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2020

THE IMPACT OF PRIOR LEARNING ASSESSMENT CORRELATIONAL STUDY ON ACADEMIC OUTCOMES AMONG ADULT COMMUNITY COLLEGE STUDENTS

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THE IMPACT OF PRIOR LEARNING ASSESSMENT CORRELATIONAL STUDY

ON ACADEMIC OUTCOMES AMONG ADULT

COMMUNITY COLLEGE STUDENTS

A dissertation submitted in partial fulfillment

of the requirements for the degree of

DOCTOR OF EDUCATION

to the faculty of the Department of

ADMINISTRATIVE AND INSTRUCTIONAL LEADERSHIP

of

THE SCHOOL OF EDUCATION

at

ST. JOHN'S UNIVERSITY

New York

by

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Date Submitted <u>March 24, 2020</u>   Date Approved <u>April 23, 2020</u>

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ABSTRACT

THE IMPACT OF PRIOR LEARNING ASSESSMENT CORRELATIONAL STUDY

ON ACADEMIC OUTCOMES AMONG ADULT

COMMUNITY COLLEGE STUDENTS

Pina Arcomano Britton

The purpose of the ex post facto study was to examine the extent to which the impact of awarding credit for Prior Learning Assessment (PLA) to adult learners increases community college enrollment and graduation rates, at an ethnically diverse community college in the northeastern United States. The study explored the relationship between adult learners who earn PLA credits or do not earn PLA credits, and student success. Data were collected from student archival records, September 2012 – May 2018 from 1,307 adult learners who ranged in age from 25 to 67, attended both full- and part-time, had a declared major, and had no previous credits from the study setting before September 2012. The main research question was to determine what, if any, impact awarding PLA had on a set of academic success indicators (GPA, persistence, and graduation). Results from a binary logistic regression analysis showed that community college adult students who earned PLA credit were significantly more likely to graduate than non-PLA adult learners who did not earn PLA credit. None of the demographic factors (age, gender, and ethnicity) added to the prediction of graduation attainment for adult learners beyond PLA status. The One-way Multivariate Analysis of Covariance analysis for the outcome measure GPA revealed that the PLA and the non-PLA group achieved statistically equivalent overall GPA, and persistence (length of time to degree

attainment) was significant. The PLA group required less time to graduate than the non-

PLA group. The relevant findings demonstrate to the community college policy and

decision makers the unique needs of adult learners, and the potential contribution PLA

status makes to student success. With the shift to a more diverse demographic, the

community college needs to use the collected information to allocate resources to

strategically develop a rigorous PLA program, and market the value and significant

benefits gained from PLA to foster more enrollment, retention, and completion. During a

critical period, when institutions continue to face the challenge of declining enrollment,

this study will add to the literature within the context of the community college

associated with the PLA process, as it relates to adult learners.

DEDICATION

In memory of my Nonna (Nonni), Vincenza Arcomano, and Nonno, Salvatore

Arcomano, who, in their prime, selflessly dedicated their lives to raising my two brothers

and me.

In memory of my mother, Pina Arcomano, who never saw her children grow up.

She would have been very proud of the three of us.

To my husband, Richard Britton, this doctorate would not have been possible

without your support and understanding. I am eternally grateful.

To my daughters, Jill and Kim, I have been an adult learner for most of their lives.

Thank you for always understanding and sharing in my journey. You are the light of my

life.

To Maggie and Jack, my adored grandchildren. I know you will achieve

greatness. Your options are endless.

Lastly, this document is dedicated to all the adult learners. Their challenges are

enormous but their potential achievements are greater.

ACKNOWLEDGEMENTS

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CHAPTER 1

Introduction

Community colleges, like other colleges and universities, continue to face the

challenges of a decrease in enrollment of traditional students, as well as other students

who complete graduation requirements. Kelderman, Gardner, and Conley (2019)

reported and reinforced that the warning signs have been apparent for years alerting

institutions of the decrease in the number of high school students to fill classes and the

increasing cost of education. The new majority of college undergraduate students

enrolled in fall 2011 were 67% adult learners with a minimum age of 25 according to the

National Center for Educational Statistics (Council for Adult and Experiential Learning.

[CAEL], 2017). CAEL (2017) acknowledged that between 2012 and 2023, there is an

expected 20% increase in the rate of adult learners over 25, according to the National

Center for Educational Statistics. The American Association of Community Colleges

(2019) estimated that for fall 2018, community college enrollment declined 3.2 % from

the previous year, and 36.6% of full-time students from the peak of 2010. In the period

between 2010 and 2016, American undergraduate institutions experienced a 7%

enrollment decrease (Ryan & Bauman, 2016). The current economic rebound contributes

to the decline in college enrollment due to increased job opportunities and the reduction

in unemployment (Juszkiewicz, 2017). The National Student Clearinghouse reported that

public two-year institutions between 2014 and 2016 showed a higher decline in the rate

of students over the age of 24 (adult learners) than of traditional students (Juszkiewicz,

2017). The decrease in enrollment between 2010 and 2016 significantly impacted

community colleges, with a 21% decline in enrollment (Ryan & Bauman, 2016).

Community college adult student enrollment continues to decline at a greater rate than that of traditional students; however, the rate of decline was at the lowest between fall 2014 and fall 2016 (Juszkiewicz, 2017). Educational appropriations in higher education are directly impacted by enrollment, full-time equivalent (FTE). Kazis et al. (2007) identified that enrollment drives revenue, and "the greater the number of students enrolling in higher education programs, the greater the amount of revenue flowing to the institutions" (p. 36). Predicting the number of students that will attend a community college is complicated because of the unknown factors of competing institutions (Cohen, Brawer, & Kisker, 2014). Colleges need to seriously consider who they serve. By 2030, the most adaptable colleges will be in the best position to serve the shifting demographic of student population (Kelderman et al., 2019) With the emerging decline of the number of students in higher education, a method for bolstering community college enrollment is to shift the focus from the traditional student to the adult learner population. The National Center for Education Statistics defined the adult learner as meeting "one of seven characteristics: delayed enrollment into postsecondary education; attends college part-time; works full time; is financially independent for financial aid purposes; has dependents other than a spouse; is a single parent; or does not have a high school diploma" (Pelletier, 2010, p. 1). Kasworm (2003) defined the adult student as 25 years of age or older, financially independent, employed, with family and community commitments, and with college student commitments. Most colleges and universities in the United States have created programs designed for adult learners, in an attempt to attract them to their campus (Ritt, 2008). Educating adults may potentially improve local and global economies, because employers are searching for adult learners who can adapt

to the changing landscape (Ritt, 2008). Given the change in enrollment trends of the community college, it is important to understand how institutions attract and meet the unique demands of adult learners (Ritt, 2008). Adult learners consider the following variables when deciding to choose or attend college: cost, convenience, flexibility, time to completion, and advising (Stamats, 2016).

An innovative strategy for attracting, retaining, and increasing completion rates for adult learners is to incorporate credit for demonstrated prior learning, known as the Prior Learning Assessment (PLA) program. PLA takes into consideration adult learners' needs and expectations to obtain a degree, time, and cost (Leiste & Jensen, 2011). R. Klein-Collins (2016) stated that valuable insights regarding program usage and student outcomes can be obtained by tracking PLA data. If institutions that award PLA credit report on retention and graduation rates, the data could better assist administrators in understanding the value of PLA to improving student success and institutional effectiveness. For most institutions, awarding credit in this manner remains an untapped opportunity (Ritt, 2008). There is a substantial correlation between degree completion and PLA (CAEL, 2017). Through the lens of PLA as a pathway to promote productivity at the community college, this study focused on the standard metrics to measure the adult learner's success, in areas such as retention, persistence, rate of completion, and goal attainment.

Purpose of the Study

The purpose of the ex post facto correlational study was to examine the extent to which the impact of awarding credit for PLA to adult learners increases community college enrollment and graduation rates, at a tri-campus suburban community college in

the Northeast. The study explored the relationship between adult learners who earn PLA credits or do not earn PLA credits, and student success. The study further examined if there was a difference in the outcomes of student success (GPA, persistence, and graduation), controlling for full-time and part-time enrollment status, between adult PLA learners and non-PLA adult learners. For the study, student success was defined as the adult learners' GPA (overall grade point average), persistence (length of time to degree attainment), and graduation (completing an associate degree) rate. Full-time enrollment status is 12 credits or more per semester, and part-time enrollment status is fewer than 12 credits per semester.

Brigham and Klein-Collins (2010) stated that since the 1970s, one innovation used but often under-promoted and under-utilized within institutions is PLA. PLA is the process employed by colleges to evaluate for academic credit and to determine if college-level knowledge and skills have been gained. Some of the methods used to evaluate and determine the validity of the knowledge base for awarding college credit are Advanced Placement (AP), College Level Examinations Program (CLEP), challenge exams, evaluation of non-collegiate instruction, and portfolio assessment. In addition, adult learners can gain knowledge outside the classroom from employment (e.g. on-the-job-training and employer-developed training), and military training and service.

A method for bolstering community college enrollment is to shift the focus from the traditional student to the adult learner population. For educators in higher education to effectively provide the contextual framework for the adult learners' success, adult leaning theory is an appropriate construct to explore the relationship between PLA and student attainment. Using the tenets of adult learning, provided by Malcolm Knowles

(1970) and Stephen Brookfield (1985) as a theoretical framework, this study provided

practitioners with a better explanation of the relationship between adult learners who earn

PLA credits or do not earn PLA credits, and student success (GPA, persistence, and

graduation). Adult learners who participate in PLA will complete more credits, remain

enrolled longer, and complete graduation requirements at a higher rate than adult learners

who do not earn credit for prior learning at a two-year institution.

Problem Statement

Community colleges, like other colleges and universities, continue to face the

challenges of a decrease in enrollment of traditional students, as well as of other students

who complete graduation requirements.
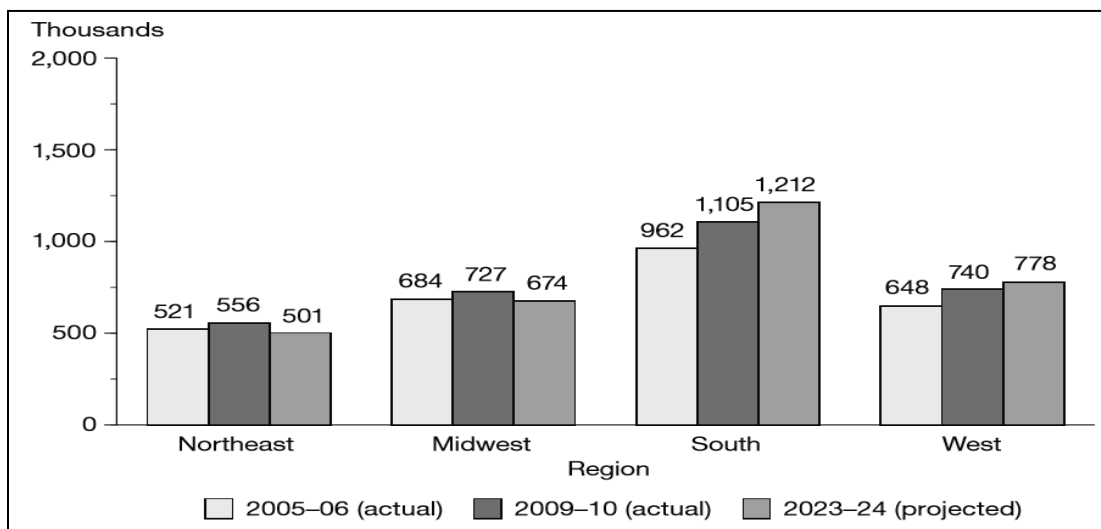
Figure 1.1. Actual and Projected Numbers for Public High School Graduates, by Region:
School Years 2005-06 (actual), 2009-10 (actual), and 2023-24 (projected). Hussar and
Bailey, 2016.

Hussar and Bailey (2016) projected that in the Northeast between 2009-2010 and again in

2023-2024, the number of public high school graduates will decrease by 10%. The

Midwest will see a similar decrease of 7%, while the South will experience a 10%

increase and a 5% increase in the West (as shown in Figure 1, Hussar & Bailey, 2016, p. 15).

The New York State Education Department (2009) reported that between 2008 and 2019, the number of high school graduates (public and private) in New York State is likely to decrease by 16.5% due to actual declines observed now by grade level in the state's schools. The New York State projection for Nassau County 2008-2019 was 14.6% and Suffolk County 12.3% (New York State Education Department, 2009). The U.S. Department of Education (USDOE) and the National Student Clearinghouse major findings concluded: "Both reports indicated a continued nationwide decline in community college enrollment, which began in 2011. The decrease in enrollment of older students has been the highest and the most consistent over the past four years" (Juszkiewicz, 2016, p. 3).

Chen (2017) stated that in higher education the traditional student holds a "privileged position" and the support for students based on lifestyle and age is not equal (p. 3). A strategy for addressing the need to attract and retain adult learners at community colleges is to provide PLA credit. Klein-Collins and Hudson (2017) described PLA as a process of evaluating an adult student's experiential learning for granting college credit toward advancing a college education. The principal organization committed to the education and future of adult learners is the CAEL, a nonprofit organization that is "a leader in pioneering learning strategies for individuals and organizations" (CAEL, 2005, para. 1). CAEL was established as a research project of the Educational Testing Service (ETS) in 1974. CAEL's approach to advance the interests of lifelong learners is multifaceted:

CAEL advances lifelong learning in partnership with educational institutions,

employers, labor organizations, government, and communities…CAEL's adult

learning focused institution initiative is aimed at increasing access and removing

barriers to postsecondary education for adults so they can be successful in

attaining postsecondary degrees and credentials. (CAEL, 2005, para. 1-2)

Community colleges should evaluate whether or not they are meeting the needs of

adult students. Klein-Collins (2010) indicated that PLA graduates from two-year

institutions are four times more likely to complete a degree than non-PLA students.

Adult learners who earn PLA credits complete a degree faster and at a lower cost. PLA

can significantly contribute to the students' progress, persistence, and completion. Adult

learners who earned between 13 and 36 credits did see a decrease in time and cost

towards completing an associate degree (Klein-Collins, 2010, p. 46). Klein-Collins's

(2010) report further identified that PLA credit can be used to obtain advanced standing

at the institution, waive course requirements, and meet general education requirements

and program requirements. Students with PLA credits are four times more likely to

graduate from a community college than non-PLA students (53% compared to 13%).

Theoretical/Conceptual Framework

For educators in higher education to effectively provide the contextual framework

for the adult learners' success, the theoretical lens of the adult learner theory explored

Malcolm Knowles and Stephen Brookfield, two of the most influential, fundamental

adult learner theorists (Irby, Brown, Lara-Alecio, & Jackson, 2013). Brookfield (1999)

identified four concepts of the college experience for adult learners. First, through

feelings of impostorship, adult learners believe that they are not the image of or have the

persona of a college student, and are in disbelief when admitted to college. Second, committing cultural suicide may emerge when adult learners enter college and experience hostility and marginalization among peers. Third, adult learners experience a loss of innocence, having believed that "returning to education is viewed as a transformative marker… knowledge and truth become seen as contextual and open" (pp. 13-14). Adult learners encounter exterior difficulties, such as finances and class scheduling, that lead to attrition. Fourth, sustaining a learning community for adult learners among peers reinforces a common educational goal: to be successful and attain a degree. The review of the related quantitative and qualitative research provides a better understanding of the conflict and turmoil adult learners encounter between personal commitments and pursuing and completing a degree, and the contribution PLA makes to adult learners' college success (GPA, persistence, and graduation). These theories informed the conceptual model that guided the study.

The conceptual model displayed a comprehensive review of the variables and the association among the main theoretical and methodological analyses of adult learners and PLA. The model exemplified the relationship between the different variables in the study, and the effect the variables had on the outcomes for graduation, persistence, and GPA. The variables illustrated show the relationship between the independent variable PLA or non-PLA adult learners and the dependent variable graduation, and if there is a difference in the dependent variables of graduation, GPA, and persistence based upon PLA or non-PLA status, controlling (covariate) for full- and part-time students. A logical structure of concepts connected the theoretical and contextual traits of adult learners (characteristics, barriers, learning styles, academic success, and adult learner theory) that

provide a sound connection between the impact of PLA and academic outcomes among adult community college students.

Conceptual Framework

Prior Learning Assessment
for Adult Learners in Community Colleges

Independent Variables

Covariate Full-time

Dependent Variables

PLA Non-PLA

Persistence

Graduation

Covariate Part-time

G.P.A.

Retention
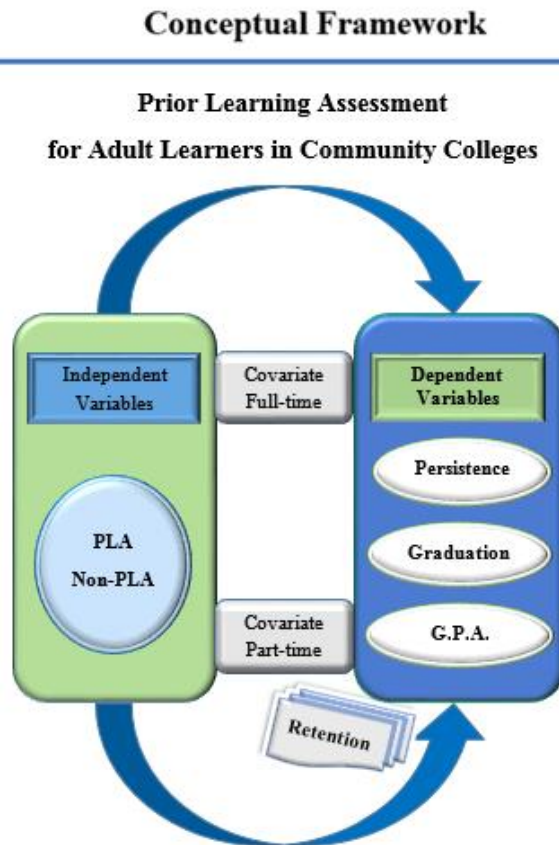
Figure 1.2. Conceptual framework.

Significance/Importance of the Study

The intent of the study was to provide data and other information to influence a community college to commit to establishing a sustainable PLA program for adult learners. Tate (2013) presented compelling evidence before the Education and Workforce Committee of the U.S. House of Representatives, stating that:

There is strong evidence of a relationship between PLA credit-earning and degree completion. In 2010, CAEL conducted a study of more than 62,000 adult students at 48 postsecondary institutions, comparing the outcomes of students

with PLA credit to the outcomes of students without such credit. Over a seven-year period, PLA students were two and a half times more likely to have earned a degree than students without PLA credit, 56 percent compared to 21 percent. (p. 7)

The benefits for institutions to adapt the PLA process are documented, but institutions vary in their implementation, delivery, and offering (Rust & Ikard, 2016; Travers, 2012; Stenlund, 2010). The current study reviewed the literature on adult learning; the characteristics of adult learners; assessment of prior learning; alternative accelerated and/or flexible learning models; community college mission, vision, and enrollment information; quantitative data analysis; and other relevant content.

Pursuing a college degree for many adult learners is a life-changing experience. The adult learner tends to be more focused and mission-driven. They experience insecurities and doubts. As mentioned previously, adult learners face many barriers to being successful in college. The student experiences conflict and turmoil between personal and family commitments and pursuing and completing a degree. The data support the concept that adult learners who are awarded PLA credits do, in fact, decrease their time towards earning an associate degree.

The significance of the study was to investigate and alert community college policy and decision makers to the unique needs of adult learners, and the potential contribution PLA status makes to student success (GPA, persistence, and graduation). With the shift to a more diverse demographic, the community college needs to use the collected information to allocate resources to strategically develop a rigorous PLA program, and market the value and significant benefits gained from PLA to foster more

enrollment, retention, and completion. Adult learners who participate in PLA will complete more credits, remain enrolled longer, and complete graduation requirements at a higher rate than adult learners who do not earn credit for prior learning at a two-year institution.

Research Question 1

To what extent is the PLA status (PLA or non-PLA) related to graduation attainment for adult learners after controlling for the covariate matriculation status (full-time, part-time)?

Hypothesis 1

Hypothesis – H_0: There is no relationship between PLA status and graduation attainment for adult learners after controlling for the covariate matriculation status.

Hypothesis – H_1: There is a relationship between PLA status and graduation attainment for adult learners after controlling for the covariate matriculation status.

Research Question 2

To what extent do demographic factors (age, gender, and ethnicity) add to the prediction of graduation attainment for adult learners beyond the PLA status (PLA or non-PLA) after controlling for matriculation status (full-time, part-time)?

Hypothesis 2

Hypothesis – H_0: The addition of demographic factors (age, gender, and ethnicity) does not significantly improve the prediction of graduation attainment for adult learners after controlling for PLA and matriculation status.

Hypothesis – H$_1$: The addition of demographic factors (age, gender, and ethnicity) does significantly improve the prediction of graduation attainment for adult learners after controlling for PLA and matriculation status.

Research Question 3

To what extent are there differences in GPA and persistence based on PLA status for adult learners after controlling for matriculation status?

Hypothesis 3

Hypothesis – H$_0$: There are no differences in GPA and persistence based on PLA status for adult learners after controlling for matriculation status.

Hypothesis – H$_1$: There is a difference in GPA and persistence based on PLA status for adult learners after controlling for matriculation status.

Design and Methods

Research Design and Data Analysis

The researcher conducted an ex post facto correlational study to examine the impact of awarding credit for PLA to adult learners, to increase community college enrollment and graduation rates at a tri-campus suburban community college in the Northeast. The study explored the relationship between adult learners who earn PLA credits or do not earn PLA credits, and student success. For the study, student success is defined as the adult learners' GPA, persistence (length of time to degree attainment), and graduation (completing an associate degree).

Data for the study were collected from student archival records for six academic years (September 2012 – May 2018). A non-random sampling of convenience was implemented to select the participants. As Creswell (2019) explained, "In nonprobability

sampling, the researcher selects individuals because they are available and convenient and represent some characteristic the investigator seeks to study" (p. 143). The data for the research were acquired from a large, ethnically diverse, tri-campus suburban community college, with a student population of 26,078, located in the northeastern region of the United States (NCES, 2018). For the purpose of the research, the institution was assigned the pseudonym Windjammer Community College.

Hypotheses

Research Question 1

To what extent is the PLA status (PLA or non-PLA) related to graduation attainment for adult learners after controlling for the covariate matriculation status (full-time, part-time)?

Hypothesis 1

Hypothesis – H_0: There is no relationship between PLA status and graduation attainment for adult learners after controlling for the covariate matriculation status.

