports from the PTA accrediting body, CAPTE, the number of students who passed the examination at this College exceeded 90% each year. The need for such high percentages of pass rate of students who take the exam each year is driven by the CAPTE requirement that the overall pass rate of students who take the exam and pass it each year has to be an average of 80% over a 3-year period. This level has to be maintained by individual PTA programs in order to retain

accreditation. Of note is that since the start of this study in 2014, new requirements have

been defined by CAPTE, which took effect in January of 2016. These require an 85%

average over a 2-year period for students taking and passing the national exam. This new

requirement has increased the expected successful outcomes, which would make the

impact of this study even more appropriate for current PTA education.

In general, the findings gleaned from interviews, classroom observations, and

College and program materials examined as part of the study, demonstrated a high level

of commitment of both the PTA program faculty and staff, and the personnel I

interviewed at the College level in other College departments. Core College documents,

such as Outcomes Assessment documents, strategic plan, and published data, all

indicated the College's commitment to student success. The findings from interviews

supported this focus on student success initiatives and indicated that the College

personnel in general were living the strategic plan and its commitment to student success.

The energy and enthusiasm of all those individuals interviewed and the welcoming aspect

of each person's office space were all indicative of a friendly and encouraging

atmosphere for students that could easily factor into assisting with the comfort level of

students who seek academic help. The general communication among departments of the

College was noted as a factor in disseminating student success initiatives, although some

deficits in this interaction were identified.

The concerns for student success at the College generally mirrored those of the

issues identified during the literature review described in Chapter 2. Many of the issues

raised in the literature were reiterated by the interviewees as concerns at this college. The

role that student debt played in college completion (Johnson, Rochkind, Ott and DuPont,

2013) was raised by the financial aid office representative as being a major issue that was

tracked by the office to ensure students did not go into too much debt and that timely

completion of a degree was paramount in reducing debt. The financial aid office

representative also indicated that many of the college students worked and this impacted

completion and success rates which supported the findings of Torres et al. (2010) who

indicated that those students who worked more than 30 hours per week as well as

attending college were more likely to drop from college.

The adverse impact on students of having to complete developmental writing,

reading and mathematics courses prior to enrolling in credit classes as indicated by Brock

(2010); Gallard et al., (2010), Maize et al., (2010), and Shree, (2014) was referred to by

the registrar's office representative as one of the items that was being reviewed by faculty

and staff to determine alternatives to delaying the taking of courses in majors prior to

completion of remediation classes. The effectiveness of bridging programs and co-

enrollment between high school and colleges as described by Petty (2014) was also

mentioned by the registrar's office as something that many of the local high school

students took advantage of during the last 2 years of high school. Perhaps one of the most

effective items that supported the stance of some of the literature was that of the use of

faculty advising, especially during the first year of the program. This was determined to

be a major factor for improving student retention within the PTA program that reflected

the work of Burnett and Larmar (2011); Williamson et al. (2014); and Strayhorn (2015).

Although no direct reference to "learning communities" as described by Johnson (2014)

was made by the PTA faculty, it was suggested by the Health Care Coach that the cohesiveness of the cohorts of students in the program was a factor helping students to succeed.

As described in Chapter 4 the key factors identified as crucial to demonstrating the purpose of the study were communication, a common student tracking system, a sense of community, an overall commitment of all personnel to student success, and a free exchange of ideas across departments and individuals. However, as an overall observation two major factors were a crucial part of the systems at this College. The first was that all people who were interviewed appeared dedicated and very serious about student success and understood their role in this endeavor. The second was that within the system people communicated a lot between the various College departments resulting in an overlap in the identification of students at risk of failure and a plan of action that all participated in to ensure the student received all the services necessary to promote success. At the core of these initiatives were the students who were kept informed of their progress through multiple methods by telephone, e-mail and letters as well as through one-on-one meetings. This cohesiveness of the system served to place students at the front and center of the focus for all people who work at the College.

Interpretation of Findings

In answering the research question: What are the systems factors and how do they operate together to support student success in an associate degree Physical Therapist Assistant program, the data collected went a long way in demonstrating the breadth and depth of the efforts made by all departments at the College to encourage student success.