Hypothesis – H_1: There is a relationship between PLA status and graduation attainment for adult learners after controlling for the covariate matriculation status.

Research Question 2

To what extent do demographic factors (age, gender, and ethnicity) add to the prediction of graduation attainment for adult learners beyond the PLA status (PLA or non-PLA) after controlling for matriculation status (full-time, part-time)?

Hypothesis 2

Hypothesis – H_0: The addition of demographic factors (age, gender, and ethnicity) does not significantly improve the prediction of graduation attainment for adult learners after controlling for PLA and matriculation status.

Hypothesis – H_1: The addition of demographic factors (age, gender, and ethnicity) does significantly improve the prediction of graduation attainment for adult learners after controlling for PLA and matriculation status.

Research Question 3

To what extent are there differences in GPA and persistence based on PLA status for adult learners after controlling for matriculation status?

Hypothesis 3

Hypothesis – H_0: There are no differences in GPA and persistence based on PLA status for adult learners after controlling for matriculation status.

Hypothesis – H_1: There is a difference in GPA and persistence based on PLA status for adult learners after controlling for matriculation status.

Sample or Participants

The study was limited to Windjammer Community College, a large, ethnically diverse, tri-campus suburban community college, with a student population of 26,078, located in the northeastern region of the United States (NCES, 2018). Demographics from Integrated Postsecondary Education Data System from fall 2018 identified enrollment at the community college as 49% part-time students, 51% full-time students, 53% female, 47% male, with 53% White, 25% Hispanic/Latino, 8% Black or African

American, 4% Asian, 2% two or more races, 7% race/ethnicity unknown, and 19% adult learner population 25 years of age or older (NCES, 2018).

The researcher acquired the data from the Office of Planning and Institutional Effectiveness (OPIE) at Windjammer Community College. Data for the study were collected from student archival records for six academic years (September 2012 – May 2018). A non-random sampling of convenience was implemented to select the participants. According to Creswell (2019), "In nonprobability sampling, the researcher selects individuals because they are available and convenient and represent some characteristic the investigator seeks to study" (p. 143).

Mills and Gay (2019) cited that a sample size guideline of a minimum of 30 participants is required in a correlational study to determine if a relationship exists between quantifiable variables. From the archival records data set, a total of 1,307 adult learners were identified: 170 PLA and 1,137 non-PLA. The total number of full-time (12 credits or more per semester) adult learners was 718: PLA 101 and non-PLA 617, as shown in Table 3.1 and Table 3.2.

The targeted population for the study was 25 years of age or older, full-time (12 credits or more per semester) and part-time status (up to 11.9 credits per semester), matriculated (a declared major) with no previous credits from the community college before September 2012. Adult learners with PLA status identify as students who were awarded college-level credit through the process of AP, CLEP, challenge exams, military credit (training/occupations), DANTES subject standardized tests (DSST), technical or professional licensure, and portfolio assessment.

Instruments

The purpose of the ex post facto correlational study was to examine the extent to which the impact of awarding credit for PLA to adult learners increases community college enrollment and graduation rates at a tri-campus suburban community college in the Northeast. Data for the study were collected from student archival records for six academic years (September 2012 – May 2018).

There were no instruments used in the study.

Procedures or Interventions

For this study, procedures and interventions are not required.

Definition of Terms

ACE Military-Occupations:

"College credit awarded based on recommendations by the American Council on Education-Military credit. Include all military occupations and experiences evaluated by ACE for college credit utilizing the ACE Guide to the Evaluation of Educational Experiences in the Armed Forces" (Klein-Collins, R., 2016, p. 8).

ACE Military-Training:

"College credit awarded based on recommendations by the American Council on Education-Military credit. Include all military training evaluated by ACE for college credit utilizing the ACE Guide to the Evaluation of Educational Experiences in the Armed Forces" (Klein-Collins, R., 2016, p. 8).

Adult Learner:

For the purpose of this study, the adult learner is 25 years of age or older, has full-time (12 credits or more per semester) or part-time (up to 11.9 credits per

semester) status, and matriculated (a declared major) into a degree program in the community college setting.

AP:

"College credit awarded based on scores earned on the Advanced Placement Program" (Klein-Collins, R., 2016, p. 6).

Challenge Exam:

"College credit awarded based challenge exam (or department exam), defined as an institutional exam designed to assess learning outcomes related to specific courses and which is developed by faculty who teach the course" (Klein-Collins, R., 2016, p. 7).

CLEP:

"College credit awarded based on scores earned on the College Level Exam Program" (Klein-Collins, R., 2016, p. 6).

Community College:

For the purpose of this study, a community college is a public institution offering programs leading to associate degrees. Community colleges have open access policies that permit the acceptance of students with poor high school academic backgrounds or have a GED.

Council for Adult and Experiential Learning (CAEL):

The focus of CAEL is "advancing the assessment of learning regardless of where that learning takes place …much of CAEL's work today is in supporting institutional efforts with PLA and Competency-Based Education, and CAEL's PLA quality standards are followed by leading PLA institutions and cited in

accreditors' guidelines for PLA policy and practice. (Bamford-Rees, Doyle, Klein-Collins, & Wertheim, 2014, p. 17).

DSST/DANTES:

"College credit awarded based on scores earned on the DSST Examination Program or its predecessor, the DANTES Examination Program" (Klein-Collins, R., 2016, p. 6).

Grade Point Average (GPA):

Achievement measures (Astin, 1984).

Graduation:

Degree attainment (completion of a college degree).

Matriculated:

Enrolled in a degree program.

Nontraditional Student:

For this study, the term nontraditional student is synonymous with adult learner.

Patterns of Enrollment:

Students are classified as full time if they were taking at least 12 hours of classes during an average academic college week and part time if taking fewer hours (NCES, 2019, February).

Persistence:

For the purpose of this study, persistence is defined as the length of time to degree attainment (graduation). Persistence is continuing involvement in coursework toward graduation (Wlodkowski, Mauldin, & Gahn, 2001).

Portfolio Assessment:

"Is an academic service through which any student can align experiential learning with college curricula by allowing faculty subject matter experts to determine if the student's learning is comparable and equivalent to college-level learning. This process results in an assessment that yields a credit or no credit decision" (Leader Kelly, 2017, p. 2).

Prior Learning Assessment (PLA) or the Assessment of Prior Learning (APL):

"Is the process by which many colleges evaluate for academic credit the college-level knowledge and skills an individual has gained outside of the classroom (or from non-college instructional programs), including employment, military training/service, travel, hobbies, civic activities and volunteer service" (Klein-Collins, 2010, p. 6).

Retention:

The benchmark for college student retention is calculated on first-time–full-time student cohorts and measured in terms of academic quarters or semesters (Flint, 2005).

Technical or Professional Certification:

"College credit awarded based on review of technical or professional certification" (Klein-Collins, R., 2016, p. 9).

CHAPTER 2

Introduction

With the emerging decline of students in higher education, a method for bolstering community college enrollment is to shift the focus from the traditional student to the adult learner population. The study explored the relationship between adult learners who earn PLA credits or do not earn PLA credits, and student success. An innovative strategy for attracting, retaining, and increasing completion rates for adult learners is to incorporate credit for demonstrated prior learning, known as the PLA program.

The focus of the literature review was to better understand adult learners, differentiate among their characteristics, and provide a sound connection between the impact of PLA and academic outcomes among adult community college students. The review of the literature addressed the variables and the theoretical framework for this body of study. To address the unique needs of adult learners and the potential contributions PLA can make to student success, the organization of the literature review was divided into thematic sections: adult learner theory; characteristics of adult learners; community college; Prior Learning Assessment; adult learners' academic success; and enrollment trends and adult learners.

Theoretical Framework

Alex, Platt, Gammill, Miller, and Rachal (2007) stated that encompassing the adult learning there are a "plethora" of theories: andragogy, transformational learning, post modernism, behaviorism, cognitivism, humanism, and constructivism. For educators in higher education to effectively provide the contextual framework for adult

learners' success, the theoretical lens of the adult learner theory was explored. Malcolm

Knowles and Stephen Brookfield are two of the most influential, fundamental adult

learner theorists (Irby et al., 2013). Brookfield (1999) identified four concepts of the

college experience for adult learners. First, through *feelings of impostorship*, adult

learners believe that they are not the image of or have the persona of a college student,

and are in disbelief when admitted to college. Second, *committing cultural suicide* may

emerge when adult learners enter college and experience hostility and marginalization

among peers. Third, adult learners experience a *loss of innocence,* having believed that

"returning to education is viewed as a transformative marker… knowledge and truth

become seen as contextual and open" (pp. 13-14). Adult learners encounter exterior

difficulties such as finances and class scheduling that lead to attrition. Fourth, *sustaining*

a learning community for adult learners among peers reinforces a common educational

goal to be successful and attain a degree. The review of the related quantitative and

qualitative research provided an understanding of the conflict and turmoil adult learners

encounter between personal commitments and pursuing and completing a degree, and the

contribution PLA makes to adult learners' college success (GPA, persistence, and

graduation).

Review of Related Literature

Adult Learner Theory

In the early 1970s, Malcolm S. Knowles, the leading practitioner of adult learning

and the father of andragogy, introduced the concept that adults learn differently than

children (Knowles, Holton, & Swanson, 1998). Knowles (1970) stated that learning and

teaching have been identified from the knowledge and experience of teaching children.

Most theories center on the operation of learning-teaching pedagogy (Knowles, 1970).

Pedagogy is from a Greek derivative stemming from *paid* (child) *agogos* (leading), the

art and science of teaching children (Knowles, 1970). During the 1950s in Europe, the

term andragogy (originating from the Greek words *anere*: adult and *agogoas*: lead) was

established to distinguish between adult learning and pedagogy (Schlossberg, 1985). Due

to the complexity of adult learner theory, discussions continue about the core principle of

andragogy (Knowles, Holton, & Swanson, 2015). Knowles (1970) defined the mission of

educators of adults as three distinct sets of needs and goals: those of individuals,

institutions, and societies. The basic theoretical concept of the adult educator's role

continues to change, known as a "change maker" from transmitting knowledge to being a

developmental facilitator for adult learners to achieve their full potential (Knowles,

1970). Vermeylen and McLean (2014) stated that adult learners in higher education have

unique characteristics and requirements. Knowles et al. (1998) stated that within the

context of practice, the summary of "Andragogy: Core Adult Learning Principles" that

are directly captured from the adult learners' viewpoint are:

- learner's need to know (why, what, how);

- self-concept of the learner (autonomous, self-directed);

- prior experience of the learner (resource, mental models);

- readiness to learn (life related, developmental task);

- orientation to learning (problem centered, contextual);

- motivation to learn (intrinsic value, personal payoff).

The humanist learning orientation is the origin for andragogy and self-directed theories

(Alex et al., 2007). Knowles et al. (1998) suggested that in using the model of

andragogy, a three-dimensional thinking process for approaching adult learning situations should be used:

> 1. The core principles of andragogy provide a sound foundation for planning adult learning experiences. Without any other information, they reflect the best approach effective adult learning. 2. Analysis should be conducted to understand: (a) the particular adult learners and their individual characteristics; (b) the characteristics of the subject matter; and (c) the characteristics of the particular situation in which the adult learning is being used… 3. The goals and purposes for which the adult learning is conducted provide a frame that puts shape to the learning experience… (pp. 181-183)

Since 1990, the study of andragogy has had scholars focusing in two directions: the analyzed content origin with that has been used in various parts of the world, and context lacking attention to the learning process (Merriam, 2001). Merriam (2001) stated that 80 years after the establishment of adult education, there does not exist one single answer, theory or model that clarifies in its entirety the adult learning context, process, and setting.

Current adult learning research has a strong psychologistic foundation (Brookfield, 1995). The adult learner theorist Stephen Brookfield is recognized for his work in self-directed learning (Irby et al., 2013). Self-direction is an externally observable process (Brookfield, 1995), and an interpretation of individualism in adult education strongly embedded within moral and political optimism (Brookfield, 1993). In adult education, self-direction focuses on the analysis of individualism by accepting the responsibility to make decisions and choices by not conceding to others (Brookfield,

1993). Programs that have the characteristics of self-direction will provide an acceptable

framework for the applicable processes and engagement in activities (Brookfield, 1993).

The adult learner theory uses the tenets of social constructivism. In 1978,

Vygotsky, a Russian psychologist, developed the theory of social constructivism, which

was influenced by his sociocultural theory (Jaramillo, 1996). Vygotsky, along with

Dewey (1916), Piaget (1973), and Bruner (1996), suggested that based on prior

knowledge, learners could construct and actively learn new knowledge (Huang, 2002)

socially and individually (Biniecki & Conceicão, 2016). Irby et al. (2013) further stated

that Vygotsky's "schemata" are built and not prescribed because they are influenced by

social relationships and cultural factors. The emphasis of constructivist learning is

forming meaning from experience (Biniecki & Conceicão, 2016). Vygotsky stressed that

for an individual to have cognitive development through "internalization" in the

sociocultural realm, the prevalent prerequisite is social interaction (Nyikos & Hashimoto,

1997). Vygotsky's zone of proximal development is the root for collaborative problem-

solving strategy (Huang, 2002). Nyikos and Hashimoto (1997) acknowledged that

Vygotsky considers that human cognitive development is a result of social interactions

with others and of the cultural environment within one's zone.

Adult development literature is grounded in Schlossberg's theory of transition.

Schlossberg's (1981) transition theory manifests itself if "an event or non-event results in

change in assumptions about oneself and the world and thus requires a corresponding

change in one's behavior and relationship" (p. 5). Transitions have an altering effect on

one's roles, relationships, routines, and assumptions (Schlossberg, 2011). Gohn and

Albin (2006) stated that Schlossberg implied that transitions or events that occur for adult

students are both significant and nonsignificant, depending on the degree of the transition

they encounter and the reaction to the event will determine the impact of a life-altering

transition (see Appendix B). Anderson, Goodman, and Schlossberg (2012) suggested

that the transition and/or preparedness is contingent upon four factors identified as the "4

S's": self, situation, support, and strategies.

4 S's	
Self	*Personal and demographic characteristics:* socioeconomic status, gender, age, health, ethnicity/culture
	Psychological resources: ego development, outlook, commitment, values, spirituality, and resilience
Situation	Trigger, timing, control, role change, duration, previous experience, concurrent stress, assessment
Support	*Type:* intimate, family, friends, institutional
	Functions: affect, affirmation, aid, honest feedback
	Measurement: stable and changing supports
Strategies	*3 categories:* modify situation, control meaning, manage stress in aftermath
	4 coping modes: information seeking, direct action, inhibition of action, intrapsychic behavior

Figure 2.1. Schlossberg's 4 S's Factors

College students will transfer out of the transition phase upon making a

commitment to being college students and establishing a daily routine. During this

phase, if adult learners are unsuccessful, Choy (2002) stated that "adult students are much

more likely than traditional students to leave postsecondary education without a degree"

(p. 12). Justice and Dornan (2001) reinforced that adult learners lack confidence in their

intellectual abilities.

Characteristics of Adult Learners

For many years academic researchers relied on fundamental characteristics to direct their studies on adult learners, but after further research, the commonalities were clarified and explained. Gohn and Albin (2006) defined college student subpopulations as groups to which students may belong such as race, gender, age, academic preparedness, and financial need. Adult learners have the characteristics to qualify as a subgroup.

To better understand adult learners, it is useful to differentiate among their characteristics. Berker, Horn, and Carroll (2003) identified that from 1999-2000, 43% of enrolled undergraduates were age 24 or older, and one-third were working adults. As Deggs (2011) explained, "the nontraditional characteristics of today's adult learner in higher education include delayed enrollment, part-time attendance, financial independence, full-time employment, having dependents other than a spouse, being a single parent, and not obtaining a standard high school diploma" (p. 1543). Kasworm (2003) identified the adult learner as 25 years of age or older, financially independent, employed, with family and community commitments, and with college student commitments.

The American Association of Community Colleges (2014) stated that the average age of the community college student is 28; 24 the median age; single parents 17%; first generation college students 36%; full-time students 22%; part-time students and employed full-time 41%; part-time students and employed part-time 32%. In 2019, the American Association of Community Colleges identified that the average age of the community college student is 28; 24 the median age; single parents 15%; first-generation

college students 29%; full-time students 37%; part-time students and employed full-time 38%; part-time students and employed part-time 34%. As shown, during the past five years, the demographics of the community college student have remained rather consistent, except for the decrease in the percentage of first-generation college students. Ma and Baum (2016) indicated that students at community colleges tend to be older than traditional students. Undergraduates in four-year public and private nonprofit institutions who were 25 or older numbered 20% in 2011-2012. That number increased to 44% in two-year public institutions and 59% in for-profit institutions (Ma & Baum, 2016). Kazis et al. (2007) stated that adult learners over age 24 currently comprise about 44% of U.S. postsecondary students.

Choy (2002) illustrated that there is a relationship among the characteristics of the nontraditional student in higher education (see Appendix C). Some of the combined characteristics are that a single parent always has dependents in order to qualify for financial aid assistance, and full-time employment occurs together with part-time enrollment status (Choy, 2002). Choy identified that 73% of nontraditional students were employed full-time with part-time enrollment status from 1999-2000.

The National Center for Education Statistics defined the nontraditional student as meeting one of seven characteristics: "delayed enrollment into postsecondary education; attends college part-time; works full time; is financially independent for financial aid purposes; has dependents other than a spouse; is a single parent; or does not have a high school diploma" (Pelletier, 2010, p. 1). The nontraditional student must address the barriers of everyday circumstances: personal life, employers, and family.

Anderson's (2013) research further described the common traits of adult learners. Among them are a need to know why they need to know something and a need to control learning. Adult students learn best when they self-discover. They are self-directed and have a wealth of experience, with a variety of learning styles. Blanchard, Hinchey, and Bennett (2011) stated that adult learners learn well in group discussions and case methods, care less about subject than subject relevance, and can reject new ideas. Morstain and Smart's (1977) quantitative study identified among part-time, evening adult students five "typologies" for learning. The "typologies" are non-directed, social, stimulation-seeking, career oriented, and life change learners.

Knowles (1980) argued that the methods used to stimulate learning differ between adults and children; thus, pedagogy and andragogy need to be distinctly differentiated. Vermeylen and McLean's (2014) empirical qualitative research by interviews with 134 adults engaged in informally learning through readings of "self-help books" related to career success, interpersonal relationships, and health and well-being. Vermeylen and McLean explained that educators of adult learners recognize that a significant amount of learning takes place outside of the classroom. Vermeylen and McLean's interviews examined five main areas: motivation, learning goals, learning strategies, learning outcomes, and impact. The findings revealed:

> Both similarities and differences between the learning practices of self-help
> readers who were 30 years of age and younger, and those who were older than 30.
> In most ways, the older and younger readers were quite similar. However, we
> found modest differences in terms of learning goals, levels of learner engagement,

pathways of learning, and the degree to which readers contested the claims of

self-help authors. (p. 24)

Deggs (2011) identified that the needs of adult learners are as complex as the

challenges facing the institutions that must meet them. Deggs conducted a qualitative

study in the mid-South, at a research university with 21 working adult learners in their

senior year who were taking a course in "professional development strategies" for the fall

and spring semester. The significance of Deggs's study was to contextually obtain a

better understanding of the barriers adult learners perceive in their life. The results of

Deggs's study were to:

Assist college and university faculty, staff, and administrators who are responsible

for the development and implementation of academic degree programs and

support services for adult learners as it would enable higher education personnel

to go beyond simply labeling the barriers that adult learners experience. (p. 1542)

Deggs's (2011) study did provide the framework and theories that guided the

research to collect data from adult learners "to better understand how they perceived the

barriers they encountered…" (p. 1542). Salient theorists supported the research

literature. Terrell (1990) identified seven adult learner developmental needs. The needs

are low self-concept; threatened by the classroom but goal-oriented and having time,

energy, and emotional demands, establishing financial stability; work and civic demands;

developing family relationships and caring for family; questioning career choices; and

reappraising habits and interests.

In Deggs's (2011) study, the relevant findings perceived by the adult learners

included intrapersonal barriers, career and job-related barriers, and academic-related

barriers (see Appendix D). Deggs's study reinforces the principle of understanding adult learners' characteristics and learning styles that relate to Knowles et al.'s (1998) core principles of andragogy and are directly captured from the adult learners' viewpoint. Deggs's findings suggest that further qualitative research of the barriers adult learners face in higher education is warranted, and institutions need to better position themselves to serve this ever-growing population.

According to Graham, Donaldson, Kasworm, and Dirkx (2000), adult learners are frequently self-directed learners and depend on prior experience to have an awareness of what they are learning. Their worldly experiences as adults are reinforced and validated through the knowledge gained in college (Graham et al., 2000). Graham et al. developed a model in 1999 of adult learners' college outcomes that contains the following six assumptions: prior experience and personal biographies, psycho-social and value orientations, adult cognition, life-world environment, connecting classrooms, and college outcomes. Graham et al. stated that the degree of the adult learners' integration into college culture determines retention outcomes. Adult learning can be promoted or impeded through life-world experiences, vocation, and social life context (Graham et al., 2000). The undergraduate experience for adult learners becomes simultaneously significant while engaging as a student, at work, with family, and the community (Kasworm, 1997).

Higher education leaders, faculty, and administrators continue to be challenged by adult learners and student engagement (Wyatt, 2011). Student affairs personnel and college leaders continue to prioritize student engagement of adult students at the top of the list of concerns. Wyatt (2011) further stated that college leaders are split over the

significance of student engagement to student success. Wyatt's qualitative study provided the framework and theories that guided the research by providing a "historical perspective on student engagement" (p. 11). The literature pertaining to the characteristics of adult learners was supported by a prominent theorist, Tinto (1997). Tinto stated that institutions embrace the concept of "learning communities" to provide an engaging learning environment to enhance student persistence and success (Wyatt, 2011, p. 11). Tinto (1975) identified that students who integrate have a stronger awareness of self-worth.

Wyatt (2011) identified that institutions need to pursue initiatives to enhance the college experience for adult learners; Lavelle and Rickford (1999) and Pascarella and Terenzini (2001) identified the lack of studies that examine the developmental needs of adult learners; and Macari, Maples, and D'Andrea (2006) recognized the need for college professionals to work effectively with students. The theoretical application derived from Wyatt's qualitative research is the development of a model: components of successful adult student engagement on colleges and university campuses, and recommended best practices, to support adult students' academic success and student engagement (see Appendix E).

Rinne (1998) stated that there are three approaches to motivate adult learners. The first is learner characteristics (achievement, motivation, self-worth, and competence); the second and third motivators are the characteristics of teachers and instructional methodology; lesson content characteristics. Green and Kelso (2006) categorized adult learners' and faculty members' responses to open-ended questions, finding three sets of factors:

context factors (conditions that students bring to the classroom, such as desire to earn good grades and other internal characteristics); structure/format factors (organization of class material, grading, opportunities to participate), [*sic*] and teacher behavior factors (e.g., sense of humor, interest in students, speaking clearly, enthusiasm). (p. 66)

Additionally, Green and Kelso explored how the behavior of faculty contributed to adult learners' motivation and demotivation.

Green and Kelso's (2006) qualitative research utilized a survey and three focus groups of adult learners at National University, California. Green and Kelso identified that adult students require a strong motivation to return to college and that they have high expectations that instructors should be competent and possess certain qualities to motivate adult learners. The significant role instructors have in adult learners' success in college must be recognized (Green & Kelso, 2006). Green and Kelso's study is significant in helping educators and administrators better understand the pedagogical behaviors that are instrumental in adult learners' academic performance, defined as GPA, persistence, and completion.

Work, social circumstances, domestic situations, and time limitations contribute to adult learner's stressful educational context (Forbus, Newbold, & Mehta, 2011). The study by Forbus et al. (2011) revealed that adult learners have a higher level of academic success measured by GPA than traditional students while dealing with the stress of student and domestic life. Berker et al. (2003) stated that working adults comprise one-third of undergraduate students, and according to Donaldson, Graham, Martindill, and

Bradley (2000), lifeworld environment, or the work, personal, and social life contexts, can promote or impede adult students' learning.

Lazarus and Folkman's (1984) stress model for adult learners, as shown in Figure 2.2, is the model tested for the study by Kohler Giancola, Grawitch, and Borchert (2009, p. 248). General life satisfaction and mental well-being were the two outcome variables examined to understand the psychological impact of stressors on adult learners. The study by Kohler Giancola et al. did support the idea that academic resources and support services are instrumental in adult learners' academic performance in higher education.
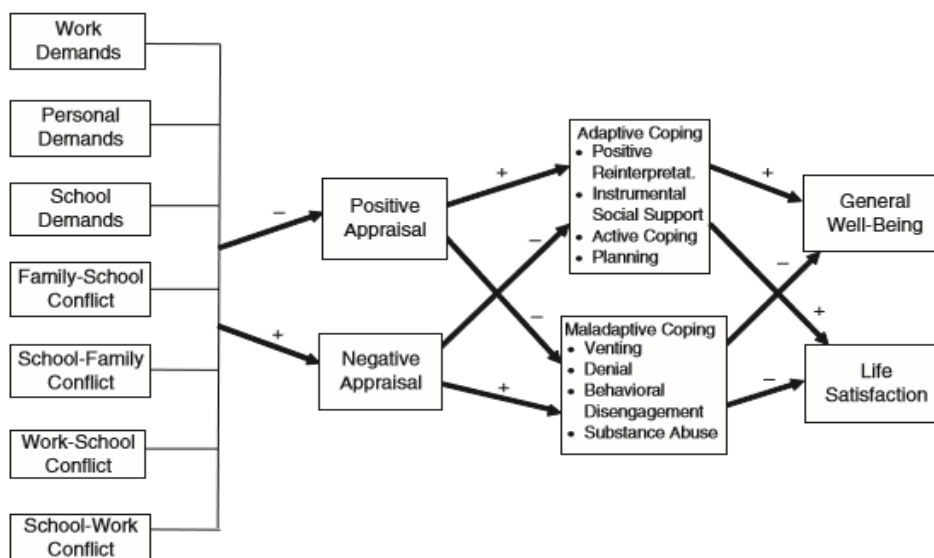
Figure 2.2. Hypothesized Model of Stress for Adult Students.

Chao and Good (2004) identified that there is a lack of research for counseling adult students in higher education. Luzzo (1999) stated that to have a better understanding of adult students, a qualitative study would provide significant data to directly explore the complex life of adult learners. Chao and Good conducted interviews of 43 adult undergraduate students from a public and a private university in the Midwest utilizing Glaser and Strauss's (1967) theory process. Chao and Good's research

methodology guided the study to determine students' reasons for attending college and how college was affecting their support systems and career goals. Chao and Good stated that the data were sequentially and systematically analyzed using the grounded theory method that was expanded by Strauss and Corbin (1998). Chao and Good's study reinforced the premise of understanding adult learners, and how academic resources and support services are instrumental in adult learners' academic performance and career path.

Community College

Examining the establishment and mission of the community college provided the foundation to better understand the role of the institution to its constituents. Bastedo, Altbach, and Gumport (2016) stated that the community college model was established at the turn of the 20th century to meet the needs of the vast number of immigrants in this country. In the first two decades of the 20th century, a variety of private institutions and a small number of public schools offered pre-baccalaureate programs. These were technology programs, normal schools, and other women's colleges, sometimes referred to as "junior colleges." They offered liberal arts courses in preparation for transfer to an upper division institution.

In 1920, the American Association of Junior Colleges was established. From 1920 to 1940, "the primary focus remained on academic education and preparation for transfer to four-year institutions" (Bastedo et al., 2016, p. 465). During this period, the realization that 75% of community college students were not transferring to baccalaureate institutions or preparing for careers became apparent. The control of community colleges

shifted from the private sector to the public sector to address the needs of the local community (Bastedo et al., 2016).

From 1940 to 1960, the shift in control of the community college was linked to both local and statewide systems. In 1944, the GI Bill was established for veterans to continue their pursuit of higher education and enter the workforce. President Harry Truman's vision laid the groundwork for the modern system of comprehensive community colleges. The 1947 President's Commission on Higher Education for American Democracy promoted the establishment of a nationwide system of tuition-free colleges that would "serve as cultural centers for the community, offer continuing education for adults, emphasize civic responsibilities, be comprehensive, [and] offer technical and general education" (Bastedo et al., 2016, p. 466).

From the early 1960s to 1980, the country experienced the greatest growth of "baby boomers" entering college. During this period, the number of community colleges nearly doubled. Federal financial aid was implemented to assist low-income students. As transfer pathways for occupational and vocational curricula from the community college to the baccalaureate were offered, the lines between them were blurred (Bastedo et al., 2016). As the 1970s economy continued to decline, liberal arts programs also declined, while vocational programs excelled. At the same time, remediation in community colleges became more important because of the increased number of high school graduates (Bastedo et al., 2016).

Bastedo et al. (2016) stated that between the 1980s and 2000, state governments highly encouraged workforce and economic development. Essential in this period were the accrediting bodies that supported employability as an end result. This required an

increase in remedial and general education (Bastedo et al., 2016). The writers further

stated that from 2000 to the present, community colleges have been increasingly faced

with meeting challenges of the social, educational, economic needs of a diverse

population, and performance accountability.

Castillo (2013) stated that community colleges were established in the late 19th

century to pursue the mission of providing a quality higher education to the underserved

population of low-and marginal-income Americans. The purpose of the community

college is to prepare students to enter the workforce upon completion, to better position

themselves in a social economic environment, and the opportunity to further pursue their

education (Castillo, 2013). Community colleges have an open enrollment policy,

suggesting that entering students are not prepared for the challenges of higher education.

The most diverse population of students attends community colleges (Barker, 2015).

Prior Learning Assessment

A strategy for addressing the need to attract and retain adult learners at

community colleges is to provide PLA credit. PLA is classified internationally with the

following terms: Assessment of Prior Learning (APL), Assessment of Prior Experiential

Learning (APEL), Credit for Prior Learning (CPL), Prior Learning Assessment and

Recognition (PLA), Recognition of Prior Learning (RPL), and the Validation and

Accreditation of Experience (VAE) (Travers, 2015). Klein-Collins and Hudson (2017)

described PLA as a process of evaluating an adult student's experiential learning for

granting college credit toward advancing a college education. Brigham and Klein-Collins

(2010) stated that since the 1970s, one innovation used, but often under-promoted and

under-utilized within institutions, is PLA. PLA is the process employed by colleges to

evaluate for academic credit and to determine if college-level knowledge and skills are gained. PLA is divided into three categories: (a) transfer credit (traditional), (b) pre-evaluated learning (professional learning, military, standard examinations, course challenge exams), and (c) individualized learning (portfolio assessment, competency-based direct assessment) (Travers, 2015). Brigham and Klein-Collins (2010) identified some of the methods used to evaluate and determine the validity of the knowledge base for awarding college credit are: AP, CLEP, challenge exams, evaluation of non-collegiate instruction, and portfolio assessment. In addition, adult learners can gain knowledge outside the classroom from employment (e.g. on-the-job-training, employer-developed training) and from military training and service (see Appendix F).

Traditional Portfolio Assessment of Prior Learning

Figure 2.3. Traditional Portfolio Assessment of Prior Learning. Travers, 2015.

PLA historically dates back to the 1930s with the College Entrance Examination Board offering standardized exams: CLEP and AP (Travers, 2015). At the close of World War II, to encourage veterans to return to work, the American Council on Education (ACE) initiated the assessment of learning for college credit through military training and various occupations for veterans, and some 20 years later incorporated

industry training and certification (Travers, 2015). College-level examinations began in 1945 and were administered by the ETS (Travers, 2015).

Keeton reiterated that from the 1960s and through the early 1970s, there was a remarkable surge in programs for adults (Dagavarian, 1990). Keeton, the founding president, served from 1977-1989 as the chief executive officer for CAEL, and was instrumental in the 1982 transition of the ETS to CAEL in order to advance PLA for the growing adult learner population (Bamford-Rees et al., 2014; Dagavarian, 1990). Colleges began to offer degree programs in the 1960s, with PLA as a program option for adult learners, and 13 colleges between 1968 and 1974 with primarily adult learners (Dagavarian, 1990).

In the 1970s, the forerunners that began serving adult learners through the experiential process were Empire State College and Thomas Edison State College (Fenwick, 2015). From 1974-1978, the Ten Standards for Assessing Learning emerged from a research study that examined adult learner practices of 50 institutions in the United States by CAEL (Travers, 2015). The data were collected by interviews, project pilots and assessor training, written working papers, and 80 launched projects (Travers, 2015). The ACE, the Council on Postsecondary Accreditation, and the American Association of Collegiate Registrars and Admissions Officers in 1979 "endorsed" PLA, ensuring that CAEL's principles of good practice were employed (Dagavarian, 1990).
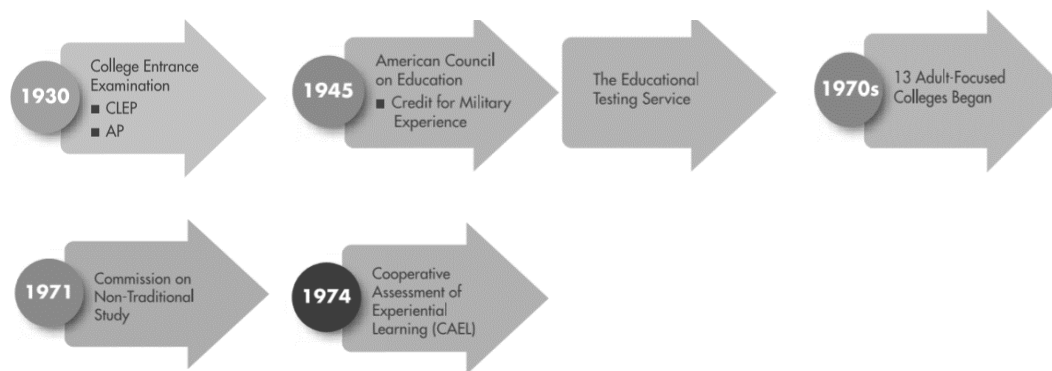
Figure 2.4. Prior Learning Assessment Time Line: 1930-1974. Travers, 2015.

　　　　The principal organization committed to the education and future of adult learners is the CAEL, a nonprofit organization that is "a leader in pioneering learning strategies for individuals and organizations" (CAEL, 2005, para. 1). Klein-Collins (2014) stated that for adult learners, PLA in recent years has attracted growing interest from higher education institutions, government officials, and the "philanthropic" community as a process to increase degree completion. Adult learners who take advantage of acquiring PLA credit can profit financially, gain reduced time to degree attainment, and be affirmed that as students they are "college material" (Klein-Collins & Hudson, 2017). Institutions benefit from offering PLA because it is a recruitment tool to attract adult learners, fulfills the college mission, and serves the community.

　　　　Klein-Collins's (2010) research was the first major international multi-institutional study that examined the relationship between PLA and adult learners' academic outcomes, from 48 higher education institutions. Until this point, there had been very limited data to support the need for colleges to provide adult learners with college credit for prior learning experience. The Lumina Foundation for Education supported the study. The goal of the Lumina Foundation is that by 2025, 60% of all Americans obtain a college education.

Four community colleges from the northeastern region of the United States participated in the study. Sixty-seven percent of the institutions offered PLA before 1980, 14% between 1980 and 1989, 17% between 1990 and 1999, and 2% between 2000 and 2001. The institutions varied in size from 1,000 to over 20,000 students. The sample population in Klein-Collins's (2010) study was a cohort of adult learners 25 or over and matriculated into a degree program in one of the 48 institutions between 2001 and 2002 and with a minimum of 25 PLA status students. The cohort was tracked for seven years. Data were accessed from student records and the National Center for Education Statistics Integrated Postsecondary Education Data System. Among the 61,129 students followed in the study, 15,524 were PLA adult learners.

The data reported were for the community colleges.

Graduation/Length of Time

The findings at the associate degree level revealed that 13% of adult learners with PLA status attained an associate degree compared to 6% with non-PLA status. The time saved to attain a degree with PLA status was between 1.5 and 4.5 months compared to with non-PLA status.

GPA

There was no difference between adult learners who had PLA status and non-PLA status for cumulative GPA. There was a difference by PLA status when examining graduation rates when controlling for cumulative GPA. PLA status adult learners with a GPA of 3.0 or higher graduated at a rate of 66% compared to those with non-PLA status at 35%, and adult learners with a GPA of 2.0-2.9 graduated at a rate of 44% compared to those with non-PLA status at 28%.

Gender

Time to graduation for non-PLA status females is longer than non-PLA status males, and PLA status females required a shorter time than PLA status males.

Ethnicity

An associate degree was attained by 16% of Black, non-Hispanic adult learners with PLA status compared to 9% of Black, non-Hispanic adult learners with non-PLA status; 17% Hispanic with PLA status compared to 6% non-PLA status; 14% White non-Hispanic with PLA status compared to 10% non-PLA status; 11% American Indian/Alaska Native with PLA status compared to 10% non-PLA status; 23% Asian/Pacific Islander with PLA status compared to 16% non-PLA status; and 8% Other with PLA status compared to 7% non-PLA status adult learners.

Age

An associate degree was attained by adult learners between the age of 25-34 was 14% with PLA status and 7% non-PLA status; age 35-44 was 13% with PLA status and 6% non-PLA status; age 45-54 was 9% with PLA status and 6% non-PLA status; age 55-64 was 7% with PLA status and 3% non-PLA status; and 65 or older was 12% for adult learners with PLA status and 5% non-PLA status.

Klein-Collins's (2010) findings supported that PLA status adult learners earn a college degree at a faster rate than non-PLA learners by obtaining credits used for advanced standing, waiving prerequisites, and meeting general education requirements and program/major requirements. Klein-Collins's (2010) findings provided a rationale for institutions to recognize the requirement of PLA and embrace the needs of adult learners so that they can attain their goals.

A PLA study similar to Klein-Collins's (2010) was conducted at four community colleges. Hayward and Williams's (2015) quantitative study examined community college adult learners, and the relationship between the PLA method and graduation for both PLA learners and non-PLA learners. The size of the sample was 20,229 adult learners, including 1,722 adult PLA learners. The purpose of the "study was to examine adult learner graduation rates by PLA status and method at four U.S. community colleges" (Hayward & Williams, 2015, p. 46). The nonprobability sampling of ex post facto data was collected from four U.S. community colleges of adult learners 25 years and older, academic years 2004-2006, and adult learners by PLA status. The study revealed that graduation rates by non-PLA adult learners was 11.8%, and adult learners with PLA status was 28.4%, thus confirming a higher graduation rate among adult PLA learners. Graduation rates by PLA methods showed that adult learners with credit through portfolio graduated at a rate of 12.3%, CLEP graduated at a rate of 52.3%, ACE (representative of completion evaluated programs from the ACE) graduated at a rate of 24.0%, and through a combination of methods graduated at 29.9%, confirming a difference between adult PLA learner graduation rates by PLA method. The relationship between method and graduation showed that CLEP had a positive effect on prediction and portfolio had an inverse effect on prediction. The study established a benchmark effect size for the research questions to determine graduation rates by PLA status and method. Hayward and Williams's quantitative research is significant because the study examined community college adult learners, and the relationship between the PLA method and graduation for both PLA learners and non-PLA learners. The study correlates with Klein-Collins's (2010) findings that adult learners with PLA status have a

higher graduation rate than non- PLA status learners. Hayward and Williams recommended that self-directed adult learners should be embraced by innovative leaders at community colleges to prepare them to graduate. The evidence suggests that the research is grounded in the conceptual framework of Knowles's experiential learning theory that from real-life experiences, knowledge and meaning are constructed (Yardley, Teunissen, & Dornan, 2012). Knowledge obtained in adulthood and adult learning promotes graduation. Merriam (2001) stated that a self-directed learner employs independent projects, student-directed discussions, and discovery learning. Programs that have the characteristics of self-direction will provide the acceptable framework for the applicable processes and engagement in activities (Brookfield, 1993).

A more recent study that examined the relationship between the PLA process and adult learners attaining a postsecondary degree was conducted in the Colorado Community College System (CCCS). McKay, Cohn, and Kuang's (2016) longitudinal data analysis baseline study explored the relationship between PLA and non-PLA adult learners' academic outcomes: graduation rate, student persistence, and time to degree completion, from 13 colleges in the CCCS. Data were collected from the college database on 299,377 adult learners, 24 years and older, admitted to CCCS between fall 2007 and summer 2010, and followed over a period of eight years through student records. The data were collected and evaluated through the CHAMP grant conducted by the Education and Employment Research Center (EERC) at Rutgers, the State University of New Jersey. Since 2008, the CCCS college system has been awarding PLA credit to adult learners, but there is a lack of uniformity in the method of doing so. The purpose of

the CHAMP grant is to improve PLA awareness, accessibility, consistency, transferability, and transparency at the CCCS colleges.

The statistical analysis in the study by McKay et al. (2016) revealed that graduation rates by PLA status were higher than for non-PLA learners. The findings are that 35% of adult learners with PLA status attained an associate degree, while only 7% of adults with non-PLA status attained a degree. Kuang and McKay (2015) reported that race/ethnicity did not affect the outcomes for graduation rates. The study indicated that after one year of attending the CCCS, 31.5% of PLA status learners dropped out and more than 52% of non-PLA learners dropped out. Time to associate degree attainment for students with PLA status was between one and seven and a half months sooner than non-PLA learners. The study revealed that only 1.7% of the students in the sample had PLA status, and assessment in CCCS varied from 0.6% to 3.4%, revealing that a small number of adult learners received PLA credits. In addition, each community college had a different preference for providing PLA credit options. Standardized exams were utilized more than 60% of the time. The study provided evidence for CCCS to develop guidelines and make changes to the structure of the data system to effectively document PLA assessment and credits. The outcome analysis presented the evidence required to assist CCCS in pursuing the process of transformative change by building trust, creating buy-in among stakeholders, developing a better understanding of who is being served, demonstrating that PLA (innovation) can provide better outcomes for adult learners, and exposing any misconceptions about PLA. The evidence suggests that the research is grounded in Lewin's (1947) change process theory to promote organizational change (as cited in Hussain et al., 2018). Kuang and McKay's (2015) study was consistent with

Klein-Collins's (2010) and Hayward and Williams's (2015) findings that adult learns that acquire PLA credits are more apt to attain a college degree than non-PLA adult learners.

Colleges and universities that offer PLA credit could publicize their criteria for assessment in order for students to obtain the necessary skills and knowledge (Boilard, 2011). An exploratory survey was conducted by the ACE at a variety of colleges and universities to provide a "snapshot" of current practices for credit for prior learning (Ryu, 2013). The participants were adult students who received credit for prior learning, as well as college administrators and industry representatives who supported employee education programs. The survey revealed that across institutions, assessment methods, acceptance rates, campus policies, and earned credit types vary for PLA, and there is a lack of information for adult learners seeking information for PLA credit options (Ryu, 2013). PLA programs are uniquely different from academic programs and need to demonstrate their academic rigor and effectiveness (Travers & Evans, 2011). A comprehensive assessment process is critical to evaluate policies, practices, and outcomes in order to enlighten institutions about program accomplishments, explore areas that require improvement, and provide the evidence to inspire change.

Thirty-four PLA programs from the United States and Canada in higher education institutions were studied by Hoffman, Travers, Evans, and Treadwell (2009) and determined five critical factors that impact program structures (Travers & Evans, 2011), which are: institutional philosophy statements and policies supporting PLA practices; institutional support, including financial, administrative, and faculty buy-in; PLA program parameters that set the structures for how credit is assessed and applied; faculty evaluator and content expert professional development; and program feedback and

evaluation processes. The results indicated a significant correlation among the five critical factors and PLA program practices (correlations range: $r = .84$, $p < .01$ to $r = .42$, $p < .05$). The implication is that the best practices incline to be more prevalent than the five factors that are in place. In addition, a formal program evaluation process took place at only 23% of the institutions in the study. In the study, the programs indicated that they did not have a systematic evaluative process and, for the most part, relied on feedback from faculty and students involved in the PLA process. Travers (2012) stated that the study by Hoffman et al. (2009) disclosed that the practice of PLA programs at some institutions are recognized as an "add-on," not connected to faculty or the academic process while others incorporate faculty advisement and academic assistance.

Klein-Collins's (2014) research brief from the CAEL explored the role of regional accrediting organizations in shaping institutional PLA policies and practices. The six regional accrediting organizations CAEL examined were: Middle States Association of Colleges and Schools (MSACS); New England Association of Schools and Colleges (NEASC); North Central Association of College and Schools (NCA), under which the Higher Learning Commission (HLC) accredits degree-granting colleges and universities; Northwest Commission on Colleges and Universities (NWCCU); Southern Association of Colleges and Schools Commission on Colleges (SACSCOC); and Western Association of Schools and Colleges (WASC). Klein-Collins's (2014) exploratory study identified that the six regional accrediting bodies reference PLA in their guidelines/policies, and require that PLA be essentially the same as results offered from traditional learning experiences. As previously affirmed, it is at the discretion of the institution to set policies for PLA (see Appendices G and H). For community and junior colleges (two-year

institutions), the policy documents are published in the Accreditation Reference Handbook under the policy on credit for prior experiential learning in undergraduate programs (Klein-Collins, 2014).