It was obvious that all department representatives who I interviewed were dedicated to student success within their own department's role. In addition, the various departments seemed to work together as much as possible to ensure students received the services they needed. A key factor may have been the focus of the 2014-2015 academic year at the College on student retention. However, the dialogue with interviewees indicated that there had been a long standing interest in student success at the College. This system-wide interest and dedication to see students succeed seemed to have taken a step up during the last few years. As indicated by the financial aid and registrar's offices, the coordination between tracking students more closely to ensure timely completion of degrees and the amount of debt incurred by students in the process has been a relatively recent accomplishment. Although annual student tracking of progress toward a degree is a federally required mandate for those students receiving financial aid, the financial aid office goes above and beyond the mandate to monitor students each semester. All students, including those in the PTA program, are monitored regarding their academic progress to ensure they meet the requirements for financial aid which include maintaining a grade point average (GPA) of 2.00 and achieving a 67% pass rate on courses taken. If students do not meet these requirements they have to meet with an academic advisor and develop and submit an academic success plan that re-focuses the students on their academic goals and seeks to reduce untoward financial debt. This close monitoring also results in communication among several departments including advising, the registrar's office, the Allied Health Coach and faculty associated with the student, when a student is identified as at risk. Several interviewees mentioned that it was a regular occurrence for

staff and faculty to pick up the phone and talk to those in other departments who could help identify and help students who were not meeting academic milestones. The use of a College-wide database that enables all departments to track students at risk of failing results in the early interventions provided by faculty in the PTA program, academic advising and the Allied Health Coach and is a definite bonus in this tracking system.

What became particularly evident to me was the dedication of all those interviewed to student success at the College. Each interviewee related stories about student success regarding individual students and seemed both enthusiastic and committed to students. All those interviewed referred to the commitment of the faculty within the PTA program to their students. There was a demonstrated mutual respect between all the interviewees implicit in the way they all spoke about people in other departments and the amount of communication they stated occurred. Of particular note was the way everyone I interviewed seemed to have no problem in picking up the phone and calling someone in another department with a question when one arose. This level of comfort speaks to a good working atmosphere at the College conducive to personal communication between departments.

Student Success Efforts at the PTA Program Level

The level of effort placed on student success was evident within the PTA program through the faculty advising system, the regular contact between the faculty and the students, the emphasis on monitoring student progress, and the use of in-class techniques to encourage student success such as pre and post lecture quizzes. The faculty appeared to be proactive in seeking out students who seemed to not be managing well in courses

and both advising them and referring them to the Allied Health Coach or appropriate resources across campus whether it be financial aid, or academic advising. In addition the faculty of the PTA program gave orientation sessions to all candidates for admission to the program to try and ensure that they knew the demands of the program before deciding to apply for entry. The fairly new insistence on each student having a faculty advisor within the program and making contact with that advisor during the first semester seemed to enhance the overall level of communication between faculty and students and develop a comfort level for the student to approach faculty with any problems.

The PTA program faculty has developed a student outcomes assessment process that is thorough and very detailed. This is part of the College-wide requirement for monitoring student outcomes and has areas that address student success and retention. This is helpful in the accreditation process for the program with the CAPTE and also allows the director of outcomes assessment to capture data from all departments and provide an overall look at the outcomes across the College. Updates on the plan are reported annually to the outcomes assessment office.

One factor that may have an impact on student success within the PTA program is the familiarity of the faculty with College services and policies. All three of the full-time faculty members have been employed for more than 10 years each which provides stability for the program and the students. Faculty members are all very committed to student success, not only to ensure an adequate pass rate on the NPTAE to maintain accreditation status, but also to ensure the success of their students. They were all very passionate about helping students to achieve their goals and making appropriate referrals

to other departments to assist in this process. This cooperation within the program itself and also with other departments is another example of the collaborative nature of the College departments.

In addition, efforts within the PTA program including making students pay towards the Scorebuilder's 2-day course which is run each year, and the increased use of NPTAE style exam questions within courses in the program have assisted the students in becoming more comfortable with the format of the NPTAE and thus better able to pass the exam successfully. Since the deposit for the exam has been instituted most students now attend both days and there has been a 100% pass rate on the NPTAE during that time. It would appear that when students have to pay towards the review course they are more likely to take attendance seriously even when they know that they will have the money returned to them upon completion of the course. This is an example of making students responsible for their behaviors.

Student Success Efforts at the School of Health Professions Level

At the School of Health Professions level emphasis was also evident in the student success and retention areas. This was evidenced by the position of the allied health coach who was previously funded through a grant and subsequently hired as a full-time staff person for the School. This person's job is to help students with affective behaviors as well as with academic advice and she takes her role extremely seriously. She is referred students through the faculty at the school and has served the PTA program students over the last few years helping several students to be ultimately successful after difficult times with both academics and clinical issues. Further evidence of the emphasis

on student success was seen in the faculty member who was given the role of coordinator

for the student success initiatives within the school and collected data on student success

and outcomes for the school. This person was knowledgeable about all the programs

within the School and spoke at length about encouraging faculty and staff to

communicate about student needs. The admissions coordinator played a part in the

overall student success initiative by monitoring all the applications for the health

programs and suggesting alternative paths for those students who did not meet program

requirements or who seemed to be uncertain of their interests in specific programs. The

creation of the new roles of these people within the school speaks to the College

commitment to student success through providing the necessary resources to carry out

these crucial services to students.