Assessing prior learning helps to validate a student's past experience, both in and out of the classroom (Stenlund, 2010). Research has revealed that learning does not have a direct association with time spent in the classroom (Chen, 2017). The credit hour, as a method of assessment, is not serving its intended function and is not a predictor of academic success. It continues to be the operational tool used by colleges and universities to measure academic success, while at the same time remaining a barrier for adult learners (Chen, 2017). There is a growing need for PLA data, and as higher education institutions continue to expand PLA offerings, institutions need to make the connection between PLA and academic outcomes (Klein-Collins, R., 2016). Postsecondary education needs to demonstrate the value of PLA through its connection to student persistence, degree completion, and time to degree as a number of states move toward performance-based funding (Klein-Collins, R., 2016). CAEL initiated conversations with some of the country's leading PLA institutions that have robust PLA tracking credit systems, including Excelsior College, Thomas Edison State University, Charter Oak State College, Miami Dade College, and University of Maryland University College. R. Klein-Collins (2016) stated that valuable insights regarding program usage and student outcomes can be obtained by tracking PLA data. The literature revealed that within the context of the community college, there is limited quantitative research associated with the PLA process and academic success. While there are qualitative studies, the focus on the PLA process is related to the adult learners' college experience.

If institutions that award PLA credit report on retention and graduation rates, the data could better assist administrators in understanding the value of PLA to improving student success and institutional effectiveness.

Adult Learners' Academic Success

Pursuing a college degree for many adult learners is a life-changing experience, and they face many barriers to being successful in college. In the United States, postsecondary institutions have a growing concern for adult learners' academic success and graduation rate (Miller, 2014). To increase retention and graduation rates at postsecondary institutions, programs that concentrate on adult learners need to expand (Miller, 2014). Miller (2014) stated that there is limited benchmark data concerning cross-institutional comparisons of program success, and a lack of relevant data on graduation rates for adult learners.

Schwehm's (2017) quantitative, cross-sectional study of convenience was an initial exploration of the social and academic adjustment, with an emphasis on the demographic variables that influenced adult transfer students at the pseudonym Metro Urban University (MUU). The purpose of the study was to identify the demographic variables and the community college experience that influence adult transfer students' academic and social adjustment at the institution. The demographics of the adult students were ages ranging from 25 to 71 with an average age of 33; 51.9% female; 48.1% male; 62.9% White; 5.1% Hispanics; 3.7% Asian Americans, and 12.2% other. A survey was administered and collected over a 30-day period to 1,766 students with 419 respondents.

The researcher performed a correlation and multiple regression analyses to determine the relationship between academic and social adjustment with adult transfer

students (Schwehm, 2017). The multiple regression analyses examined if the demographic variables at the university had a significant influence on academic self-efficacy (SE-Broad scores) and GPA. Academic adjustment (dependent variable) was measured by university self-efficacy and GPA, and social adjustment (dependent variable) was measured by the PCScale (5-point Likert scale: strongly disagree to strongly agree). The results indicated that two predictor variables, ethnicity (non-White) and first-generation status, accounted for 3% of the variance, and age and ethnicity accounted for 6%. Predictor variables for the community college were GPA and classroom involvement that accounted for 10.4% of the variance in academic self-efficacy, and GPA and classroom involvement accounted for 20% of GPA. Both GPA and classroom involvement at the community college identified a positive relationship with university GPA. A statistically significant influence on social adjustment accounted for 4.7%, encompassing classroom involvement and extracurricular participation. The standardized beta values predicted that classroom involvement had the most influence on academic self-efficacy ($\beta = .180$), community college GPA ($\beta = .45$) had the greatest influence on university GPA, and classroom involvement ($\beta = .217$) had the greatest influence on social adjustment. The evidence suggests that the research is grounded in Bandura's (1977) theory of self-efficacy that affects academic achievement through persistence. The study provides more insight on the adult learners' transfer experience, and the variables that affected and influence the community college students' transformative experience to the university setting.

  The study by Quiggins et al. (2016) identified the economic condition for unemployment in the United States at 5%, according to the U.S. Department of Labor,

Bureau of Labor and Statistics (2015). The economic situation encouraged adult learners

(nontraditional students) to enter college for career advancement and to be more

competitive in the job market. The purpose of the researchers' quantitative explanatory

design was to "determine the motivations and barriers of nontraditional undergraduate

students at the College of Agricultural Sciences and Natural Resources (CASNR) at

Texas Tech University" (Quiggins et al., 2016 p. 274). The researchers collected the data

utilizing the Motivated Strategies for Learning Questionnaire based on a seven-point

Likert-type scale developed by Pintrich et al. (1991). The instrument employed to collect

data was a questionnaire distributed online during the fall semester 2012 to 139

nontraditional students of 25 years or older, with a response rate of 30.2% (N = 42)

students. The demographics of the participants was 25 (59.5%) females; 17 (40.5%)

males; 35 (83.3%) Caucasian; four Hispanic/Latino (9.5%); two multiracial (n = 2,

4.8%); over 40% (n = 17) employed part-time; 28.6 % (n = 12) employed full-time; and

16.7% (n = 7) were unemployed nontraditional students.

The principal findings of the questionnaire study by Quiggins et al. (2016)

identified that intrinsic motivation for the nontraditional student was to have a thorough

understanding of course content in their major, course content that stimulates interest and

is challenging, and a need to learn new material with the risk of not attaining a sound

grade. The extrinsic motivation of the nontraditional student was to strive for higher

grades in class; to demonstrate academic achievement to family, friends, and others; and

to improve overall GPA. The nontraditional students identified the barriers on campus as

lacking a nontraditional student department/office, lack of mentoring/tutoring programs,

and lack of support groups. The study found that the support of family and friends was

the least likely barrier to the nontraditional student furthering their education. The results of the study identified that nontraditional students furthering their education more closely relates to personal satisfaction (intrinsic motivation) than to any extrinsic motivation.

The research by Quiggins et al. (2016) is important to this study because their findings supported Knowles's (1984) assumption of andragogy that "adults are more responsive to internal motivators than external motivators" (Knowles & Swanson, 2015, p. 50). In addition, the study by Quiggins et al. (2016) supported the significance of alerting community college policy and decision-makers to the unique needs of adult learners and the contribution PLA makes to student success (GPA, persistence, and graduation).

With the decline of the traditional student population in higher education, colleges and universities need to be more informed and supportive of adult learners (nontraditional students) as they struggle to balance college and external factors such as employment and family life. Malin, Bray, Dougherty, and Skinner's (1980) hierarchical multiple regression exploratory data-analytic method study examined the factors that influenced the adult learners' success (GPA academic performance) and satisfaction (college experience and college situation). The purpose of the study "was to examine the relative influence of major sets of college and noncollege factors on the success and satisfaction of both men and women in college" (Malin et al., 1980, p. 116). The sample population was systematically computer-generated in the spring of 1978 from the University of Houston Central Campus of students 25 years of age or older who were undergraduates or post-baccalaureate. Questionnaires were collected from 403 adult learners who were 56% males, 44% females, majority White, under 35 years of age, married, no children,

and had sub-professional jobs. On the questionnaire, the respondents provided their GPA

range (measure of academic performance) and satisfaction at the university that was

assessed with a five-point scale rating instrument.

The chi-square tests revealed that males and females differed significantly in that

female college students were more likely to be White; have higher family income;

divorced; work fewer hours; out of school for a longer time; and have a concentration of

study in humanities, fine arts, social science, or education (Malin et al., 1980). The

results identified that females had a higher GPA than males; they were more significantly

satisfied with the college experience and had a greater effective positive change. As

Malin et al. (1980) explained: "The multiple correlations (R) between all the independent

variables and the dependent variables were .65 for GPA, .69 for college satisfaction, and

.64 for affective changes" (p. 123). The study revealed that the variables that predicted

success and satisfaction did not differ between adult male and female college students.

When faced with the same factors as women, adult male students were more challenged

than adult female students in balancing school, work, and family. The study supported

the research by Lunneborg, Olch, and de Wolf (1974) that concluded that females sustain

a higher GPA than males in college. The study byMalin et al. (1980) contributed to this

research by examining the factors that influence adult learners' success (academic

performance, as measured by GPA).

Adult learners (nontraditional students) experience conflict and turmoil between

personal/family commitments, and pursuing/completing a degree. Markle's (2015) three-

year study was a mixed-method design that examined the factors that influence

persistence (degree attainment or continued enrollment status), provided a better

understanding of the barriers adult learners face, and sought to determine if gender plays a role in persistence. The purpose of the study was to "examine the factors that influence persistence among nontraditional students" (Markle, 2015, p. 270). The participants were from a southeastern United States public university; 25 years and older or with a five-year high school gap; part-time or full-time employment, and had spouses, domestic partners, parents, or were caretakers. Data were collected from an emailed open-ended survey of 494 nontraditional students and the students' computerized records. At the end of the third year, persistence was measured by the participants' academic status. Demographic characteristics, academic characteristics, and situational characteristics were the independent variables.

An independent sample *t*-test was used to explore gender differences in persistence, withdrawal consideration, and interrole conflict (Markle, 2015). The study revealed that there was no significant difference in persistence or withdrawing between males and females; about one-third experienced moderate levels of interrole conflict, and 43% experienced high to very high levels. Men's GPA and confidence (graduating) were the only significant predictors of persistence, and GPA, confidence (graduating), and full-/part-time enrollment were the significant predictors of persistence. The regression analyses predicting withdrawal consideration indicated that there was 34.8% of variance in persistence for males and 31.2% for females. The only significant predictor for men withdrawing was confidence in graduation, and for women: academic classification, university satisfaction, confidence in graduating, work-school conflict, and school-family conflict. The survey revealed that one-third of the students considered withdrawing from the institution. Males considered withdrawing from college for financial reasons, and

females considered withdrawing from college as a result of interrole conflict. The study supported the results of the quantitative analyses and identified the contributing factors for college withdrawal for male and female adult students. The factors are: age, feeling out of place, marginalization by institutional policies, and stress. The overall results of the study were significant because it increased awareness of the barriers adult learners (nontraditional students) face to pursue and attain a college degree. Markle's (2015) study provided evidence that adult learners experience conflict and turmoil between personal/family commitments and pursuing/completing a degree.

Providing the framework and alternative measures for the academic success of adult learners requires collaboration between the academic and support service areas. Lessening the barriers and reducing the hurdles that students encounter in academia can provide a systematic approach to recruiting and retaining this population. Adult learning is the determinant theory for the literature review and framework for academic success.

Enrollment Trends and Adult Learners

Bontrager (2004) stated that the anticipated downturn in enrollment supported the growth of enrollment management. As a result, enrollment management became an increasing concern for institutions. The 1990s saw a downturn in the overall population affecting every segment of higher education. When the enrollment paradigm shifted, institutions looked to adult learners to fill the gaps (Bontrager, 2004).

An examination of enrollment management assists in understanding the impact and it has on and potential it holds for both the community college and adult learners. LoBasso (2005) provided the basic premise for enrollment and retention management. According to LoBasso, there cannot be a successful enrollment management program

without a successful retention management program that has considerable faculty involvement. The enrollment management program must also feature the college's strengths and advertise the institution's real possibilities. There must be a robust financial aid program that supports the enrollment and retention efforts.

Huddleston and Rumbough (1997) conducted a national study to identify enrollment management areas utilized in higher education. Seven areas identified are: institutional research and planning, marketing, admissions, registrar, financial aid, student orientation and retention, and advising. Within an enrollment model, each of these significant areas has a key role in the success of the institution. Vital to a successful enrollment management operation are a shared mission and goals (Huddleston, 2000).

Community colleges continue to invest time, revenue, and academic personnel to focus recruitment and retention efforts for traditional students. Higher education policies and practices continue to favor the traditional student model, 18- to 21-year-old high school graduates who enroll full time (Kazis et al., 2007). Similar efforts must be made to meet the obligation institutions have to adult learners. Attracting and retaining adult learners requires a college-wide commitment, from the top down. Colleges need to evaluate how they are meeting the needs of adult students. Adult learners consider the following variables when deciding to attend college: cost, convenience, flexibility, time to completion, and advising (Stamats, 2016).

Kasworm (2003) set the stage for adult learners in higher education. The increase in adult learners has changed the perception of the importance of a college credential as a pathway to financial stability and life opportunities (Kasworm, 2003). Kasworm (2008) asserted that some institutions have formalized degree programs for adult learners.

Institutions frequently offer dedicated offices to serve adult learners that provide orientation programs and first-year-cohort courses (Kasworm, 2008). Assigning an academic adviser who recognizes the specific needs of the student is critical to academic success. Establishing a robust support system for adult learners will provide reassurance, increase self-esteem, and ensure student persistence to degree completion (Kasworm, 2008). Students remain in school if they have a positive experience from their first interaction at an institution.

Acquiring a college degree for many adult students is a life-altering experience. Adult students tend to be more focused and mission-driven (Kasworm, 2003). They experience insecurities and doubts. As mentioned previously, adult students face many barriers to being successful in college. Adult learners experience conflict and turmoil between personal/family commitments and pursuing/completing a degree. These potential students require encouragement and affirmation to proceed through the admission and registration process (Kasworm, 2008).

R. Klein-Collins (2016) stated that to meet the needs of the increasing adult population and increase degree completion in higher education, PLA offerings are being launched at an increasing rate. Adults would like to go back to school but are uncertain about financing and do not have sufficient information or resources to do so (Bamford-Rees et al., 2014). The PLA process for adult learners can be "intimidating" and cause uncertainty of the outcome when challenging a course (Leiste & Jensen, 2011). Brigham and Klein-Collins (2011) stated that many institutions lack the ability to provide a comprehensive PLA program. To effectively design and implement a successful adult learners' program, institutions need to consider the learners' requirements and

expectations (Frey, 2007). PLA takes into consideration adult learners' needs and expectations to obtain a degree, time, and cost (Leiste & Jensen, 2011). Flint (2000) stated that institutions should be more creative with outreach, marketing, and recruitment initiatives to attract and address adult learners' barriers and needs. Flint (2000) suggested that institutions take the services of the office of admissions, the bookstore, and classes to where adult learners work and reside.

Choitz and Prince (2008) evaluated "adult-friendly" instructional methods to attract and retain adult students. The report examined flexible and accelerated program schedules, design models, and easier transitions and transfer across institutions. Kazis et al. (2007) proposed a framework of alternative delivery approaches in postsecondary education: weekend colleges, evening and modularized courses, satellite campuses, accelerated and modularized programs, career pathways, and bridge programs.

Stamats's (2016) white paper addressed enrollment strategies to increase adult learner enrollment and persistence. An essential consideration is to develop an understanding of students who enroll and complete a program. Developing a rigorous student profile is an essential first step. The four main elements in a student profile are: demographic, psychographic, program format, and reach profile (see Appendices I and J for definitions and profile grid). A key indicator to attract and retain adult learners is assessing program offerings and the delivery of the programs. The recommendations are accessible required courses, shorter semesters, hybrid courses, and adult student cohorts.

Frey (2007) recommended a framework to develop policies for colleges to assist adult learners in achieving their educational goals. For adult learners to be successful, the development of the following is recommended: outreach, life and career planning,

financing, assessment and learning outcomes, teaching-learning process, student support systems, technology, and strategic partnerships (see Appendix K).
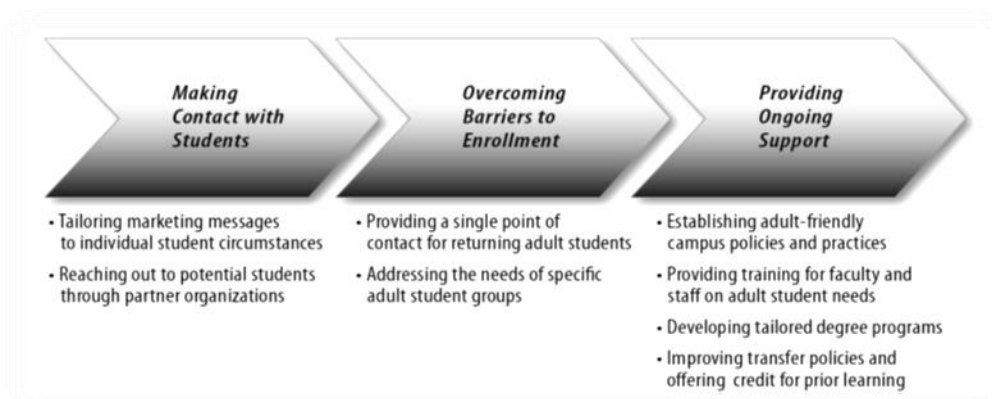
Figure 2.5. Stages in Assisting Returning Adults to Complete College Credential.

Erisman and Steele (2012) summarized the strategies institutions need to adopt to facilitate and implement a successful and effective program to attract and retain adult learners, as shown in Figure 2.5 (p. 2). At colleges and universities, strategies and principles for marketing have become conventional practice (Huddleston, 2000). Erisman and Steele suggested tailored marketing messages, a specific point of contact, and providing ongoing support. Assessing existing adult marketing and recruitment best practice strategies is essential to ensure high-quality yield and performance.

Johnson and Cantrell (2012) recommended the following principle guidelines developed by the CAEL to facilitate the success of adult learners. Some of the recommendations are: assessing learning outcomes, assisting with financing, developing comprehensive academic and student support systems, focusing on teaching and learning, providing life/career planning assistance, and using technology.

Community college adult student enrollment continues to decline at a greater rate than that of traditional students; however, the rate of decline was at the lowest between

fall 2014 and fall 2016 (Juszkiewicz, 2017). Understanding the needs of the complex

adult learners in education is no easy mission for enrollment management. The increased

cost of higher education makes it more important than ever that students graduate and

become successful. Where students go to college matters less than what students do

during their time at the institution. Institutions should review, expand, and provide

alternative methods for meeting the unique challenges adult learners face in academia.
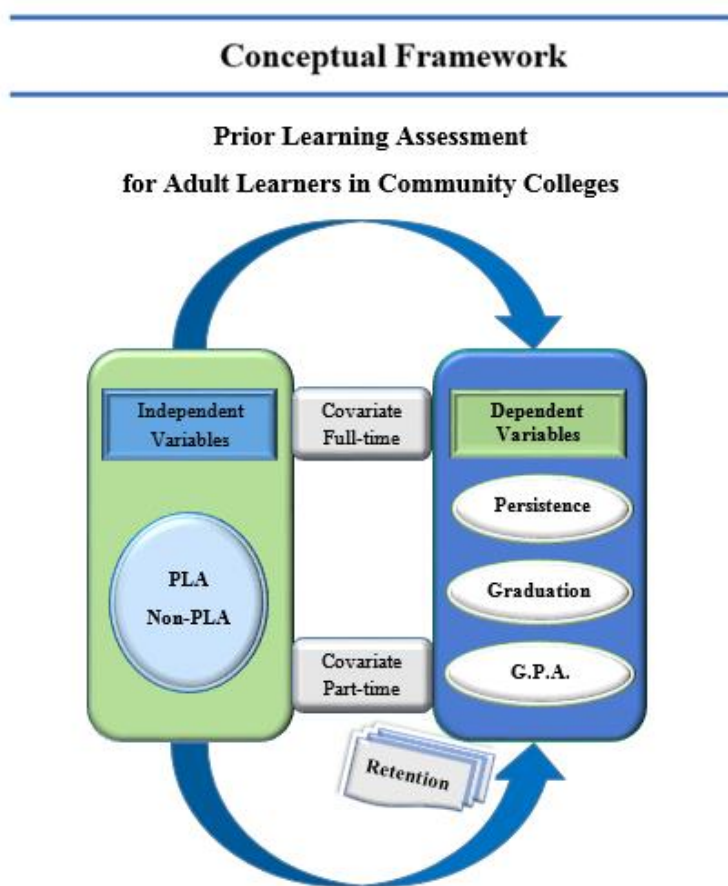
Figure 2.6. Conceptual Framework.

ADULT LEARNER THEORISTS

- Transition Theory 4S's:
- Self
- Situation
- Support
- Strategies

Stephen Brookfield 1985

Malcom S. Knowles 1970

- Andragogy: Core Adult learning Principles:
- Learner's need to know
- Self-concept
- Prior Learning Experience
- Rediness to learn
- Learning problem cntered,
- Motivation

Nancy Schlossberg 1981

Lev Vygotsky 1978

- Self-directed:
- Decisions and choices

- Social Constructivism:
- Meaning from experience

Characteristics of the Adult Learner

Dellayed Enrollment | Self-discover | Variety of Learning Styles

Full-time Employment | Self-directed | Intrapersonal Barriers

Part-time Enrollment | Prior Learning Experience | Self-worth

Figure 2.7. Adult Learner Theorists and Characteristics of the Adult Learner.

Conclusion

The conceptual model showed a comprehensive review of, as well as an association among, the main theoretical and methodological analyses of adult learners and PLA. The current research study examined adult learners who attended a community college both full and part-time, and the contribution PLA made to the students' GPA, goal to persist, and graduation. To better understand adult learners, it is useful to differentiate among their characteristics. Deggs (2011) described some of the characteristics of the adult learners in higher education as: postponed enrollment,

attending part-time, full-time employment, and family commitments. Based upon the literature, Choy (2002) stated that adult learners are more likely to enroll in a two-year institution. A logical structure of concepts connected the theoretical and contextual traits of adult learners (characteristics, barriers, learning styles, and academic success). Deggs and Choy provided a sound connection between the impact of PLA and academic outcomes among adult community college students.

Deggs's (2011) research identified that the needs of adult learners are as complex as the challenges facing the institutions that must meet them. Ryu's (2013) research recognized that skills and knowledge acquired outside the classroom (prior learning) had increased momentum in higher education. Acceptance of prior learning at the institutional level varies greatly, particularly regarding placement policy and the types of credits issued (Ryu, 2013).

CHAPTER 3

Introduction

Community colleges, like other colleges and universities, continue to face the challenges of a decrease in enrollment of traditional students, as well as of other students who complete graduation requirements. Hussar and Bailey (2016) projected that in the Northeast in 2009-2010 and again in 2023-2024, the number of public high school graduates will decrease by 10%. A method for bolstering community college enrollment is to shift the focus from the traditional student to the adult learner population. A strategy for addressing the need to attract and retain adult learners at community colleges is to provide PLA credit. Klein-Collins and Hudson (2017) described PLA as a process of evaluating adult students' experiential learning for granting college credit toward advancing a college education.

Methods and Procedures

Research Questions

The main research question was to determine what, if any, impact awarding PLA has on a set of student academic success indicators (GPA, persistence, and graduation) for a sample of adult learners at a tri-campus suburban community college in the Northeast. The study employed a quasi-experimental research design in which the main independent variable, PLA, consists of two groups of students: those who were awarded PLA (PLA, coded 1) and those who did not receive PLA (non-PLA, coded 0). PLA is employed by colleges to evaluate for academic credit and to determine if college-level knowledge and skills have been gained.

Research Question 1

To what extent is the PLA status (PLA or non-PLA) related to graduation attainment for adult learners after controlling for the covariate matriculation status (full-time, part-time)?

Hypothesis 1

Hypothesis – H_0: There is no relationship between PLA status and graduation attainment for adult learners after controlling for the covariate matriculation status.

Hypothesis – H_1: There is a relationship between PLA status and graduation attainment for adult learners after controlling for the covariate matriculation status.

Research Question 2

To what extent do demographic factors (age, gender, and ethnicity) add to the prediction of graduation attainment for adult learners beyond the PLA status (PLA or non-PLA) after controlling for matriculation status (full-time, part-time)?

Hypothesis 2

Hypothesis – H_0: The addition of the demographic factors (age, gender, and ethnicity) does not significantly improve the prediction of graduation attainment for adult learners after controlling for PLA and matriculation status.

Hypothesis – H_1: The addition of the demographic factors (age, gender, and ethnicity) does significantly improve the prediction of graduation attainment for adult learners after controlling for PLA and matriculation status.

Research Question 3

To what extent are there differences in GPA and persistence based on PLA status for adult learners after controlling for matriculation status?

Hypothesis 3

Hypothesis – H_0: There are no differences in GPA and persistence based on PLA status for adult learners after controlling for matriculation status.

Hypothesis – H_1: There is a difference in GPA and persistence based on PLA status for adult learners after controlling for matriculation status.

Research Design and Data Analysis

An ex post facto correlational quantitative research method design was chosen for the study because the collected data would be statistically analyzed, and this type of design explains a relationship and effect among variables (Creswell, 2019). A non-random sampling of convenience was implemented to select the participants. As Creswell (2019) explained, "In nonprobability sampling, the researcher selects individuals because they are available and convenient and represent some characteristic the investigator seeks to study" (p. 143). The ex post facto research method attempts to establish a cause for differences that exist in behavior or status of individuals or groups, and administration of the treatment has already been applied (Mills & Gay, 2019; Ruiz-Primo & Mitchell, 1996). "After the fact," the research conclusion is formulated (Ruiz-Primo & Mitchell, 1996).

The categorical independent variable for the research question was adult learners' PLA status (PLA coded 1, or non-PLA coded 0). Adult learners are independent either in one category or the other (Fraenkel, Wallen, & Hyun, 2017). The dependent variables were GPA (overall grade point average on a 4-point scale), persistence (length of time to degree attainment), and graduation attainment (completing an associate degree coded 1, or did not complete degree coded 0). The covariate was Matriculation Status (MS: full-

time coded 1, or part-time coded 0). GPA and persistence were continuous variables, and graduation was a dichotomous variable.

To determine if there was a difference in graduation outcomes based on PLA status, after controlling for the covariate matriculation status (MS), a binary logistic regression was employed. In the model, graduation was the dependent variable, PLA was the independent variable, and MS was the covariate. The alpha level of .05 was used for the logistic regression analysis.

To examine the impact of the demographic factors (age, gender, and ethnicity) on graduation attainment, while controlling for PLA (PLA or non-PLA) and matriculation (full-time, part-time) status, a binary logistic regression was conducted. In the simultaneous entry logistical model, graduation was the dependent variable. PLA was the independent variable, and MS, age, gender, and ethnicity were the covariates. PLA and MS were the predictor variables. The alpha level of .05 was used for the logistic regression analysis.

To determine if there was a difference in students' GPA and persistence based upon adult learners with PLA status, a One-way Multivariate Analysis of Covariance (MANCOVA) was appropriately selected. MANCOVA is a more robust test than ANCOVA because two or more dependent variables are incorporated in the same analysis, revealing a more powerful examination of differences among the group means (Fraenkel et al., 2017; Knapp, 2018). In the model, GPA and persistence were the dependent variables, PLA was the independent variable, and MS was the covariate. The alpha level of .05 was preferred for the statistical MANCOVA analysis.

Reliability and Validity of the Research Design

The ex post facto design is vulnerable to both internal and external threats because they lack both random assignment and precise treatment manipulation. A possible threat to the non-experimental ex post facto design may have posed an internal and external threat to validity. In order to minimize the possible threats to validity, the researcher collected archival data which eliminated contact with the subjects and reduced a possible external threat in the reactive effects of the selection of subjects. Mortality is a possible internal threat that the researcher minimized by collecting data on matriculated adult learners from the community college.

The Sample and Population

Sample:

The purpose of the ex post facto correlational study was to examine the extent to which the impact of awarding credit for PLA to adult learners increased community college enrollment and graduation rates at a tri-campus suburban community college in the Northeast. According to Mills and Gay (2019), "Correlational research involves collecting data to determine whether, and to what degree, a relationship exists between two or more quantifiable variables" (p. 224). The study explored the relationship between adult learners who earn PLA credits or do not earn PLA credits and student success. For the study, student success was defined as the adult learners' GPA, persistence (length of time to degree attainment), and graduation (completing an associate degree).

The site from which the researcher drew participants was a large, ethnically diverse, tri-campus suburban community college, with a student population of 26,078

located in the northeastern region of the United States (NCES, 2018). For the purpose of the research, the institution was assigned the pseudonym Windjammer Community College (WCC). The community college used in this study was one of the 48 postsecondary institutions that participated in the benchmark PLA study, *Fueling the Race to Postsecondary Success: A 48-institution Study of Prior Learning Assessment and Adult Student Outcomes* (Klein-Collins, 2010). Demographics from Integrated Postsecondary Education Data System from the fall 2018 identified enrollment at the community college as 49% part-time students, 51% full-time students, 53% female, 47% male, with 53% White, 25% Hispanic/Latino, 8% Black or African American, 4% Asian, 2% two or more races, 7% race/ethnicity unknown, and 19% adult learner population 25 years of age or older (NCES, 2018).

Study Setting Historical Background:

The community college used in this study established a PLA program during the late 1980s (Bamford-Reese et al., 2009). Soon after, the Adult Learner Programs Office was created to further expand assistance to adult students seeking to earn advanced credit and placement through not only PLA but also other alternative methods including the CLEP, as well as through local college challenge exams and recognized licensing examinations (Bamford-Reese et al., 2009). During a February 2009 site visit by consultants from the CAEL, it was noted there was at one time a well-designed and robust PLA program in place at WCC (Bamford-Reese et al., 2009). Bamford-Reese et al. (2009) further reported that the original program was available on all three campuses and was adequately funded to support the staffing and operations of the Adult Learner Programs Office. A one-credit prior learning portfolio course CS OS30 was created to

assist adult learners with assessing their prior learning and, if appropriate, developing and submitting learning portfolios for review and possible credit attainment. The course was offered each semester on each of the three campuses. The program had support of faculty and administrators on all campuses and had a regular review process. It was a vibrant program for about a decade from1989-1999 (Bamford-Reese et al., 2009).

Since 2009, participation in the PLA program and enrollment in the Portfolio Preparation Course have continued to decline. As a result, additional resources have been reduced. Interest in, and knowledge of, adult learner programming has also declined. It was the intention of this study to provide data to explore the potential efficacy of PLA in the current educational landscape. In doing so, this established academic program may be determined to be a vital part of attracting, motivating, and otherwise assisting adult students to join and succeed in the learning community of the institution.

Participants:

The targeted population for the study were students 25 years of age or older, of full-time (12 credits or more per semester) and part-time status (up to 11.9 credits per semester), matriculated (a declared major) with no previous credits from the community college before September 2012. Adult learners with PLA status identify as students who were awarded college-level credit through the process of AP, CLEP, challenge exams, military credit (training/occupations), DANTES subject standardized tests (DSST), technical or professional licensure, and portfolio assessment.

Mills and Gay (2019) cited that a sample size guideline of a minimum 30 participants is required in a correlational study to determine if a relationship exists

between quantifiable variables. From the archival records data set, a total of 1,307 adult

learners were identified: 170 PLA and 1,137 non-PLA. The total number of full-time (12

credits or more per semester) adult learners was 718 (PLA 101 and non-PLA 617), as

shown in Table 3.1 and Table 3.2. The researcher gained access to the research site,

WCC, through the Office of Planning and Institutional Effectiveness (OPIE) to acquire

the archival data.

Table 3.1

Descriptive Statistics for PLA and Non-PLA Adult Learners: Frequency and Percent

		n	*%*
Valid	Non-PLA	1137	87.0
	PLA	170	13.0
	Total	1307	100.0

Table 3.2

Demographic Distribution of PLA and Non-PLA Adult Learners

Demographic	PLA *(n)*	Non-PLA *(n)*
Gender		
Male	84	359
Female	86	778
Age		
25-34	119	758
35-44	34	227
45-54	14	126
55-64	3	25
65 and over	0	1
Ethnicity/Description		
American Indian/Alaska Native	2	5
Asian	5	35
Black or African American	27	218
Hispanic or Latino	48	230
Native Hawaiian/Pacific Islander	0	4
Two or more races	3	11
Race/ethnicity unknown	30	186
White	53	436
Foreign Student	2	12
Unknown	30	186
Enrollment		
Full-time (12 credits or more)	101	617
Part-time (11.9 credits or less)	69	520
Financial Aid		
Pell Recipient	71	640
Pell Non-Recipient	99	497
Tap Recipient	33	336
Tap Non-Recipient	137	801

Instruments

The purpose of the study was to examine the impact of awarding credit for PLA to adult learners in order to increase community college enrollment and graduation rates at a tri-campus suburban community college in the Northeast. Data for the study were collected from student archival records for six academic years (September 2012 – May 2018).

Procedures for Collecting Data

The researcher contacted the OPIE at WCC via phone to initiate the process for acquiring the ex post facto data for the study. A formal meeting with OPIE administration took place to clarify the required data and the approval process. The researcher submitted electronically to the Institutional Review Board (IRB) an application to OPIE for committee approval to obtain the ex post facto data. After receiving committee IRB approval, the researcher acquired the data from OPIE at WCC. The researcher confirmed that the retrieved archival data had no subject identifiers and were password protected and encrypted to ensure subject privacy and confidentiality. The process for the data collection occurred between January 2019 and March 2019.

The researcher acquired the data from the OPIE at WCC. Data for the study were collected from student archival records for six academic years (September 2012 – May 2018). A non-random sampling of convenience was implemented to select the participants. According to Creswell (2019), "In nonprobability sampling, the researcher selects individuals because they are available and convenient and represent some characteristic the investigator seeks to study" (p. 143).

The acquired archival data of student records were for six academic years (September 2012 – May 2018), adult learners (25 years of age or older), full-time status (12 credits or more per semester), part-time status (up to 11.9 credits per semester), and matriculated (a declared major) with no previous credits from the community college before September 2012. Adult learners with PLA status identify as students who were awarded college-level credit through the process of AP, CLEP, challenge exams, military credit (training/occupations), DSST, technical or professional licensure, and portfolio assessment.

The researcher submitted St. John's University (IRB) exempt application to the committee upon approval of the dissertation proposal. The IRB exempt application was chosen because the research setting was an established accepted educational institution accredited by the Middle States Commission on Higher Education, the collection of the data exists, and the information obtained for the study did not have any human subject identifiers. The data analysis process commenced upon IRB acceptance from St. John's University. The researcher submitted drafts of the narrative and data analysis to the mentor as scheduled.

Research Ethics

Data for the ex post facto correlational quantitative research were collected from student archival records through the OPIE at WCC. The researcher confirmed that the retrieved archival data had no subject identifiers and were password protected and encrypted to ensure subject privacy and confidentiality.

Summary

An ex post facto correlational quantitative research method design was chosen for the study because the collected data were statistically analyzed, and it explains a relationship and effect among variables (Creswell, 2019). A non-random sampling of convenience was implemented to select the participants. The researcher gained access to the research site through the OPIE to acquire the archival data. A binary logistic regression was used to determine if there is a difference in graduation outcomes for adult learners based on PLA status (PLA or non-PLA) after controlling for the covariate (full-time, part-time); binary logistic regression analysis was used to examine the impact of the demographic factors (age, gender, and ethnicity) on graduation attainment, while controlling for PLA (PLA or non-PLA) and matriculation (full-time, part-time) status; and a One-way MANCOVA was used to determine if there is a difference in student success rate for GPA and persistence (length of time to degree attainment), based upon adult learners with PLA or non-PLA status after controlling for MS (full-time, part-time). Chapter 4 reports the results and findings for the data analysis. The analysis and synthesis of the research findings in relationship to prior research and recommendations are discussed in Chapter 5.

CHAPTER 4

Introduction

The purpose of the ex post facto correlational study was to examine the extent to which the impact of awarding credit for PLA to adult learners increases community college enrollment and graduation rates at a tri-campus suburban community college in the Northeast. As Mills and Gay (2019) explained, "Correlational research involves collecting data to determine whether, and to what degree, a relationship exists between two or more quantifiable variables" (p. 224). The study explored the relationship between adult learners who earn PLA credits or do not earn PLA credits and student success. For the study, student success was defined as the adult learners' GPA, persistence (length of time to degree attainment), and graduation (completing an associate degree). This chapter presents the data analysis findings for the research questions stated in the Chapter 1 and Chapter 3, and the relevant quantitative statistical data following IRB approval from St. John's University.

Results/Findings

Participants

After receiving IRB committee approval, the researcher acquired the data for the anonymous adult learners from the OPIE at WCC. The acquired archival data were from 1,307 adult learners for six academic years (September 2012 – May 2018), who had a declared major and no previous credits from the study setting, WCC, before September 2012 (as seen in Table 4.1).

Table 4.1

Descriptive Statistics for PLA and Non-PLA Adult Learners: Frequency and Percent

	n	%
Non-PLA	1137	87.0
PLA	170	13.0
Total	1307	100.0

Table 4.2

Descriptive Statistics for Matriculation Status Part-Time and Full-Time: Frequency and Percent

	n	%
Part-time	589	45.1
Full-time	718	54.9
Total	1307	100.0

It is displayed in Table 4.2 that 54.9% of the students maintained full-time MS (12 credits or more per semester), and 45.1% of students maintained part-time status (up to 11.9 credits per semester). The adult learners in the study ranged in age from 25 to 67 with a $M = 33.33$, $SD = 8.43$. Females represented 66.1% of the population and males 33.9%. The adult students self-identified as White comprised 37.4% of the sample, Hispanic or Latino 21.3%, Black/African American 18.7%, unknown (unidentified) 16.5%, Asian 3.1%, Foreign 1.1%, two or more races 1.1%, and Indigenous People (Native Americans, Native Alaskan, Native Hawaiian, Pacific Islanders) 0.8%. For this study, adult learners with PLA status identify as students who were awarded college-level credit through the process of AP, CLEP, challenge exams, military credit (training/occupations), DSST, technical or professional licensure, or portfolio assessment.

The mean average of awarded PLA credits was 4.0176. Table 4.3 shows the distribution

of PLA credits.

Table 4.3

Descriptive Statistics for Earned PLA Credits

	Credits	n	%
PLA	.50	1	.1
	1.00	7	.5
	2.00	36	2.8
	3.00	73	5.6
	4.00	8	.6
	5.00	11	.8
	6.00	14	1.1
	7.00	3	.2
	8.00	5	.4
	9.00	1	.1
	10.00	1	.1
	10.50	1	.1
	11.00	3	.2
	13.50	4	.3
	14.00	1	.1
	22.00	1	.1
	Total	170	13.0
Non-PLA Credits		1137	97.0
Total		1307	100.0

Research Question 1

To what extent is the PLA status (PLA or non-PLA) related to graduation attainment for adult learners after controlling for the covariate matriculation status (full-time, part-time)?

Hypothesis 1

Hypothesis – H_0: There is no relationship between PLA status and graduation attainment for adult learners after controlling for the covariate matriculation status.

Hypothesis – H_1: There is a relationship between PLA status and graduation attainment for adult learners after controlling for the covariate matriculation status.

Analysis Overview

Before beginning the statistical analysis for the hypothesis, the data were screened. There were no missing data values or coding errors. Since all the variables in the analysis were nominal measures, univariate and multivariate were not an issue.

To determine if there was a difference in graduation outcomes based on PLA status, after controlling for the covariate MS, a binary logistic regression was employed. In the model, graduation was the dependent variable, PLA was the independent variable, and MS was the covariate. The alpha level of .05 was used for the logistic regression analysis. All statistical analyses were conducted using the SPSS v 24 software.

The present study was designed to examine the impact of PLA participation (coded 0 for non-PLA, $N = 1,137$ participants, and 1 for PLA and 170 participants) on graduation outcomes for a sample of $N = 1,307$ adult community college students. The dependent variable encoding for graduation original value = No and internal value = 0, and original value = Yes and internal value = 1. Because the sample consisted of both

full-time (coded 1, $n = 718$) and part-time (coded 0, $n = 589$) adult learners (MS), the

analysis of the impact of PLA on graduation was evaluated after controlling MS in a

binary logistic regression analysis in which graduation outcome coded 1 for graduates, n

$= 136$, and 0 for non-graduates ($n = 1,171$) was the dependent variable; and PLA and MS

were the predictor variables as seen in Table 4.4.

Table 4.4

Graduation Crosstabulation of Matriculation Status Part-Time and Full-Time

	Graduation		
Matriculation Status	No	Yes	Total
Part-time	545	44	589
Full-time	626	92	718
Total	1171	136	1307

Preliminary Analysis

A logistic regression analysis was performed to assess the fit of the model to the

data. In addition, each categorical data cell had a count (n) of greater than five per cell

minimum in the number of cases in the IV and DV. If any of the expected frequencies of

the cells is too small ($f_e < 5$), little power may apply to the analysis (Tabachnick & Fidell,

2007). Logistic regression is very sensitive to high correlations among the predictor

variable. The researcher ran a collinearity diagnostic to determine if the assumption was

met. A preliminary multiple regression analysis indicated that collinearity among

predictor variables was not a problem within the current sample, VIF $= 1.001$ and

tolerance $= .999$. The VIF scores were well below 10 and the tolerance scores were well

above .20, the cutoff scores. The results indicated that the variables PLA and MS were

uncorrelated and showed no multicollinearity. The correlation is not significant; therefore, the required assumptions were met for the logistic regression analysis.

Results for Binary Logistic Regression

The result for the full model was statistically significant $\chi^2(df = 2, N = 1307) = 17.7, p < .001$, indicating that the two predictor variables (PLA and full-time or part-time) were significant predictors for graduation outcomes. The proportion variance in graduation outcome accounted for by the model was small (Nagelkerke $R^2 = .028$), accounting for only 2.80% of the variability in graduation outcomes, and Cox-Snell $R^2 = .013$ accounting for only 1.03% of the variability in graduation outcomes.

Table 4.5

Graduation Classification Results

	Predicted Graduate		Percent Correctly
Actual Graduate	No	Yes	Classified
No	1171	0	100.0%
Yes	136	0	0.0%
Overall Percentage			89.6%

Classification results were impressive, with 89.6% of the cases correctly predicted, for an overall sample, but very asymmetrical in that 100% of the non-graduates were correctly predicted, but 0% of the actual graduates were correctly classified. They were all predicted to be non-graduates as shown in Table 4.5.

Seen in Table 4.6 are the regression coefficients (*B*), Wald's test (*W*) for the significance of *B*, odds ratios (*OR*). The researcher set the confidence intervals for odds ratios at 95% for each of the predictors. The results indicated that MS (full-time, part-

time) was a significant positive predictor correlated with graduation ($B = .584$, $W =$ 9.155, $p = .002$, $OR = 1.793$). The full-time adult learners were 1.793 times more likely to graduate (95% CI 1.228, 2.618). This finding indicates that full-time adult learners were more likely to graduate than part-time adult learners, although the effect size is small, as defined by Chen, Cohen, and Chen (2010).

The finding for PLA was also significant and revealed a positive predictor between PLA and graduation ($B = .660$, $W = 8.307$, $p = .004$, $OR =1.935$). As shown in Table 4.6, this result indicated that PLA adult learners were approximately 1.935 times more likely to graduate (95% CI 1.235, 3.031) than non-PLA adult learners, and again the effect size was small, as defined by Chen et al. (2010).

Table 4.6

Binary Logistic Regression Results of the Factors Predicting Graduation

Model	B	SE B.	Wald X^2	df	p	OR	95% C.I. for OR
MS	0.584	0.193	9.155	1	0.002	1.793	95% CI 1.228 – 2.618
PLA	0.660	0.229	8.307	1	0.004	1.935	95% CI 1.235 – 3.031

Note. In the table, *Exp (B)* is Odds Ratio (*OR*).

Effect Size Guidelines for ORs: 1.68 (.60 = small, 3.47 (.29) = medium, 6.71 (.15) = Large (Chen, Cohen, & Chen, 2010).

$p < .05$

Summary of Findings

Results from a logistic regression analysis indicated that after controlling for MS (full-time, part-time), community college adult students who earned PLA credit were significantly more likely to graduate than non-PLA adult learners who did not earn PLA credit. After controlling for MS, the proportion of PLA adult learners that graduated was

16.8% ($p = .168$, $SE = .023$), and the proportion of non-PLA adult learners was 9.4% ($p = .094$, $SE = .009$). The 7.7% difference between the two groups is statistically significant ($p < .01$). The analysis indicates that the null hypothesis is rejected, as PLA for adult learners significantly influenced graduation attainment among PLA or non-PLA adult learners, although the effect size was small (1.935) as defined by Chen et al. (2010).

Research Question 2

To what extent do demographic factors (age, gender, and ethnicity) add to the prediction of graduation attainment for adult learners beyond the PLA status (PLA or non-PLA) after controlling for MS (full-time, part-time)?

Hypothesis 2

Hypothesis – H_0: The addition of the demographic factors (age, gender, and ethnicity) does not significantly improve the prediction of graduation attainment for adult learners after controlling for PLA and matriculation status.

Hypothesis – H_1: The addition of the demographic factors (age, gender, and ethnicity) does significantly improve the prediction of graduation attainment for adult learners after controlling for PLA and matriculation status.