Student Success Efforts at the College Level

At the College level, in departments separate from the School of Health

Professions, the theme of student success and retention continued to be a major focus.

Many changes have been recently made to ensure this goal. The evolution of the College

database to encompass the ability for all faculty and staff to monitor student progress and

interventions taken to intervene for those students at risk of failure seems to have been a

major initiative. This system allows all parties with a vested interest to monitor both the

student progress and the measures taken to help the student. In this way the effort is more

coordinated and each person knows what others have done to assist the student. The

information from several interviewees indicated that this system also served to let faculty

and staff know what students were advised from other departments so that students'

misconceptions could be addressed and information provided to at risk students became both consistent and accurate. The installation of this College data system is yet another example of the ways in which collaboration across departments has been enhanced for the benefit of students.

Continued efforts to increase student retention and success include a College-wide discussion regarding the number of compressed format courses such as concentrated two week courses that cover material usually delivered over a 15-week semester. Data gathered regarding these apparently indicate that many students drop from the courses before completion due to the work load. The concept of having such short heavily compressed courses is being examined to see if this is a viable option at this community college. A faculty committee is also looking into the policy of allowing students to add courses to their schedule during and immediately after the first week of the start of classes. The faculty is looking at data collected regarding the success of students in courses where they register after the first day of class and discussing both whether changes in the policy are required and what alternatives are possible.

One initiative that has recently been instituted to help students complete developmental courses in a more timely fashion and reduce the frustration of delay in starting courses which count toward their associate degree, is the running of the developmental English course alongside the first College English course. In this way the same instructor teaches both courses and is able to monitor the progress of each student carefully and integrate work from both courses. Although this new approach has just

started the results appear to be promising. Discussions are underway to see if this would work with other developmental courses.

Limitations of the Study

The limitations of the study remain the same as those provided in Chapter 1. The fact that this was a study conducted at one specific community college means that the results will not be identical, but may be identifiable with other community college PTA programs. However, the systems factors that arose from the study may have implications for other colleges seeking to identify systemic factors that could help to improve student success in PTA programs and perhaps even other health care programs.

Another identified limitation stated in chapter 1 was that the study would be limited by those systems factors in place at the time the study was conducted. The scope of this study makes it impossible to determine the factors previously in place before the study was conducted or to determine whether further progress or innovations were made after the conclusion of the study. However, the sharing of the results of this study may assist the College in further advancing student success initiatives. Other community colleges may not have the same or similar systems in place in order to either replicate the study or to implement any of the processes identified as successful components of the student success. The concern that some of the selective admissions processes in place for this specific program might make the findings irrelevant to other colleges is somewhat unfounded. Although some community colleges have a completely open door policy for the PTA programs, all programs have baseline requirements for admission that meet accreditation requirements and expectations. In this respect the admission requirements

for the College in the study are not dissimilar to those in place at other colleges housing PTA programs.

Recommendations for Action

Overall the data suggest that the College personnel do a very good job of working together collaboratively for the benefit of the students. However, I have identified some areas needing attention or that indicate there is room for improvement. For consistency with previous chapters I will outline these recommendations for the PTA program, the departments closely related to the PTA program, the overall College, and the profession of physical therapy.

These recommendations are for consideration by the College departments and the PTA program faculty. The results of this study would be of interest to other colleges housing a PTA Program, and perhaps those colleges who have other allied health programs. Although this study was conducted in a community college the results could be applicable to 4-year institutions who offer PTA programs. The systems in place for student success initiatives can be of interest to all colleges regardless of the programs offered.

Recommendations Arising out of the PTA Program Data

The overall success of students within the PTA program is excellent with 100% of students passing the NPTAE over the last 2 years. This criterion was why I chose this college to carry out my research study. With more recent efforts to monitor student progress within the program including the use of faculty advisors for each of the students in the program, the retention/graduation rate is starting to improve. This need to improve

the graduation rate was identified by the program director as one of the factors focused

on during the last few years.