Analysis Overview

To examine the impact of the demographic factors (age, gender, and ethnicity) on graduation attainment, while controlling for PLA and MS, a binary logistic regression was conducted. In the simultaneous entry logistical model, graduation was the dependent variable. PLA was the independent variable, and MS, age, gender, and ethnicity were the covariates. PLA and MS were the predictor variables. Because the variable ethnicity was a nominal variable with eight levels, it was dummy coded into seven binary (0,1)

dummy variables (as shown in Table 4.7). The alpha level was set to .05. The statistical

frequencies for age are seen in Table 4.8 and the frequency and percent for gender and

ethnicity are seen in Table 4.9.

Table 4.7

Descriptive Statistics for Ethnicity

Ethical/Racial Group	n	Parameter Coding						
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Indigenous People*	11	1	0	0	0	0	0	0
Asian	40	0	1	0	0	0	0	0
Black/African American	245	0	0	1	0	0	0	0
Foreign	14	0	0	0	1	0	0	0
Hispanic or Latino	278	0	0	0	0	1	0	0
Two or more races	14	0	0	0	0	0	1	0
Unknown	216	0	0	0	0	0	0	1
White	489	0	0	0	0	0	0	0

Note *Includes Native Americans, Native Alaskan, Native Hawaiian, and Pacific Islanders

Table 4.8

Statistical Frequencies for Age

N	M	Mdn	SD	Minimum	Maximum
1307	33.33	30.00	8.43	25.00	67.00

Table 4.9

Descriptive Statistics for Gender and Ethnicity

	n	*%*
Female	864	66.1
Male	443	33.9
Indigenous People*	11	.8
Asian	40	3.1
Black/African American	245	18.7
Foreign	14	1.1
Hispanic or Latino	278	21.3
Two or more races	14	1.1
Unknown	216	16.5
White	498	37.4

*Includes Native Americans, Native Alaskan, Native Hawaiian, and Pacific Islanders

Preliminary Analysis

Before beginning the statistical analysis for the hypothesis, the data were screened. To detect univariate outliers for the variable age, all age scores were converted to Z scores using the criteria +/– standard deviations. No univariate outliers were detected (Z min. = -1.05, Z max. = 2.92).

Next, the assumption tests for the logistic regression analysis were performed to assess the fit of the model to the data. Each categorical data cell had a count (*n*) of greater than five per cell minimum in the number of cases in the IV and DV. If any of the expected frequencies of the cells are too small ($f_e < 5$), little power may apply to the analysis (Tabachnick & Fidell, 2007). Logistic regression is very sensitive to high

correlations among the predictor variables. The researcher ran a collinearity diagnostic to determine if the assumption was met. A preliminary multiple regression analysis indicated that collinearity among predictor variables was not a problem within the current sample the range of VIF = 1.019 - 1.256 and the range of tolerance = .796 - .981. The VIF scores were well below 10 and the tolerance scores were well above .20, the cut off scores. The results showed that the variables (PLA, MS, age, gender, and ethnicity) were uncorrelated and showed no multicollinearity. The correlation is not significant; therefore, the required assumptions were met for the logistic regression analysis.

Results for Binary Logistic Regression

The results for the logistic regression model were statistically significant χ^2(df = 11, N = 1307) = 29.81, p < .00, indicating that the two predictor variables were significantly correlated with graduation outcomes. The proportion variance in graduation outcome accounted for by the model was small (Nagelkerke R^2 = .046), accounting for approximately 4.6% of the variability in graduation outcomes, and Cox-Snell R^2 = .023, accounting for only 2.3% of the variability in graduation outcomes.

Table 4.10

Graduation Classification Results

	Predicted Graduate		Percent Correctly
Actual Graduate	No	Yes	Classified
No	1171	0	100.0%
Yes	136	0	0.0%
Overall Percentage			89.6%

The classifications results appeared to be impressive with 89.6% of the cases correctly predicted, for an overall sample. However, the results appeared to be very asymmetrical, in that 100% of the non-graduates were correctly predicted, but zero percent of the actual graduates were correctly classified: they were all predicted to be non-graduates (as shown in Table 4.10).

Shown in Table 4.11 are the regression coefficients (B), Wald's test (W) for the significance of B, and odds ratios (OR). The researcher set the confidence intervals for odds ratios at 95% for each of the predictors. The results indicated that, after controlling for the other predictor variable in the model, MS (full-time, part-time) was a significant positive predictor correlated with graduation ($B = .545$, $W = 7.562$, $p = .006$, $OR = 1.724$). This finding indicates that full-time adult learners were approximately 1.724 times more likely to graduate (95% CI 1.169, 2.541) than part-time adult learners, although the effect size 1.724 was small, as defined by Chen et al. (2010).

The finding for PLA was also significant and revealed that, after controlling for the other predictor variables in the model, PLA was positively related to graduation status ($B = .646$, $W = 7.558$, $p = .006$, $OR = 1.907$). This result indicated that PLA students were approximately 1.907 times more likely to graduate (95% CI 1.204, 3.022) than non-PLA students, and again the effect size was small, as defined by Chen et al. (2010).

Specifically related to this research question, none of the demographic factors (age, gender, and ethnicity) added to the prediction of graduation attainment for adult learners beyond the PLA status (PLA or non-PLA) after controlling for MS (full-time, part-time).

Table 4.11

Binary Logistic Regression Results of the Factors Predicting Graduation

Model	B	SE B.	Wald X^2	df	p	OR	95% C.I. for OR	
PLA	.646	.235	7.558	1	.006	1.907	1.204	3.022
MS	.545	.198	7.562	1	.006	1.724	1.169	2.541
Age	.019	.010	3.292	1	.070	1.019	.998	1.040
Gender	-.290	.192	2.274	1	.132	.748	.513	1.091
Indigenous*	-18.855	12005.312	.000	1	.999	.000	.000	.
Asian	.154	.506	.092	1	.762	1.166	.432	3.146
Black/ African American	-.007	.257	.001	1	.977	.933	.600	1.642
Foreign	.695	.678	1.051	1	.305	2.005	.530	7.577
Hispanic/ Latino	-.367	.274	1.795	1	.180	.693	.405	1.185
Two or more	.110	.788	.020	1	.889	1.116	.238	5.227
Unknown	.172	.259	.444	1	.505	1.188	.715	1.974

Note. *Includes Native Americans, Native Alaskan, Native Hawaiian, and Pacific Islanders

Effect Size Guidelines for ORs: 1.68 (.60 = small, 3.47 (.29) = medium, 6.71 (.15) = Large (Chen, Cohen, & Chen, 2010)

p < .05

Summary of Findings

Results from a logistic regression analysis indicated that after controlling for the

demographic factors of age, gender, and ethnicity, variables MS and PLA remained

significant predictors of graduation outcomes. The findings also indicated that the

demographic variables of age, gender, and ethnicity were not significant predictors of

graduation status after controlling for PLA and MS. The analysis indicates that the null

hypothesis is attained.

Research Question 3

To what extent are there differences in GPA and persistence based on PLA status

for adult learners after controlling for matriculation status?

Hypothesis 3

Hypothesis – H_0: There are no differences in GPA and persistence based on PLA status

for adult learners after controlling for matriculation status.

Hypothesis – H_1: There is a difference in GPA and persistence based on PLA status for

adult learners after controlling for matriculation status.

Analysis Overview

Before beginning the statistical analysis for the hypothesis, the data were

screened. To detect univariate outliers for the variable persistence, all persistence scores

were converted to Z scores using the criteria +/– standard deviations. No univariate

outliers were detected (Z min. = -2.49, Z max. = 2.02).

To determine if there was a difference in students' GPA and persistence based

upon adult learners with PLA status, a One-way MANCOVA was appropriately selected.

MANCOVA is a more robust test than the ANCOVA because two or more dependent

variables are incorporated in the same analysis, revealing a more powerful examination

of differences among the group means (Fraenkel et al., 2017; Knapp, 2018). In the

model, GPA and persistence were the dependent variables, PLA was the independent

variable, and MS was the covariate. The alpha level of .05 was preferred for the

statistical MANCOVA analysis.

Preliminary Analysis

Data for the sample of 29 PLA graduates and 107 non-PLA graduates were analyzed employing a Multivariate Analysis of Covariance (MANCOVA) to assess possible differences between groups in the outcome measures, persistence (length of time to degree attainment): Years to Graduate (GRAD), and overall Cumulative Grade Point Average (CUMGPA). Because 35% of the PLA adult learners and 32% of the non-PLA adult learners attended college as part-time students, MS for all 136 cases was coded (0 for part-time students, and 1 for full-time students), and this dichotomous variable matriculation status (MATRICST) served as a covariate in the MANCOVA. The researcher determined that the best analysis to use was a MANCOVA, because the model has multiple DVs, with the inclusion of covariates. Thus, the analysis is correctly described as a Multivariate Analysis of Covariance (Tabachnick & Fidell, 2013).

An exploratory data analysis of the variable persistence (GRAD) and Cumulative Grade Point Average (CUMGPA) was conducted to determine if the measures met the assumption of normality. The distribution of scores for the dependent variable GRAD (M_{GRAD} = 3.21, SD = .887, N = 136) met the assumptions of normality (Field, 2007). Specifically, a Z-test for skewness (*Skewness* = .034, SE_{skew} = .208, Z = .166, p = .868) was nonsignificant at the 5% level. In addition, no outlier scores were detected using the conventional 3SDs rule (Field, 2007).

The exploratory data analysis for CUMGPA (M = 3.45, SD = .426, N = 136) was problematic. The distribution of CUMGPA scores was significantly and negatively skewed (*Skewness* = -.638, SE_{skew} = .208, Z = -3.07, p = .002). The data failed to meet a fundamental assumption of MANCOVA. Based on the recommendation of Tabachnick

and Fidell (2013) to normalize the distribution of CUMGPA scores, the data were

transformed through a reflection (reverse coding) and then a reciprocal (1/.x) inversion.

A re-evaluation of the transformed CUMGPA scores (T_CUMGPA) failed to reveal any

significant departure from normality (*Skewness* = .195, *SE* $_{skew}$ = .208, Z = .934, p = .348).

As final exploratory data analysis, Box's *M* test of equality of covariances

between the two study groups (PLA, non-PLA) was conducted. It showed no statistically

significant difference among the variances (Box_M = .381, F = .124 (3, 37947), p = .946)

and indicated that the data have met the assumption of equality of homogeneity of

covariances. Levene's test for equality of variances between the two study groups (PLA,

non-PLA) was conducted and indicated that the data met the assumption (equality of

homogeneity) of variances for both GRAD (F(1, 134) = .483, p = .488) and

T_CUMGPA: (F(1,134) = .345, p = .558) outcome measures.

Results for the MANCOVA

In the MANCOVA model, the variables GRAD (persistence: years to graduation)

and T_CUMGPA (GPA) were the dependent variables, Group (PLA, non-PLA) was the

independent variable, and MATRICSTAT (full-time, part-time) was the covariate. The

results for the MANCOVA indicated that after controlling for MS, the effect of group

(PLA, non-PLA) was marginally significant (Wilks Λ = .957, $F(2,$ 132) = 2.98 p = .054.

To understand the effect for group follow-up, Univariate Analyses of Covariances

(ANCOVAs) were conducted for each outcome measure as shown in Table 4.12. The

finding for the dependent variable, persistence: years to Graduation (GRAD) was

statistically significant (F(1,133) = 3.95, p = .049, η_p^2 = .029), and reflects a small effect

size, accounting for less than 3% of the variability GRAD. This shows that MS (full-

time, part-time), the covariate, had an impact on the relationship between the dependent

variable persistence (length of time to degree attainment) and GPA.

Table 4.12

Follow-up Univariate ANCOVA

Source	DV	SS	df	MS	F	p	η_p^2
	Years to Graduate	6.969[a]	2	3.484	4.67	0.011	0.066
	Tran_Cum GPA	.020[b]	2	0.010	0.31	0.734	0.005
Matric Status_FT,PT	Years to Graduate	4.184	1	4.184	5.61	0.019	0.040
	Tran_Cum GPA	0.010	1	0.010	0.31	0.581	0.002
Group	Years to Graduate	2.947	1	2.947	3.95	0.049	0.029
	Tran_Cum GPA	0.011	1	0.011	0.33	0.567	0.002
Error	Years to Graduate	99.266	133	0.746			
	Tran_Cum GPA	4.373	133	0.033			

Note. a. R^2 = .066 ($R^2_{Adjusted}$ = .052)

b. R^2 = .005 ($R^2_{Adjusted}$ < .001)

Regarding this significant finding as shown in Table 4.13, the mean adjusted

number of years to graduate (persistence) for non-PLA group (M_{Adj} = 3.283, SE = .084)

was significantly greater (p = .049) than the mean adjusted years to graduate (persistence)

for the PLA group mean (M_{Adj} = 2.923, SE = .160). The PLA group required

approximately .352 years fewer to graduate than the non-PLA group, which represents a

small effect size: Cohen's d = .39, which is noteworthy. Note, Cohen's d = .2 small

effect; d = .5 medium effect; and d = .8 large effect (Rice & Harris, 2005).

The findings for the outcome measure T_CUMGPA was not statistically significant $F(1, 133) = 0.33$, $p = .567$, indicating that PLA group ($M_{CumGPA} = 3.516$) and the non-PLA group ($M_{CumGPA} = 3.563$) achieved statistically equivalent overall cumulative grade point averages, as shown in Table 4.13.

Table 4.13

The Adjusted Means and Summary Statistics for Persistence-Years to Graduation and Transformed and Reverted GPA by Study Group (PLA and Non-PLA)

| | | | | | 95% Confidence Interval | |
Dependent Variable		Mean	Std. Error	Lower Bound	Upper Bound
Years to Graduate	non-PLA	3.283[a]	0.084	3.117	3.448
	PLA	2.923[a]	0.160	2.606	3.240
Tran_Cum GPA	non-PLA	0.696[a]	0.018	0.661	.0730
	PLA	0.674[a]	0.034	0.607	0.740
Cum GPA_Reverted[1]	non-PLA	3.563[a]			
	PLA	3.516[a]			

Note. a. Means are adjusted for the covariate matriculation status

[1] Transformed scores have been reverted to standard GPA.

Summary of Findings

The findings showed that the *p* value for the contrast of the T_CUMGPA for PLA and non-PLA was above .05 ($p = .567$); and not significant after controlling for the MS (full-time, part-time), the null hypothesis for the outcome measure cumulative GPA is retained. The data revealed that persistence, years to graduate (length of time to degree attainment) was significant, because the PLA group required .352 years' less time to graduate than the non-PLA group, thus the null hypothesis is rejected.

Conclusion

Results from a logistic regression analysis revealed that that PLA adult learners were 1.935 times more likely to graduate than non-PLA adult learners, after controlling for MS (full-time, part-time). In addition, a logistic regression analysis indicated that after controlling for the demographic factors of age, gender, and ethnicity, variables MS and PLA remained significant predictors of graduation outcomes, and the demographic variables did not add to the prediction of graduation outcomes. The results for the MANCOVA showed that the findings for the outcome measure T_CUMGPA was statistically nonsignificant, and indicates that the overall GPA of the two groups (PLA, non-PLA) were equivalent. The data revealed that the findings for the variable persistence, years to graduate (length of time to degree attainment) was statistically significant: specifically, the PLA group required .352 years' less time to graduate than the non-PLA group. The synthesis and discussion of the researcher's questions, implications of the findings, relationship to prior research, limitations and recommendations, and the practical implications are addressed in Chapter 5.

CHAPTER 5

Discussion

Introduction

This chapter presents a discussion and sequential interpretation of the study's

relevant results and findings and integrates the theoretical and conceptual framework

with the analyses. During a critical period, when institutions continue to face the

challenge of declining enrollment, this study will add to the limited quantitative research

within the context of the community college associated with the PLA process as it relates

to adult learners. The relevant relationship to prior research explored in the literature

review is linked to the findings for each research question. The limitations of the study

will examine the threats to the statistical conclusion, both internal and external. The final

discussion within the context is to provide recommendations for future research and

practice for policymakers and practitioners through the lens of higher education,

specifically the community college.

Implications of Findings

An innovative strategy for attracting, retaining, and increasing completion rates

for the adult learner is to incorporate credit for demonstrated prior learning, known as the

PLA program. There is a substantial correlation between degree completion and PLA

(CAEL, 2017). Through the lens of PLA as a pathway to promote productivity at the

community college, this study focused on the standard metrics to measure adult learners'

success, such as GPA, persistence, and graduation completion.

Community colleges, like other colleges and universities, continue to face the

challenges of a decrease in enrollment of traditional students, as well as of other students

who complete graduation requirements. Kelderman et al. (2019) reported and reinforced

that the warning signs have been apparent for years, alerting institutions to the decrease

in the number of high school students to eventually fill classes and to the increasing cost

of education. The current economic rebound contributes to the decline in college

enrollment due to increased job opportunities and the reduction in unemployment

(Juszkiewicz, 2017), and Hussar and Bailey (2016) have projected that in the Northeast

between 2009-2010 and again in 2023-2024, the number of public high school graduates

will decrease by 10%. In addition, predicting the number of students who will attend a

community college is complicated because of the unknown factors of competing

institutions (Cohen et al., 2014). With the emerging decline of students in higher

education, a method for bolstering community college enrollment is to shift the focus

from the traditional student to the adult learner population. Colleges need to seriously

consider whom they serve. By 2030, the most adaptable colleges will be in the best

position to serve the shifting demographics of the student population (Kelderman et al.,

2019). The significance of the study was to investigate and alert community college

policy and decision-makers to the unique needs of adult learners, and the potential

contribution PLA status makes to student success. With the shift to a more diverse

demographic, the community college needs to use the collected information to allocate

resources to strategically develop a rigorous PLA program, and market the value and

significant benefits gained from PLA to foster more enrollment, retention, and

completion. Adult learners who participate in PLA may complete more credits, remain

enrolled longer, and complete graduation requirements at a higher rate than adult learners

who do not earn credit for prior learning at a tri-campus suburban community college in the Northeast.

The first research question that guided the study was:

To what extent is the PLA status (PLA or non-PLA) related to graduation attainment for adult learners after controlling for the covariate matriculation status (full-time, part-time)?

To determine if there was a difference in graduation outcomes based on PLA status, after controlling for the covariate MS, a binary logistic regression was employed. In the model, graduation was the dependent variable, PLA is the independent variable, and MS was the covariate. Results from a logistic regression analysis revealed that PLA adult learners were 1.935 times more likely to graduate than non-PLA adult learners, and full-time adult learners were 1.793 times more likely to graduate. The analysis showed that community college adult students who earned PLA credit were significantly more likely to graduate than non-PLA adult learners who did not earn PLA credit. Thus, the hypotheses tested were supported and indicated that there is a relationship between PLA status and graduation attainment, and that full-time MS is a positively correlated predictor for graduation on PLA adult learners. Programs that have the characteristics of self-direction will provide an acceptable framework for the applicable processes and engagement in activities (Brookfield, 1993).

This study clearly validates the idea that there is a positive relationship between graduation and PLA status. Of PLA adult learners, 16.8% graduated, and of non-PLA adult learners 9.4% graduated. My study reinforces the impact PLA status has on academic outcomes by looking at PLA more closely to optimize a pathway to graduation,

thus increasing retention. Adult learners who participated in PLA did complete

graduation requirements at a higher rate than adult learners who did not earn credit for

prior learning at a two-year institution. The positive academic contextual relationship of

the current findings aligns with Klein-Collins's (2010) research that examined the

relationship between PLA and adult learners' academic outcomes. Klein-Collins's

(2010) study is significant because it provides a rationale for higher education institutions

to recognize the PLA requirement, and to embrace the needs of adult learners. The study

revealed that graduation rates by non-PLA adult learners was 11.8%, and adult learners

with PLA status was 28.4%. It is clear that PLA status has a positive relationship to

graduation. These practical findings will contribute to future studies and a better

understanding of the impact that awarding credit for prior learning has for adult learners

in attaining an associate degree. The increase in graduation gives weight to adult

learners, and positively supports PLA credits to reinforce graduation attainment. The

findings of the research are grounded in the conceptual framework of Knowles's

experiential learning theory that from real-life experiences, knowledge and meaning are

constructed (Yardley et al., 2012). Knowledge obtained in adulthood and adult learning

promote graduation. Merriam (2001) stated that a self-directed learner employs

independent projects, student-directed discussions, and discovery learning The

concluding analysis from the current study is consistent with Klein-Collins's (2010)

research, Hayward and Williams's (2015) research, and McKay et al.'s (2016) study that

community college adult students who earned PLA credit were significantly more likely

to graduate than non-PLA adult learners who did not earn PLA credit. The present

research outcomes will add to the contextual scholarly discussion and reinforce the significant implications of PLA for adult learners.

The second research question that guided the study was:

To what extent do demographic factors (age, gender, and ethnicity) add to the prediction of graduation attainment for adult learners beyond the PLA status (PLA or non-PLA) after controlling for matriculation status (full-time, part-time)?

A binary logistic regression was conducted to examine the impact of the demographic factors (age, gender, and ethnicity) on graduation attainment while controlling for PLA and MS. In the simultaneous entry logistical model, graduation was the dependent variable. PLA was the independent variable, and MS, age, gender, and ethnicity were the covariates. PLA and MS were the predictor variables. Results from a logistic regression analysis indicated that after controlling for the demographic factors of age, gender, and ethnicity, that variables MS and PLA remained significant predictors of graduation outcomes. The results indicate that, after controlling for the other predictor variable in the model, MS (full-time, part-time) was a significant positive predictor correlated with graduation. This finding indicated that full-time adult learners were approximately 1.724 times more likely to graduate. The finding for PLA was also significant and revealed that, after controlling for the other predictor variables in the model, PLA was positively related to graduation status. This result indicated that PLA students were approximately 1.907 times more likely to graduate.

Specifically related to this research question, none of the demographic factors (age, gender, and ethnicity) added to the prediction of graduation attainment for adult learners beyond the PLA status (PLA or non-PLA) after controlling for MS (full-time,

part-time). The hypotheses tested are not supported by the demographic attributes (age, gender, and ethnicity) in adding to the prediction of graduation attainment for adult learners beyond the PLA status after controlling for MS (full-time, part-time). The results provide an interesting emergence; demographic attributes had no significant additional contribution to graduation attainment. The findings align with McKay et al.'s (2016) previous study.