During the time the interviews were conducted in late 2014 most of the

interviewees indicated that although they had served at one point on college-wide

committees with members of faculty of the PTA program, this was not the case for the

past couple of years. This may in part be due to the fact that the PTA program just went

through the re-accreditation process with the CAPTE. This is a lengthy and time

consuming process requiring a lot of attention to detail and data collection. However, I

cannot help but feel that the PTA faculty is becoming somewhat isolated by not serving

on college-wide committees. The benefits to serving on such committees enable a better

understanding of the total working of the College system and also allow relationships to

be established with people in other departments across the campus that work toward

student success. Although all interviewees related a good working relationship with the

PTA program director in particular, furthering working and networking opportunities by

serving on committees beyond those within the PTA department and the School of Health

Professions, would probably enhance interdepartmental relationships and further

encourage collaboration for student success and retention. Of particular note is that

several new people have been hired in key positions at the College during the last two

years. These include the president, the vice president for academic affairs, and an

individual to oversee the new role of student success initiatives in general at the College.

Serving on college-wide committees would facilitate the process of getting to know these

people better as well as other new employees in departments across the College.

Another recommendation for the PTA program would be the possibility of including the student success coach in some of the appropriate monthly PTA department meetings when the agenda includes student success and retention issues specific to the PTA students, even for part of the meetings where these issues are discussed. This would help all interested parties to be aware of what is being done for the students so that duplication of services does not occur unnecessarily. The PTA faculty and the student success coach are all working to help students be successful, but there seems to be a slight lack of cohesiveness between them all. Regular meetings would assist in creating a tighter network focused on student success.

In similar vein, the allied health admissions staff should be included in departmental meetings at appropriate times as well. The individual from this department indicated that she meets with the PTA program director at certain times of the year when admissions issues are paramount, but inclusion in departmental meetings would allow all PTA faculty members to be aware of the issues surrounding admissions associated with student success and retention.

Recommendations Arising out of Data From Departments

Closely Related to the PTA Program

The recommendations determined from interviews with departments closely related to the PTA program mainly emerged from ideas put forth by the Student Success Coach. One of the issues raised was that students were often uncomfortable entering the coach's office since it is located in the center of a busy corridor right outside the office of the dean. In addition, this office is an interior location with no windows to the outside,

but windows looking into the corridor. These windows have blinds that can be closed, but the lack of privacy was mentioned as a deterrent to comfort of the students who needed to be seen by the coach. Mention was made in the interview that the coach often met with students in other locations on campus such as the library if they were too nervous about being seen in the coach's office. Although space is at a premium in the allied health building a more private location for the office of the coach would be beneficial for those students requiring services. The high visibility of the office space may deter some students from seeking the services provided or prevent them following through with faculty recommendations to see the coach.

Recommendations Arising From Departments Across the College

Many innovative initiatives to improve student success and retention have been implemented across the College campus. I observed that the collaboration among departments appeared to be of a high level. The early warning factors newly integrated into the College database system seem to inform all stakeholders regarding student lack of progress in courses, and seem to be a positive step in helping identify at risk students at the mid-term point and before. Mid-term grades are entered into the system by faculty members and students have immediate access to their grades. Recommendations for students to follow up with the advising department personnel are made through e-mail, hard mail, and by telephone call. In addition, the financial aid department personnel closely track students who receive financial aid to ensure they are meeting the standards for continued financial assistance and are not accruing more debt than is advisable or failing to many of their courses. These attempts to help students complete their programs

of study in a timely manner are part of a coordinated effort to help students be successful

at the College. All these departments working together is in direct alignment with the

focus of the college strategic plan which encompasses student access and success. The

objectives and goals within this plan include student achievement initiatives and

accessibility and affordability topics keeping this a main focus at the College. All of these

factors serve to emphasize that the collaboration among College departments is a major

focus in the system of the College as a whole and is definitely a strength of the

institution. I identified some factors which might serve to further improve student success

in the PTA program and perhaps in other programs at the College.

Despite all the efforts to retain students and promote success there are some

possible things that might help to improve this system even further. Sometimes the word

does not seem to get out about the coordination of strategies across the College

performed by the department of learning outcomes assessment and this could be an area

to improve visibility. Many of the departments are doing amazing work in the area of

student success and a format to share these initiatives across the whole campus would

enable people to adopt successful ideas from other departments. Celebrating the

successes helps to boost faculty and staff morale and assists in helping all departments

learn from each other so they are not re-inventing the wheel when developing student

success initiatives. Perhaps sessions at faculty development times of the year would be an

occasion to share these ideas, or a publication about a variety of student success

initiatives could be made accessible to all faculty and staff. This could lead to the

development of a publication to advertise the College's efforts in this area to the general

public. This would also be an example of a strategy to meet the Middle States recommendation at the most recent re-accreditation visit for the College of "strengthen[ing] communication and collaboration throughout the College community".

At the moment each department submits an outcomes assessment plan and report to the office of outcomes assessment. These documents and reports are made into a master report for the whole college. However, this master report is extremely complicated and difficult to read. I wonder how many people at the College actually read the report and use it when planning outcomes for their own departments? Simplification of the results arising out of this amalgamation of all reports could form the basis for the development of the publication outlining successful strategies.

The student success coach made an observation that I found of interest. She suggested that some of the students the College loses to other colleges due to change of curriculum could be better retained. Her suggestion was that students should have to see a counselor before they register for classes or enter a program of study. This could enhance the retention of students who might consider enrolling in another health care program rather than transferring to another college. The logistics of this might be easier if the registration and counseling services were located in closer proximity to each other.

The systematic approach to student success is a complicated one. This College works well with interdepartmental collegiality. With the increase of collaboration and communication across the campus brought about by better sharing of data and outcomes regarding student success initiatives the impact for the College could be one of greater excellence and serve as a model for other colleges. The basic structure is present and now

all that is needed is a following through of all the parts to create the whole picture upon which even greater success could be founded.

Although it is not possible for me to say definitively that all systems within the College contribute to student success in the PTA program, the data gathered for this study suggest that close collaboration across College departments enhances the flow of assistance for those students with personal and academic difficulties. When factors within the PTA program itself are combined with those within the school and the College as a whole, it is easy to see that all systems within this College are focused on student success. Whether we can say that the systemic approach at this College is linked to student success in the PTA program or not, it certainly does not hurt that the collaboration and cooperation among College departments exists. The free flow of communication leads to less isolation of individual departments. I truly believe that the more isolated departments become and the more self-absorbed about the specific program issues concerned in the accreditation process, the less likely the students are to obtain the assistance they may need to succeed.

Another factor that seems to be of overall importance is the way in which College administrators listen to the requests and needs for additional personnel or resources to further assist students. Within this College there is evidence that many departments were provided with newly developed positions to ensure the work with students could continue apace with demand. This occurred within several of the departments I held interviews with including financial aid, outcomes assessment, and the School of Health Professions.

Obviously not all colleges that house a PTA program are similar in size or location to this College. One of the factors I described contributing to student success was the selective admissions process to the program itself. However, when the College as a whole is collaborative and communication is made easier, with no top-down restrictions on the flow of information between departments, the possibilities for coordination of efforts geared to student success seems to be more attainable.

When considering if some of the ideas within this study would work for other institutions they will need to determine what level of collaboration and communication currently exists. Would applying some of the systemic ideas work within the context of their college? Do they already have some level of cooperation and collaboration and perhaps feel the need to continue to expand the possibilities within the scope of their budget to include some of the suggestions I have made? Perhaps a more concerted effort to enhance the college-wide communication would open up new possibilities for collaboration of ideas for new student success initiatives at the college, division, school and program levels? Would the inclusion of round table discussions during faculty and staff development activities about current student success initiatives being used within departments lead to more dissemination of ideas about further possibilities throughout the college? Another aspect to consider is whether data can be used to make a case for additional personnel to assist with student success initiatives both academic and personal. As all colleges strive to raise graduation rates, reduce attrition, and improve overall student success many of the factors raised in this study may be of help. Add to this equation that overall budgets are reduced and enrollments in general are down at colleges

it is important that we use every means possible to retain students and ensure their success now and for the future.

Many individual initiatives pertaining to student retention have provided empirical evidence that they can enhance student retention. However, a system-wide culture of supporting student success in all departments, where each office and entity examines its own role and works collaboratively with other entities is likely to have an even greater impact.

Recommendations for Further Study

Further study of other PTA programs set in different community colleges following the same procedures would be interesting to see how the system at other colleges compares to that of this College. Determining whether other PTA programs with very good pass rates on the NPTAE have similar experiences in the college system would be helpful in verifying the collected data. Since this is the first study of this kind regarding a PTA program further study of such programs would add to the body of literature supporting student success in PTA programs. In other studies it would be helpful to include the president of the College and the vice president of academics in the list of interviewees to see if this would add to the data in any significant way. In this study the president and vice president were comparatively new to their positions and declined being interviewed as they felt they could not add to the body of knowledge I was collecting.

Implications for Positive Social Change

The implications of this study for social change are several. As stated in previous chapters, as the population of the United States continues to age with more people over the age of 65 than ever before, there is a need for qualified individuals to work with this population for rehabilitation. The retention and success of students in the health care field will make more qualified individuals available for employment in rehabilitation situations. This is not just a cost issue, although helping people remain in their own homes is certainly less costly for families than the skilled nursing facility option, but it is also a quality of life issue. Having people remain in their own homes and not be admitted to skilled nursing facilities is a cost saving measure over time for insurance companies, the Federal, State and local governments, the Medicare system, and for the individuals and their families. In addition it allows people to maintain their independence as long as possible and to have a better quality of life.