My research confirms that PLA status has a positive effect for adult learners on graduation and attaining an associate degree. Demographics did not add to the prediction of graduation attainment beyond the PLA status. The outcomes show that the opportunities were equal among the adult learners. Kuang and McKay (2015) reported that race/ethnicity did not affect the outcomes for graduation rates for adult learners with PLA status, and the current research findings support this assertion. This current study aligns with Kuang and McKay's (2015) research that race/ethnicity did not add to graduation prediction. Pursuing a college degree for many adult learners is a life-changing experience. This could be a positive policy shift for all students. Adult learners face many barriers to being successful in college. The student experiences conflict and turmoil between personal/family commitments and pursuing/completing a degree. Vermeylen and McLean (2014) stated that adult learners in higher education have unique characteristics and requirements. The findings of the present study support Deggs's (2011) assertion that the needs of adult learners are as complex as the challenges facing the institutions that must meet them. There are transitional factors that can impact graduation, but are not apparent in this study. Schlossberg's (1981) transition theory manifests itself if "an event or non-event results in change in assumptions about oneself

and the world and thus requires a corresponding change in one's behavior and

relationship" (p. 5). Transitions have an altering effect on one's roles, relationships,

routines, and assumptions (Schlossberg, 2011). Gohn and Albin (2006) stated that

Schlossberg implied that transitions or events that occur for adult students are both

significant and nonsignificant, depending on the degree of the transition they encounter,

and that the reaction to the event will determine the impact of a life altering transition, the

4 S's: self, situation, support, and strategies. All of the mentioned transitional factors

could have had an impact on the demographic characteristics of the adult learners in the

current study, since there was no direct contact with the sample population to analyze

further. The literature reveals that the complexity of adult learners and their

characteristics extends beyond the demographic factors (age, gender, and ethnicity), and

PLA does have a positive impact for adult learners as they strive to attain an associate

degree at a community college, as is positively confirmed in the current analysis. The

outcomes did not substantiate that the demographic factors (age, gender, and ethnicity)

added to the prediction of graduation attainment for adult learners beyond their PLA

status. As seen through the lens of this researcher, the current findings will add to the

scholarly academic literature and warrant continued discussion and research beyond the

scope of this current study.

The third research question that guided the study was:

To what extent are there differences in GPA and persistence based on PLA status

for adult learners after controlling for matriculation status?

To determine if there is a difference in students' GPA and persistence based upon

adult learners with PLA status, a One-way MANCOVA was appropriately selected. In

the model, GPA and persistence were the dependent variables, PLA was the independent variable, and MS was the covariate. The null hypothesis for the outcome measure cumulative GPA was retained and showed that there was no difference in GPA based on PLA status after controlling for MS. The overall GPA of the two groups (PLA, non-PLA) were equivalent. The data revealed that persistence, years to graduate (length of time to degree attainment) was significant, because the PLA group required .352 years' less time to graduate than the non-PLA group. Since the study validates that PLA status has a positive impact on the reduction of time to degree attainment, the null hypothesis was rejected and the alternate hypothesis was supported. The alternate hypothesis clearly supports that there was a positive relationship between the length of time to degree attainment and PLA status.

The present study revealed and aligns with Klein-Collins's (2010) research that at the associate degree level there was no difference between adult learners who had PLA status and non-PLA status for cumulative GPA. The current study GPA mean average for adult learners with or without PLA status was approximately 3.5. This outcome aligns with the results of the study by Forbus et al. (2011), that adult learners achieve a higher level of academic success measured by GPA than traditional students while dealing with the stress of student and domestic life.

The current outcome analysis shows a positive relationship between PLA status and adult learners acquiring an associate degree. In fact, the adult learners with PLA status were found to graduate in .352 years' less time than the non-PLA group. Financial savings emerged as an additional relevant factor, due to the decrease in time to degree attainment. Through the lens of a PLA adult learner, over a three-year period the savings

are substantial. The PLA credentialing not only saves the student approximately one year of tuition, time, and goal attainment, but also considers adult learners' needs and expectations.

Klein-Collins's (2010) study showed that the time saved to attain a degree with PLA status was between 1.5 and 4.5 months compared to time to degree completion with non-PLA status. McKay et al.'s data analysis revealed that time to associate degree attainment for students with PLA status was between one and seven and a half months sooner than for non-PLA learners. Klein-Collins's (2010) and McKay et al.'s findings are aligned and consistent with the outcomes of the current study. Knowles's (1970) theory of andragogy and self-directed learning provides a clear connection to the determination, self-reliance, and academic outcomes of adult learners with PLA status.

Additional Implications

There is no easy resolution to address the complex challenges of the continued decline in enrollment of traditional students and persistence to degree attainment at a community college. The findings of this study support and add to quantitative research reinforcing the impact of PLA on academic outcomes among community college adult students. My research confirms and supports that adult learners with PLA status have higher educational attainment. Prior research supports the current findings that the graduation mean for PLA adult learners was higher than for non-PLA adult learners, and PLA adult learners compared to non-PLA adult learners attained an associate degree in a shorter period. In addition, full-time adult learners were more likely to graduate than part-time adult students.

Retaining and persisting for adult learners at a community college is multifaceted in providing the institutional resources for a thriving PLA program. In 2014, CAEL celebrated 40 years dedicated to serving adult students (Bamford-Rees et al., 2014). CAEL, through PLA, mapped the pathway and guides adult learners to achieve academic success. The research identifies that a successful retention management program that has considerable faculty involvement (LoBasso, 2005) is necessary for an effective enrollment management program. Faculty involvement is critical in assisting with the development of standards and practice involvement, and it aids in providing consistency and codifying institutional standards. Institutions have policies and procedures in place with the primary focus on the traditional student. For adult learners to be successful, the development of the following is recommended: outreach, life and career planning, financing, assessment and learning outcomes, teaching-learning process, student support systems, technology, and strategic partnerships. CAEL recommends the principle guidelines to facilitate success of adult learners: assessing learning outcomes, assisting with financing, developing comprehensive academic and student support systems, focusing on teaching and learning, providing life/career planning assistance, and integrating the use of technology (Johnson & Cantrell, 2012). The tenet ideology for a thriving PLA program at a community college requires a comprehensive reform with the establishment of an institutional unit that is dedicated to serving adult learners and provides faculty academic advisors, mentoring, curriculum development, credit credentialing and options (a course evaluation list), assessment, program policies and procedures, and counseling. Kohler Giancola et al.'s (2009) study supported the context that academic resources and support services are instrumental in adult learners' academic

performance in higher education. Shifting the focus in higher education from traditional students to adult learners requires a visionary leader who can provide guidance for policymaking, obtain support from faculty and student support services personnel, and foster and maintain collaboration with the community and industry partnerships.

A divergence that emerged from my findings was that gender did add to the prediction of graduation attainment as stated in Klein-Collins's (2010) study. The study revealed that time to graduation for non-PLA status females is longer than non-PLA status males, and PLA status females required a shorter time than PLA status males. An additional divergence from the current research findings was identified in Schwehm's (2017) study of the social and academic adjustment of adult community college students' experience that influence adult transfer students' academic and social adjustment at the institution. The findings revealed that there was statistically significant influence on social adjustment encompassing classroom involvement and extracurricular participation. Both GPA and classroom involvement at the community college identified a positive relationship with university GPA. Schwehm's (2017) findings question the adult learner theorist Stephen Brookfield's self-directed learning theory. Self-direction is an externally observable process (Brookfield, 1995), and an interpretation of individualism in adult education is strongly embedded within moral and political optimism (Brookfield, 1993).

Relationship to Prior Research

The current findings are in alignment with prior research. My research confirms and supports that adult learners with PLA status have higher educational attainment. Prior research supports the current findings that PLA adult learners attained an associate degree in a shorter period than non-PLA adult learners. Hayward and Williams's (2015)

quantitative study revealed noticeable differences in graduation rate at four community colleges with adult learners who had PLA status. The literature supports this composition of study and reinforces the theory of andragogy. Knowles, the leading practitioner of adult learning, supports the tenet that from real-life experiences, knowledge and meaning are constructed (Yardley et al., 2012). Knowledge obtained in adulthood and adult learning promote graduation. Merriam (2001) stated that a self-directed learner employs independent projects, student-directed discussions, and discovery learning. Programs that have the characteristics of self-direction will provide the acceptable framework for the applicable processes and engagement in activities (Brookfield, 1993). Vygotsky's (1978) social constructivism theory along with Dewey (1916), Piaget (1973), and Bruner (1996) suggested that based on prior knowledge, learners could construct and actively learn new knowledge (Huang, 2002) socially and individually (Biniecki & Conceicão, 2016). The theoretical framework substantiates the current study's findings. Degree attainment in a shorter period of time was consistent with Klein-Collins's (2010) findings. The findings of the current study for GPA could be an indication of the barriers adult learners face in everyday circumstances. The characteristics of adult learners found in the literature review provide a clear connection to the value of PLA status for adult learners. This study substantiates the importance of shifting the focus in higher education from traditional students to adult learners and the implementation of a strategically codified PLA program. Deggs's (2011) study reinforces the principle of understanding adult learners' characteristics and learning styles that relate to Knowles et al.'s (1998) core principles of andragogy and are directly captured from the adult learners' viewpoint. Some of the barriers adult learners face are personal life, employers, and family.

Schwehm's (2017) study, an initial exploration of the social and academic adjustment,

revealed that both GPA and classroom involvement at the community college identified a

positive relationship with university GPA. The current study reveals that there was no

difference in GPA based on PLA status. This finding will add to further academic

discussion and scholarly research. Ramalho and Mesquita's (2007) study revealed

pedagogical approaches to teaching and learning for adult students and suggested that

faculty motivation stimulates adult learners' interest in a discipline. Adult learners prefer

classes that are not entirely lecture so they can apply their learned knowledge. The

pedagogical approaches to teaching and learning for adult students identified in Ramalho

and Mesquita's (2007) study and the barriers the adult learners face daily could

contribute to their overall GPA. The relationship to prior research is reaffirmed by the

current study and adds to the current literature. The research outcomes reasserted that

knowledge gained from previous experience and the impact PLA has on student success

reduce cost and time to degree attainment.

Limitations of the Study

This ex post facto correlational study examined the impact of awarding credit for

PLA to adult learners, to increase community college enrollment and graduation rates at a

tri-campus suburban community college in the Northeast. The study was limited to

WCC, a tri-campus suburban two-year college, with a student population of 26,078

located in the northeastern region of the United States. The researcher acquired the data

from the OPIE at WCC. Data for the study were collected from student archival records

for six academic years (September 2012 – May 2018) of 1,307 adult students with a

minimum age of 25. The collected data identified that 1,137 were non-PLA adult

learners and 170 had PLA status.

A quantitative method was used for this study to analyze a collection of numerical

data that described, explained, predicted, "or control[led] phenomena of interest" (Mills

& Gay, 2019, p. 6). One potential limitation to the study was the lack of insight from the

adult learner population from the experimental site. A qualitative research component

tends to evoke a comprehensive wealth of narrative or visual data from collected analysis

over an extended period of time (i.e., non-numerical) and provides insight into a specific

phenomenon of relevance (Mills & Gay, 2019). A second potential limitation to the

study was that the PLA data were pre-sorted before conducting the analysis based on the

college's system in determining what credentialing applied as PLA status. Lastly, since

the data were archival, the researcher did not have any knowledge of the physical, social,

or learning environment of each class that could have impacted the results of the adult

learners' graduation, persistence, and GPA at the community college. A potential threat

to external validity could possibly be the random heterogeneity of respondents. Although

this study had a diverse population, individual characteristics not considered may threaten

the validity of the study. One example of this is the socioeconomic status of the

individuals in the study (Kirk, 1982).

Recommendations for Future Practice

The study will serve to alert the community college policy and decision-makers at

the college in the Northeast to the unique needs of adult learners and the contribution

PLA status makes to student success (GPA, persistence, graduation). The findings

supported the limited previous quantitative research from a community college. The data

revealed that the community college adult learners who earned PLA credit were significantly more likely to graduate than non-PLA adult learners who did not earn PLA credit, and that those who had earned PLA credit were significantly more likely to graduate in a shorter period of time. It is apparent that community colleges, like other colleges and universities, continue to face the challenges of a decrease in enrollment of traditional students, as well as of other students who complete graduation requirements. As previously stated, Kelderman et al. (2019) reported and reinforced that the warning signs have been apparent for years, alerting institutions to the decrease in high school students to eventually fill classes and the increasing cost of education. Colleges need to seriously consider who they serve. Institutions need to prioritize the adult learner population by affirming them as adults and honoring their previous experience. By 2030, the most adaptable colleges will be in the best position to serve the shifting demographic of student population (Kelderman et al., 2019). PLA is the cornerstone to serve adult learners, and the study site has considered this evidence in correspondence with this researcher.

Historical background for future practice at Windjammer Community College.

In September of 2018, a retired Executive Dean from WCC in a correspondence with this researcher stated that:

In the late 80's and early 90's it became evident that our new and returning adult learners, twenty-five years of age and older, were enrolling (or re-enrolling) in large numbers. Attention to the unique needs of adult learners became of local, regional and national interest. It was determined, through student feedback, data

analysis, and faculty input, that our growing adult student population could be served by providing a rigorous prior-learning program. Likewise, an "adult" format for our Freshman Seminar initiative was eventually developed. As a result, an "Adult Learner Office" was created to serve the college community… more than a decade of PLA operations, the resources devoted to prior learning assessment began to diminish… new programming deflected resources from our Adult Learner PLA and College Level Examination Program (CLEP) efforts…after 2010…the Adult Learner Office, home of the PLA Program, was renamed and marketing of the PLA program was significantly reduced. The new CLEP office was staffed by part-time employees and the PLA program, while still offered as a college-wide program, evolved into a smaller, single campus office.

My research shows that adult learners consider the following variables when deciding to choose or attend college: cost, convenience, flexibility, time to completion, and advising (Stamats, 2016). PLA takes into consideration adult learners' needs and expectations to obtain a degree, time, and cost (Leiste & Jensen, 2011). Some of the distinctive characteristics of adult learners are that they are employed full-time; enroll part-time; are self-directed; self-discover; and have a variety of learning styles, intrapersonal barriers, family commitments, and financial constraints. The following considerations are recommended to practitioners and policymakers in order to meet the unique needs of adult learners and to ensure academic success and retention. The institution should provide orientations specific to adult learners; student support services that address the learning styles of adult students in the classroom; interdisciplinary degree programs that provide the most constructive use of PLA credits to shorten degree

completion; time flexible scheduling; class time that is adapted around adult learners'
schedules; life and career programs; local business partnerships to link degree attainment
and career opportunities; and marketing directly to adult learners to specifically address
their needs (Finch, 2016).

To attract and retain adult learners at the community college, practitioners and
policymakers should provide administrative support, staffing, a dedicated space/office for
adult learners that provides admission services, PLA credit evaluation, academic
advising, transfer and career path advising, peer mentoring, and social interaction. The
community college should develop an adult learner handbook and policy manual,
examine tuition payment for adult learners that provides an array of options, establish
professional development for faculty and staff, and enact a robust communication plan.
The impact of a strategically codified PLA program reinforces the findings that emerged
from this study. Adult learners who earned PLA credit were significantly more likely to
graduate than non-PLA adult learners, and the length of time to degree attainment was
shorter, thus reaffirming the knowledge gained from previous experience and the impact
PLA has on student success, while reducing cost and time to degree attainment.

The research revealed that institutions are not only unclear but also inconsistent in
the evaluation of PLA credits. Tannehill, Solomon, and Yeager (2008) support that there
should be "careful documentation of the award process and specific evidence" (p. 72).
The archival data retrieved from WCC for this study revealed that the individual PLA
methods defined and grouped by category used to evaluate and determine the validity of
the knowledge base for awarding college credit are AP, CLEP, challenge exams,
technical or professional certification, DSST, ACE-Military Training, and military

training and service. The study revealed that the PLA methods were not coded

specifically for each category, but were placed within two categories. As a result, it is

difficult to determine the impact of particular PLA methods. A recommendation for

future practice would be to develop and implement a process that provides a distinctive

code for each PLA method awarded to adult learners. Distinctive coding for each

awarded credit provides clarity, quality assurance, and assessment outcomes.

The community college stakeholders should assess the needs of adult learners to

establish a robust PLA program to attract and retain this neglected population.

Recommendations for Future Research

There is a need for additional quantitative research on the impact that PLA has on

academic success and retention for adult learners at a community college. Further

research will provide an opportunity to examine this topic through the lens of a variety of

areas (e.g., economic status, number of classes per semester, weekly work hours, marital

status, and online modality). Future research to examine the impact of awarding credit

for PLA to adult learners, to increase community college enrollment and graduation rates

should be expanded to include additional community colleges. In addition, a qualitative

research method study at WCC should be conducted among the three campuses. A

qualitative research component tends to evoke a comprehensive wealth of narrative that is

systematically collected, analyzed, and interpreted to better understand a phenomenon.

The intent of the study would be to examine the effect that academic resources and

student support services have on adult learners who participate in PLA credit as well as

adult learners who do not earn credit for prior learning. The qualitative component

should further investigate the phenomenon of part- or full-time and dropout/non-degree

attainment in order to provide additional insight into the adult learners' academic success.

Qualitative research methodology for the study could use a single case study to develop a

more "in-depth understanding" of extensive collection of data (Creswell, 2012). A

supplemental demographic survey instrument should be developed and administered to

determine if there are any significant characteristic outcomes that could potentially

impact adult learners' academic success in degree attainment and retention at the

community college. The expansive demographic tool should include the following

variables: marital status, number of dependents, employment status (part- or full-time),

recipient of financial aid/grants, and income level. The descriptive narrative will provide

insight to a more comprehensive understanding of how adult learners are served in higher

education.

Conclusion

The purpose of the ex post facto correlational study was to examine the extent to

which the impact of awarding credit for PLA to adult learners increases community

college enrollment and graduation rates at a tri-campus suburban community college in

the Northeast. The study explored the relationship between adult learners who earn PLA

credits or do not earn PLA credits, and student success. A binary logistic regression was

employed to determine if there was a difference in graduation outcomes based on PLA

status, after controlling for the covariate MS. The findings revealed that PLA adult

learners were 1.935 times more likely to graduate than non-PLA adult learners, and the

full-time adult learners were 1.793 times more likely to graduate. In addition, a binary

logistic regression was conducted to determine to what extent the demographic factors

(age, gender, and ethnicity) add to the prediction of graduation attainment for adult

learners beyond the PLA status (PLA or non-PLA) after controlling for MS (full-time, part-time). The results provided an interesting emergence; demographic attributes had no significant additional contribution to graduation attainment. The findings indicate that full-time adult learners were approximately 1.724 times more likely to graduate, and PLA students were approximately 1.907 times more likely to graduate. A One-way MANCOVA was conducted to determine if there is a difference in students' GPA and persistence based upon adult learners with PLA status after controlling for MS. The outcome measure cumulative GPA showed that there was no difference in GPA based on PLA status. However, the data revealed that persistence, years to graduate (length of time to degree attainment) was significant, because the PLA group required .352 years' less time to graduate than the non-PLA group.

The data from this study support the recommendation to alert community college policy and decision makers to the unique needs of adult learners, and the potential contribution PLA status makes to student success (GPA, persistence, and graduation). With the shift to a more diverse demographic, the community college needs to use the collected information to allocate resources to strategically develop a rigorous PLA program, and market the value and significant benefits gained from PLA to foster more enrollment, retention, and completion. Finally, a qualitative research method study of a single case study to develop a more extensive understanding at WCC should be conducted of adult learners among the three campuses. The descriptive narrative will provide insight to a more comprehensive understanding of the adult learners whom the community college serves.

Final Thoughts

As a practitioner in higher education, the overall dissertation research process has provided an interesting emergence of data that aligns with past studies. This body of research will contribute to future exploration on the impact of PLA on academic outcomes among adult community college students. PLA credits promotes student success and assists with alleviating adult learners' insecurities, lack of confidence, low self-esteem, and decreased retention rate. Through PLA, adult learners begin their academic tenure with a reduced course load, substantiating the adult learners' prior experience, decreasing time to goal attainment, and reducing cost toward degree attainment, thus promoting retention and motivation and boosting self-esteem.

This study substantiates the importance of shifting the focus in higher education from traditional students to adult learners and the implementation of a strategically codified PLA program. At the forefront is the disquieting implication that with the continued decline of students in higher education, colleges, specifically community colleges, need to consider the consequences of not investing in adult learners and increasing the visibility of awarding PLA credits. As Hussar and Bailey (2016) projected, in the Northeast between 2009-2010 and again in 2023-2024, the number of public high school graduates will decrease by 10%. This decline has been apparent for years, alerting institutions to the decrease in high school students to eventually fill classes and to the increasing cost of education. These projections continue to become known and have a significant impact on institutions. My research confirms and supports that adult learners with PLA status have higher educational attainment. Prior research supports the current findings that the graduation mean for PLA adult learners was higher than for non-

PLA adult learners, and PLA adult learners compared to non-PLA adult learners attained an associate degree in a shorter period. In addition, full-time adult learners were more likely to graduate than part-time adult students. Three interesting findings did emerge from the analysis. First, financial savings emerged as an additional relevant factor, due to the decrease in time to degree attainment. Second, demographic factors (age, gender, and ethnicity) did not contribute to graduation attainment and did align with previous studies. The outcomes show that the opportunities were equal among the adult learners. Third, the data revealed that there was no difference in GPA based on PLA status, and the results did align with previous research. It has become apparent that the tenet ideology for a thriving PLA program at a community college requires a comprehensive reform with the establishment of an institutional unit that is dedicated to serving adult learners and provides faculty academic advisors, mentoring, curriculum development, credit credentialing and options (a course evaluation list), assessment, program policies and procedures, and counseling.

The research experience has been valuable. The past and current knowledge obtained from the literature will provide me, as a practitioner in higher education, with guidance to better understand the conflict and turmoil adult learners encounter between personal commitments and the process of pursuing and completing a degree, as well as the contribution PLA makes to adult learners' college success. A significant insight and inspiration that has been the driving force to conduct this study is that institutions need to seriously consider who they serve to better position themselves with the shifting demographic population. The experience has provided me, as an administrator in higher education, with a better understanding of the gaps and shortcomings of serving the

neglected population, adult learners, and the need to establish a robust PLA program to attract and retain adult students. The community college needs to use the collected information to allocate resources to develop a rigorous PLA program strategically, and market the value and significant benefits gained from PLA to foster more enrollment, retention, and completion. During a critical period, when institutions continue to face the challenge of declining enrollment, this study will add to the literature within the context of the community college associated with the PLA process, as it relates to adult learners.