Since the start of this study the requirements for continued accreditation of a PTA program have changed from requiring an 80% average over a three-year period to an 85% average over a two-year period of students taking the NPTAE passing it each year. This increase in the expectations for students passing the NPTAE makes it even more important that student success is ensured. If a continued supply of qualified health care personnel is to be educated to serve the public the colleges that house a PTA program must remain open and fully accredited. In order to do so the results on the NPTAE must be maintained at least at the 85% average over two years. Although not part of the research question addressed by this study, the other accreditation criterion that has to be

maintained is that of an average graduation rate of at least 60%. In order to meet both of

these criteria student success within the college PTA programs and on the NPTAE are of

prime importance.

Another area applicable to social change is that of reducing the costs of college

attendance for students while educating them to serve the community at large through the

health care system. Students who complete their course of study in an associate degree

for PTA in 2 years and are successful in passing the NPTAE at the first attempt have less

debt than those who either complete the program in a longer time period, or fail and have

to take the NPTAE a second or more times. The financial aid personnel verified that they

tracked students to ensure they did not have excessive debt as described in Chapter 4. The

current cost of taking the exam and becoming licensed or registered in the state in which

a PTA wishes to work is approximately $500. Each time a graduate has to re-take the

exam it costs more money.

This study also gives credence to Senge's concept of an institution working as a

system to ensure both the success of the whole, and of the parts. In this case the system is

working together resulting in greater likelihood of success for students in one area of the

College namely the PTA program. Perhaps the PTA program students would be

successful without the help of the system set up at the College, but the results would

certainly not have been as smoothly and seamlessly achieved. In this study it is evident

that although the focus was on the PTA program success rate on the NPTAE, the side

issue for the faculty of the PTA program was that of increasing the graduation rate of

students as well as ensuring the success rate on the exam. The concepts of retention and

success on the national exam are closely intertwined at the College as evidenced in the analysis of the interviews and the documents studied. The extensive collaboration between departments within the College plays a large part in creating an atmosphere of cooperation that is reflected in the efforts made on the behalf of students to encourage their success. This atmosphere is conducive to both a pleasant working and learning environment. The College appears to live its strategic plan in which student success is a major goal. This study has provided evidence of what can be achieved when everyone at an institution works together toward a common goal, in this case that of student success.

What further comes to mind in considering social change is that all people within the departments interviewed advocated for student success. The fact that departments collaborate extensively means that the topic of student success is discussed at length in interdepartmental meetings and the subject remains a visible entity. The openness of this communication leads to the free flow of information regarding the topic and from this strategies for improvement are constantly developed and revised. The PTA faculty was all committed to student success, but with the addition of all the other departments this commitment became a cohesive and tangible effort.

If we are to have sufficient health care workers to take care of the ever increasing aged population then as educators we have the need to make student success a priority. Students need to be encouraged not only to be successful at the college level, but to continue that success throughout their careers. Part of that success includes reducing the financial burden as much as possible, stimulating interest in continuing education throughout the lifespan, building the self-esteem of individuals working in health care,

and encouraging their personal and professional growth. Although we can look at all the help provided to students to encourage success that have been noted in this study, it is important that students are also encouraged to take responsibility for their actions and their own learning. This is provided for with the systems in place to make the student responsible for following through with recommendations made by faculty members, advisors, financial aid services, and counselors. The health care coach specifically provides assistance with encouraging the growth of self-esteem and confidence in students which should make a lasting impression on students as they progress through their careers. All people who work in education have a responsibility to instill students with a love of learning and a sense of responsibility.

Conclusion

My experience with the research process was very positive. All the people interviewed at the College were extremely helpful and the hospitality I received was excellent. All the people I requested to interview agreed to participate which made my work much easier. The joy of collecting data for a qualitative study was also a source of frustration. After gathering the multitude of information, trying to make some semblance of sense and order of the plethora of facts was a massive feat that I could never have previously imagined. The welcoming atmosphere and the interest in the subject of the study by all the interviewees played a large part in making this study a rewarding experience.

As a PTA program director myself I embarked on this study with some of my own ideas about student success. However, the collection of data from interviews,

classroom observations, and PTA and College documents gleaned some surprising results

that I could not have anticipated. The interaction between the departments included in the

study demonstrated surprising consistencies in the stories told by each interviewee. The

sincere commitment of all people I interviewed to the topic of student success was very

apparent. I was amazed at the extent to which all College personnel seemed to live the

strategic plan and embody the goals and objectives of this plan into their interactions with

students. The fine tuning of the work on student success at the College that I have

suggested would not be possible if the people involved were not open to innovative ideas

and truly wished to enhance the student success initiative. The College administrative

staff demonstrated their commitment to student success through the appointment of a

director of outcomes assessment with supporting staff, hiring of many academic advisors,

and making the grant position of allied health coach into a full-time College funded

position. The recent addition of a director for student success points to the commitment

of the College to this topic.

When I started the interviews some of the comments centered round the fact that I

could not have picked a better topic that was so much in line with the goals of the

College. If I were to do further interviews as a follow-up at the College I would include

the director of student success and the vice president for academics. Both of these

individuals will now have had some time in position and might be able to add to the data

collected.

If I were to start again with the process for this study I think I would still perform

interviews and would try and coordinate my visits to campus with PTA program

meetings if possible. It is easy to use hindsight and I spent two sessions of 3 separate days for a total of 6 days at the College as it is. When I am working full time this is probably about the best I could have done. The only alternative would have been to work over the summer, but then I would not have been able to observe classes and some of the faculty and staff would not have been available for interview due to vacations. There probably is no "good" time to achieve all that I expected to be able to do.

I am pleased I performed all the interview transcriptions, but it was a lengthy process. I do think I gained a lot from doing the transcriptions because I was thinking about analysis all the time I was doing them. This made the task of sifting through all the collected information somewhat easier than it would have been if an outside party had performed the transcriptions.

In hindsight I think interviewing the president and vice president would have been helpful even though they both felt they could not add to my data. The new hire of the director of student success occurred during my visits so was not able to participate in the interviews. I would very much like to do a follow-up visit and interview this person, but know that this is not possible for this study. This individual will by now have gained knowledge of the college student success initiatives and I would like to know this person's ideas as a relatively new person to campus. Overall I feel I gathered some interesting data and am pleased with my first major research study outside the health care arena.

To reflect on how the study has changed my thinking on the topic of student success I would have to note that although I have always personally been committed to

promoting student success, I am now more committed than ever. Seeing the interactions within the College system working to support student success has made me realize that Senge's (1990) ideas about the system supporting the individual aspects, the parts, of the whole is a compelling argument. It is truly amazing how when people work together and focus on a topic of value the effect can be inspiring. Even though there are many aspects of interventions for encouraging student success at the College that range from computer tracking of student grades, follow-up through a variety of departments and personal interaction with students, the general atmosphere of collegiality at the College is perhaps the single most effective tool in overall student success within the PTA program. When everyone works together towards a common goal, great things can be achieved.

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Appendix A: Interview Questions

Initial questions for interview of study participants are for information only and to identify the role of the interviewee within the organization. All questions have been previously tested in a pilot study.

What is your full name?

- What position do you hold at the college?

- What are your major roles within that position?

- How many years have you been in this position?

- Do you understand and agree to this interview being recorded?

- Have you read and understood the permission sheet and the explanation of this research study? (Here an overview of the research study and the permission paper for signature by the interviewee will be provided)

Actual study questions

- Tell me about any experiences you have had with student success/student outcomes in general

  o The response to this question will identify those people who have a role with general college student success in addition to the PTA program students

- What experience have you had with student success/outcomes in the physical therapist assistant program?

  o This will identify those people who have specifically dealt with PTA students in any way that may impact on their success

- Can you explain any things you think may have helped with student success?

    o Intended to stimulate the interviewee into consideration of what he/she thinks about student success and what in his/her mind affects such success. This question opens up the interviewee to consider his/her own role in student success.

- Talk to me about any interactions you have had with students regarding student success

    o Although this may not directly apply to all interviewees in their role at the college, it may open up ideas about both formal and informal discussions with students that they may not have even previously thought about

- Tell me about any interactions you may have had with other people at the college such as faculty and staff in other departments about student success

    o This question is intended to make the interviewee think about his/her interactions globally at the college whether individually or in a group setting. If not raised by the interviewee, the topic of participation in college-wide committees and meetings may be raised by the interviewer. This will assist in identifying the systems issues related to student success that is vital to the study.

- How do you feel the College as a whole supports or undermines retention efforts? Please describe any stories that may speak to this issue.

- Is there anything else you would like to add before we close?

- o Some people may have input that surfaces as a result of previous questions. This question endeavors to keep the interview as open-ended as possible with room for individual input that may be slightly off topic.
- Thank you so much for your assistance today

The above questions have been tested in a pilot study performed as part of the research course RSCH 8350, *Advanced Qualitative Reasoning and Analysis* through Walden University in fall 2010.

Additional questions per department will be added as follows:

Physical Therapist Assistant Department faculty and staff additional questions:

- What specific areas of student or college-wide interaction can you describe that you feel pertains to student success in the PTA program?
- Are there other areas that you feel impact student success at this institution?
- Are there areas within the PTA program that you feel impact the good success rate your students have on the NPTAE?
  - o These specific questions relate to PTA student success while still focusing on the aspects of inter-departmental communications and interactions regarding student success. Asking specifically about PTA student success may elicit further questions from the me regarding specific policies and procedures, such as selective admissions processes (if any), didactic teaching methods, laboratory teaching methods, clinical placements, and student services for tutoring and advising.