Appendix A

Institutional Review Board Approvals

IRB-FY2020-362 - Initial: Initial - Exempt - St. John's
irbstjohns@stjohns.edu irbstjohns@stjohns.edu
Tuesday, January 14, 2020 4:17 PM
annunzia@stjohns.edu <annunzia@stjohns.edu>; Pina A. Britton
<pina.britton17@my.stjohns.edu>

Federal Wide Assurance: FWA00009066
Jan 14, 2020 4:17 PM EST
PI: Pina Britton
CO-PI: Anthony Annunziato
Dept: Ed Admin & Instruc Leadership

Re: Initial - IRB-FY2020-362 Doctoral Dissertation: The Impact of Prior Learning
Assessment Correlational Study On Academic Outcomes Among Adult Community
College Students

Decision: Exempt

PLEASE NOTE: If you have collected any data prior to this approval date, the data needs
to be discarded.

Selected Category: Category 1. Research, conducted in established or commonly
accepted educational settings, that specifically involves normal educational practices that
are not likely to adversely impact students' opportunity to learn required educational
content or the assessment of educators who provide instruction. This includes most
research on regular and special education instructional strategies, and research on the
effectiveness of or the comparison among instructional techniques, curricula, or
classroom management methods.

Sincerely,

Raymond DiGiuseppe, PhD, ABPP
Chair, Institutional Review Board
Professor of Psychology

Marie Nitopi, Ed.D.
IRB Coordinator

December 5, 2019

To: Pina Arcomano Britton
        Assistant Dean of Academic Affairs
        ███████████ Community College
        brittop@██████████.edu

From: Dr. Courtney Brewer
        Assistant Professor
        Co-chair, Institutional Review Board
        brewerc@windjammercc.edu

Re: Prior Learning Assessment

Dear Dean Britton,

After a review of your request, it was the decision of the Board to renew your authorization.
Please note the following information:

• **IRB# 18-014**
• **Expiration Date: 12/5/20**

Please note that changes to the protocol must be reported to the IRB immediately and that
such changes may warrant a new review. Should you have any questions, feel free to contact
either myself or my co-chairs, Rachael Millings and Dr. Helen Wittmann.

Sincerely,

Dr. Courtney Brewer
Associate Professor
Co-chair, Institutional Review Board
brewerc@windjammercc.edu 631-451-4986

Rachael Millings
Assistant Professor
Co-chair, Institutional Review Board
millinr@windjammercc.edu 631-548-3582

Dr. Helen Wittmann
Assistant to the Vice President
Co-chair, Institutional Review Board
wittmah@windjammercc.edu 631-451-4828

Appendix B

Schlossberg's Model for Analyzing Human Adaptation to Transition

A MODEL FOR ANALYZING HUMAN ADAPTATION TO TRANSITION

TRANSITION

Event or nonevent resulting in
change or assumption
Change of social networks
Resulting in growth or deterioration

PERCEPTION OF THE PARTICULAR TRANSITION	CHARACTERISTICS OF PRETRANSITION AND POSTTRANSITION ENVIRONMENTS	CHARACTERISTICS OF THE INDIVIDUAL

Role Change: gain or loss
Affect: positive or negative
Source: internal or external
Timing: on-time or off-time
Onset: gradual or sudden
Duration: permanent, temporary, or
          uncertain
Degree of Stress

Internal Support Systems:
  Intimate relationships
  Family unit
  Network of friends
  Institutional Supports
  Physical Setting

Psychosocial Competence
Sex (and Sex-Role Identification)
Age (and Life Stage)
State of Health
Race/Ethnicity
Socioeconomic Status
Value Orientation
Previous Experience with a
  transition of a similar nature

ADAPTATION

Movement through phases following
transition: pervasiveness through
reorganization
Depends on:
  1) Balance of individual's resources and
    deficits.
  2) Differences in pre- and post-
    transition environments
    re perception, supports, and individual

Schlossberg, N. K. (1981)

Appendix C

Institutional and Nontraditional Student Characteristics

Percentage of all undergraduates with each nontraditional characteristic, by type of institution, and percentage of nontraditional undergraduates with each nontraditional characteristic, by nontraditional characteristic and status: 1999-2000

Type of institution, non-traditional characteristic, and nontraditional status	Financially independent	Attended part time	Delayed enroll-ment	Worked full time	Had depen-dents	Single parent	No high school diploma*
	All undergraduates						
Total	50.9	47.9	45.5	39.3	26.9	13.3	6.5
Type of institution							
Public 2-year	63.7	69.5	58.7	53.8	34.5	16.4	9.8
Public 4-year	37.6	33.3	31.5	25.5	17.6	9.2	2.4
Private not-for-profit 4-year	36.7	27.6	34.0	28.5	18.8	8.6	3.2
Private for-profit	72.9	21.5	67.8	40.8	44.3	26.6	15.6
	Nontraditional undergraduates						
Nontraditional characteristic							
Any nontraditional characteristic	67.8	63.8	60.9	54.0	35.8	17.7	8.7
Financially independent	100	66.2	66.4	57.3	52.8	26.1	10.1
Attended part time	70.3	100	58.8	62.0	36.2	15.7	8.0
Delayed enrollment	74.1	61.7	100	52.0	39.7	19.6	9.2
Worked full time	72.0	73.3	48.4	100	40.7	16.6	7.1
Had dependents	100	64.5	67.6	58.2	100	49.4	11.6
Single parent	100	56.6	68.0	55.4	100	100	14.1
No high school diploma	78.7	58.6	76.1	46.2	47.6	28.7	100
Nontraditional status							
Minimally nontraditional	15.2	36.2	22.8	22.8	0	0	2.2
Moderately nontraditional	68.0	63.8	42.2	51.5	18.7	3.8	5.2
Highly nontraditional	99.4	80.4	76.3	75.0	79.6	38.6	15.1

*Student did not finish high school or completed with a GED or certificate of completion.

NOTE: Total row and nontraditional characteristic and status rows include students at types of institutions not shown here. Students may appear in more than one column. Percentages in the "minimally nontraditional" row (only one nontraditional characteristic) do not add to 100.0 due to rounding.

SOURCE: U.S. Department of Education, NCES. National Postsecondary Student Aid Study (NPSAS:2000).

Choy, 2002, p. 6

Appendix D

Deggs's 2011 Study Relevant Findings

The relevant findings perceived by the adult learners included intrapersonal barriers, career and job-related barriers, and academic-related barriers.

Deggs's (2011) relevant findings for intrapersonal barriers are: "time management which was discussed by a total of six students. Other intrapersonal barriers included money management (three students), balance of family responsibilities (two students), handling of physical and emotion matters (two students), and fear of failure (one student)" (p. 1547).

Deggs's (2011) relevant findings for career- and job-related barriers are: "lack of support from workplace while pursuing education which one student discussed" (p. 1547).

Deggs's (2011) relevant findings for academic-related barriers are:

Understanding and utilizing technology (three students) and lack of face to face interaction with faculty and peers (three students). Other themes in the area included balancing academic course loads (two students), meeting the general expectations as a student (one student), lack of instructor feedback (one student), and finally coping with a learning disability (one student). (p. 1547-1548).

The original results of Cross's (1981) study of adult learners "contextual description of barriers" was expanded in Deggs's (2011) findings, providing "an updated paradigm and provided greater insight into the categories of barriers" (p. 1549).

Expanded Explanation of Barriers Perceived by Adult Learners

Cross's (1981) Category	Barrier Identified in Current Study
Institutional	Academic-related barriers
Situational	Career- and job-related barriers
Dispositional	Intrapersonal barriers

Appendix E

Components of Successful Nontraditional Student Engagement on College and

University Campuses

Institutional Commitment

Environment

Faculties

Communication

Nontraditional Student Engagement

Staff

Programs & Services

Counselors

Curriculum
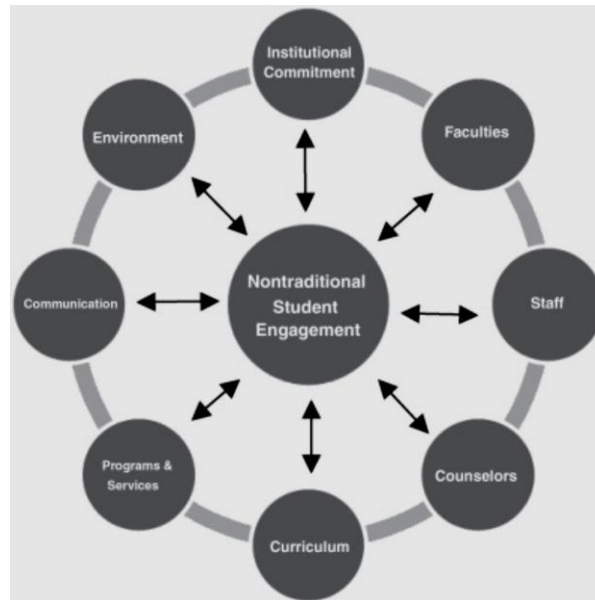
Recommended Best Practices

1. Institutions must look at what nontraditional students need at various stages of academic career (i.e., first-year, sophomore, junior, and senior year in college).

2. Institutions must provide tutoring labs and services identified specifically for students aged 25 and above staffed by tutors aged 25 and above.

3. Faculty should strive to understand and adopt their teaching methods and delivery systems to incorporate nontraditional student learning styles.

4. Counselors who understand nontraditional student needs and desires are instrumental in their integration to college life and successful degree completion. Therefore, it is important to hire and train counselors and advisors who understand nontraditional student issues and needs.

5. Institutions need to develop programs and events that would appeal to nontraditional students and include their families.

6. Increase campus communication to include improved marketing strategies targeted toward nontraditional students. This includes Web site improvements that foster easier access to campus information and programs.

7. General education requirements imposed on all college students are particularly difficult for this population of students. Nontraditional students have been out of high school for a longer period of time and find math and science coursework difficult. Institutions must look at improvements in these course offerings to include more online coursework with tutorials, streamlining general education courses in shorter blocks of time, and reducing duplication in coursework (Wyatt, 2011, p. 18).

Appendix F

Individual PLA Methods, Defined and Grouped by Category

The methods an institution would track would be drawn from a standard list of individual PLA methods as defined below. Institutions may vary in terms of the number of methods tracked, based on the specific PLA methods offered (or accepted in transfer) at that institution. However, all institutions would adhere to the same list of defined methods to ensure consistency.

For some reporting and analysis needs, the individual methods could be grouped into the above categories as shown. Institutions offering PLA methods not listed in the standard table could add them under the appropriate category, or in the "Other" category.

Larger Category	PLA Method or Tool	Method definition
Standardized Exams	AP	College credit awarded based on scores earned on the Advanced Placement Program.
	CLEP	College credit awarded based on scores earned on the College Level Exam Program (CLEP).
	DSST	College credit awarded based on scores earned on the DSST Examination Program or its predecessor, the DANTES Examination Program.
	UExcel	College credit awarded based on scores earned on Excelsior College Examination or UExcel exams, and their predecessors, the Regents College Examination and the ACT Proficiency Exam Program.
	International Baccalaureate Exam (IB)	College credit obtained under International Baccalaureate Credit.
continued on next page	Thomas Edison State College Examination Program (TECEP)	College credit awarded based on scores earned on the Thomas Edison State College Examination Program (TECEP).
Standardized Exams (cont.)	*Additional methods added as needed*	Colleges consulted for this report tracked credit awarded for several other exams, such as: • University of Cambridge International Exam • ACTFL Oral Proficiency Interview • NYU Foreign Language Proficiency Exam • Caribbean Advanced Proficiency Examination Program • Cambridge Advanced International Certificate of Education (AICE) (British AS-Level and A-Level) • SAT/ACT* *Some institutions have policies for awarding college credit for high scores on the SAT and ACT college readiness exams. Other institutions use the scores for placement or waiving course prerequisites.*
Challenge Exams	Challenge Exams	College credit awarded based on challenge exam (or departmental exam), defined as an institutional exam designed to assess learning outcomes related to a specific course and which is developed by faculty who teach the course. (Existing final exams or comprehensive exams may provide the basis for developing a challenge exam but are not appropriate for use as challenge exams without evaluation and revision to ensure that they accurately and fairly assess all course learning outcomes.)

Larger Category	PLA Method or Tool	Method definition
Standardized Exams	AP	College credit awarded based on scores earned on the Advanced Placement Program.
	CLEP	College credit awarded based on scores earned on the College Level Exam Program (CLEP).
	DSST	College credit awarded based on scores earned on the DSST Examination Program or its predecessor, the DANTES Examination Program.
	UExcel	College credit awarded based on scores earned on Excelsior College Examination or UExcel exams, and their predecessors, the Regents College Examination and the ACT Proficiency Exam Program.
	International Baccalaureate Exam (IB)	College credit obtained under International Baccalaureate Credit.
continued on next page	Thomas Edison State College Examination Program (TECEP)	College credit awarded based on scores earned on the Thomas Edison State College Examination Program (TECEP).

Individual Assessments	Portfolio Assessment	College credit awarded based on a student portfolio (based on an interview, a performance assessment, a product assessment and/or a written narrative, along with related documentation) which has been evaluated by the institution or an external portfolio evaluation service for college level credit.
	Skill Simulation or Demonstration	College credit awarded based on a student's performance or demonstration of a specific skill or competency.
	Interview-based Assessment	College credit awarded based upon evaluation of responses given during a structured interview on the subject matter.

Evaluation of Non-College Education and Training	NCCRS Workplace and Volunteer Training	College credit awarded based on recommendations by the National College Credit Recommendation Service-Workplace and Volunteer Training.
	NCCRS-Other Assessed Credit	College credit awarded based on recommendations by the National College Credit Recommendation Service- Other Assessed Credit. Include all other credits that do not fall into the above NCCRS Training category or any of the others with in the PLA definitions, but have been evaluated by NCCRS for credit.
	ACE Military-Training	College credit awarded based on recommendations by the American Council on Education-Military Credit. Include all military training evaluated by ACE for college credit utilizing the ACE Guide to the Evaluation of Educational Experiences in the Armed Forces.

	ACE Military-Occupations	College credit awarded based on recommendations by the American Council on Education-Military Credit. Include all military occupations and experiences evaluated by ACE for college credit utilizing the ACE Guide to the Evaluation of Educational Experiences in the Armed Forces.
	ACE CREDIT- Education, Workplace and Training	College credit awarded based on recommendations by the American Council on Education-Education, Workplace and Training. Include non-accredited general education, corporate, workplace and (non-military) training evaluated by ACE for college credit. The resource for these credit recommendations is the ACE National Guide to College Credit for Workforce Training.

	Other Credit for Locally Assessed Training (Internally Assessed, Not by External Party)	College credit awarded based on local evaluations of training programs. Include credit for local business, nonprofit, volunteer, government, or other such training that has been evaluated by institutional faculty for college level credit but which is not as comprehensive as an apprenticeship, certification, or licensure program.
continued on next page		

Evaluation of Non-College Education and Training (cont.)	Other Military Credit	College credit awarded based on local evaluation of military training or experience. Include any credit that is awarded based on the local institution's evaluation of the Joint Services Transcript. This should not include any military credit evaluated by ACE.
	Technical or Professional Certification	College credit awarded based on review of technical or professional certification.
	Technical or Professional Apprenticeship	College credit awarded based on review of apprenticeship programs. Include credit for combination of comprehensive on-the-job training and related instruction of theoretical and practical aspects for highly skilled occupations.
	Technical or Professional Licensure	College credit awarded based on review of technical or professional licensure programs.
	Badges	College credit awarded based on the evaluation of individually-earned badges.
Other	*Additional methods added as needed*	Other nontraditional course credit for the assessment of prior learning awarded that does not fit within the other categories.

Klein-Collins, R., 2016, pp 6-9

Specific PLA-related Variables to Track

Determining which methods to track is the first step in developing a system for tracking PLA data. It is also important to know the areas of study for which students are earning PLA credits, the equivalent course for which a student is earning the credit, when the credit was earned, and how the credit applies to the degree. Some of the data would be ideal to have available for the purposes of student advising or for including on the student transcript, while other data may be valuable for internal research and analysis. (Klein-Collins, R., 2016, p. 9)

Appendix G

Middle States Commission on Higher Education (MSCHE)

MSCHE is the regional accrediting body for higher education institutions in the following states: Delaware, the District of Columbia, Maryland, New Jersey, New York, Pennsylvania, Puerto Rico, the U.S. Virgin Islands, and other locations overseas.

The MSCHE policies, guidelines, and procedures are presented in a web-based format on its website (see http://www.msche.org/?Nav1=POLICIES&Nav2=INDEX), with references to standards found in the organization's Characteristics of Excellence in Higher Education (2011). Policies on PLA are located under the third heading on the site,
Institutional Programs and Services, Transfer Credit, Prior Learning, and Articulation. (http://www.msche.org/documents/ Transfer,-PriorLearning,-Articulation---1110.pdf).

The PLA policy's main requirement is that any institutional policy on transfer credit (including PLA) must be publicly disclosed. Beyond that, the policy document allows the individual institution to establish its own policies and practices. The MSCHE policy nevertheless puts forth 12 general principles that "usually characterize effective policies for transfer and experiential learning and their implementation." These recommendations for effective policies provide guidance while allowing very different policies and practices at the institutional level. The 12 principles include the following:

- Transfer and experiential learning decisions are student-centered and guided by the institution's mission and goals.

- Previous learning is judged on the student's learning outcomes, using valid evaluation measures including third-party review by organizations such as ACE or CAEL.

- Credit is awarded based on course equivalencies of the receiving institution.

- Policies are clearly communicated, including whether degree requirements may be met by prior or experiential learning.

- Credit is awarded for learning, not experience.

- Faculty participate in the creation, review, and implementation of transfer and experiential learning policies/procedures.

- Outcome data on the success of transfer students or students receiving credit for experiential learning is used to assess the overall student experience at the receiving institution MSCHE is the only regional accreditor to emphasize this last recommendation—using student outcome data on PLA students to evaluate the overall student experience at the institution (Klein-Collins, 2014, p.2).

Appendix H

Accrediting Bodies' Policies and Procedures for Awarding PLA Credit

POLICY CATEGORY	MSCHE	NEASC	HLC	NWCCU	SACSCOC	WASC ACCJC	WSCUC
Restrictions on the number of PLA credits that can apply to a degree	No mention	Students complete at least 25% of the under-graduate program at the institu-tion awarding the degree.	PLA limited to a reasonable proportion of the credits required to complete the student's program (e.g., a fraction of the 75% of cred-its that can be earned outside of the institution)	Credit for prior experiential learning is lim-ited to a maxi-mum of 25% of credits needed for a degree	At least 25% of the credit hours required for the degree are earned through instruction offered by the institution award-ing the degree. Experiential credit may count toward the residency require-ment if evaluated at the institution.	No mention	Credit for prior experien-tial learning is awarded for no more than 30 semester units, or the equiva-lent, toward the degree
PLA for undergraduate only	No mention	Yes	No mention	Yes	No mention	Yes	Yes
PLA credit award specifically limited to curricular offerings of the institution	No mention	No mention	No mention	Yes	Credit awarded for experiential learning com-parable to the institution's own degree programs	Yes	Yes
Reference to standards of good practice	12 principles defined by MSCHE	No mention	No mention	No mention	Examples of good practices pro-vided in Resource Manual	CAEL Standards 1-7 and 9-10	WASC-defined (based on CAEL Standards)
Transparency—requirement to clearly communicate policies to students	Yes	Yes	Yes	Yes	Yes	No mention	Yes
Faculty review required	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Klein-Collins, 2014, p. 7

Appendix I

Student Profile Considerations

The demographic profile answers the question: Who are our students? As such, it considers gender, ethnicity, household income, location, distance from college, current educational status, academic preparedness, etc. This information is especially important for identifying potential list sources.

The psychographic profile answers the question: Why are students interested in returning to school? This profile is interested in student motivations for college, fears and reservations, and expected benefits. This information will help guide your communication strategies.

The program format profile answers the question: What kinds of programs are students interested in? It looks at academic interests, desired program formats, preferred delivery options, and program length. This information will influence program design.

The reach profile helps you identify the best way to attract or reach these students. This profile addresses such issues as media and channel preferences, optimal recruiting strategies, influencers, and even recruiting windows. This information will help guide the creation of your recruiting communication plan (Stamats, 2016, p.3).

Appendix J

Master Student Profile

Adult Student Segment: _____	
Demographic profile:	• Gender • Ethnic • Household income • Employment status • How they will pay for college • Type/amount of financial aid • Average driving distance/Average drive time • Geodemographic profile
Psychographic profile:	• Primary motivators for returning to/going to college • Anticipated benefits/outcomes • Fears and reservations
Program profile:	• Majors of most interest • Program length • Program delivery
Reach profile:	• Who influences them • What social media they follow/participate in • What traditional media they follow/listen to/view • What marketing strategies they respond to most • What lists capture their name/address/interest

Stamats, 2016, p.4

Appendix K

The Principles in Developing Programs and Policies

Outreach: The institution conducts outreach to adult learners by overcoming barriers of time, place, and tradition in order to create lifelong access to educational opportunities.

Life & Career Planning: The institution addresses adult learners' life and career goals before or at the onset of enrollment in order to assess and align its capacities to help learners reach their goals.

Financing: The institution promotes choice using an array of payment options for adult learners in order to expand equity and financial flexibility.

Assessment of Learning Outcomes: The institution defines and assesses the knowledge, skills and competencies acquired by adult learners both from the curriculum and from life/work experience in order to assign credit and confer degrees with rigor.

Teaching-Learning Process: The institution's faculty uses multiple methods of instruction (including experiential and problem-based methods) for adult learners in order to connect curricular concepts to useful knowledge and skills.

Student Support Systems: The institution assists adult learners using comprehensive academic and student support systems in order to enhance students' capacities to become self-directed, lifelong learners.

Technology: The institution uses information technology to provide relevant and timely information and to enhance the learning experience.

Strategic Partnerships: The institution engages in strategic relationships,

partnerships, and collaborations with employers and other organizations in order to

develop and improve educational opportunities for adult learners (Frey, 2007, p. 4).

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<div align="center">Vita</div>

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Baccalaureate Degree	*Bachelor of Arts, State University of New York at Stony Brook, Stony Brook, Major: Studio Art*
Date Graduated	*August, 1985*
Other Degrees and Certificates	*Master of Science, State University of New York at Stony Brook, Stony Brook, Major: Health Care Policy and Management*
Date Graduated	*May, 1999*
	New York State Advanced Certificate in Community Health, State University of New York at Stony Brook, Stony Brook
Date Graduated	*May, 2001*
	New York State Advanced Certificate in Health Care Management, State University of New York at Stony Brook, Stony Brook
Date Graduated	*May, 1997*
	Associate in Applied Science, Suffolk County Community College, Selden, Major: Interior Design
Date Graduated	*May, 2009*
	Associate in Art, Suffolk County Community College, Selden, Major: Liberal Arts
Date Graduated	*January, 1984*