Financial aid department additional questions:

- Do you serve on any committees or participate in organizations with faculty or staff from the PTA program?

- Please tell me about the kind of interactions you have with PTA Program faculty and staff about students or the program in general.

- What kinds of interaction do you have with other departments at the College on a regular or occasional basis?

- Please tell me about the kind of interactions you have with students in the PTA program.

- What kind of questions do PTA students have for you?

- How would you describe your interactions with PTA students compared to other students at the College?

    o Having financial aid staff focus on interactions with College departments in general and then specifically with the PTA program staff and faculty may help to elicit reflections regarding the program compared to other programs and students that they may not have otherwise considered. In this way the systems approach for the study may be further illuminated.

Registrar's office additional questions:

- Do you serve on any committees or participate in organizations with faculty or staff from the PTA program?

- Can you tell me how many of the local high school students co-enroll in college courses while still in high school and then attend the college?

- Please tell me about the kind of interactions you have with PTA program faculty and staff about students or the program in general.

- What kinds of interaction do you have with other departments at the College on a regular or occasional basis?

- Please tell me about the kind of interactions you have with students in the PTA program.

- What kind of questions do PTA students have for you?

- How would you describe your interactions with PTA students compared to other students at the College?

  o Having Registrar's office staff focus on interactions with College departments in general and then specifically with the PTA program staff and faculty may help to elicit reflections regarding the program compared to other programs and students that they may not have otherwise considered. In this way the systems approach for the study may be further illuminated.

Student services additional questions:

- Do you serve on any committees or participate in organizations with faculty or staff from the PTA program?

- Please tell me about the kind of interactions you have with PTA program faculty and staff about students or the program in general.

- What kinds of interaction do you have with other departments at the College on a regular or occasional basis?

- Please tell me about the kind of interactions you have with students in the PTA program.

- What kind of questions do PTA students generally have for you?

- How would you describe your interactions with PTA students compared to other students at the College?

  o Having Registrar's office staff focus on interactions with College departments in general and then specifically with the PTA program staff and faculty may help to elicit reflections regarding the program compared to other programs and students that they may not have otherwise considered. In this way the systems approach for the study may be further illuminated.

Advising and support services additional questions:

- Do you serve on any committees or participate in organizations with faculty or staff from the PTA program?

- Please tell me about the kind of interactions you have with PTA Program faculty and staff about students or the program in general.

- What kinds of interaction do you have with other departments at the College on a regular or occasional basis?

- Please tell me about the kind of interactions you have with students in the PTA program.

- What kind of questions do PTA students have for you?

- How often do PTA students seek your assistance in a given semester? What topics would you say are the most frequently occurring among all PTA students?

- How would you describe your interactions with PTA students compared to other students at the College?

  - Having student support staff focus on interactions with College departments in general and then specifically with the PTA program staff and faculty may help to elicit reflections regarding the program compared to other programs and students that they may not have otherwise considered. In this way the systems approach for the study may be further illuminated.

Admissions office additional questions:

- Do you serve on any committees or participate in organizations with faculty or staff from the PTA program?

- What actual role do you play in the admissions process for the PTA program?

- Please tell me about the kind of interactions you have with PTA Program faculty and staff about students or the program in general.

- What kinds of interaction do you have with other departments at the College on a regular or occasional basis regarding the admissions process for the PTA program?

- Please tell me about the kind of interactions you have with students in the PTA program.

- What kind of questions do PTA students/prospective PTA students have for you?

- How would you describe your interactions with PTA students compared to other students at the College?

  - o Determining the role the admissions office plays in the PTA program will help to determine the student selection process for the program in addition to the review of literature regarding the admissions process. Having Admissions office staff focus on interactions with College departments in general and then specifically with the PTA program staff and faculty may also help to elicit reflections regarding the program compared to other programs and students that they may not have otherwise considered. In this way the systems approach for the study may be further illuminated.

Appendix: Grid for Classroom Observation

Lescher research: Classroom Observation Form (Names of instructor and students not identified)

Possible topics pertaining to student success	Relevant comments made by instructor	Relevant comments made by students	Number of times comment of a similar nature occurred during the class session	Other observations
Study skills				
Test taking skills				
Review of material previously learned				
Class assignments				
Reading materials				
Hints on learning strategies				
Free flow of communication between students and instructor				
Different types of learning style accommodated				
Tutoring				
Group learning activities				
Other				
Other				