MAKING CONNECTIONS: USING E-PORTFOLIOS TO ASSESS AND GRANT CREDIT FOR PRIOR LEARNING

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Prior learning assessment has existed for decades but in recent years it has increased in popularity. The advent of the e-Portfolio and the emergence of MOOCs have changed how prior learning may be assessed. The purpose of this study was to examine how higher education institutions adopted and used e-Portfolios in prior learning initiatives. The researcher employed a collective case study and used aspects of Rogers’ diffusion of innovation theory as a lens to explore institutional adoption and use of e-Portfolios for prior learning assessment purposes. Participants for this study included a number of institutions that were part of the Pennsylvania State System of Higher Education (PASSHE). Data from a document review, surveys, and interviews was collected and analyzed to measure how these institutions used e-Portfolios to link traditional college degree programs with prior learning initiatives including possibly knowledge attained through MOOCs. The data findings revealed that e-Portfolios were not being adopted or used to assess prior learning at any of this study’s participating institutions. Additionally it appeared that MOOCs were not currently being considered for prior learning opportunities. Interview participants also discussed their struggles with maintaining support and credence of prior learning on their campuses. The findings are relevant for higher education administrators who seek to increase enrollments and college completion rates especially as many institutions face growing competition to attract students and stay relevant in a competitive educational marketplace. Additional research is needed to investigate the future potential of MOOCs, the Badges system, and e-Portfolios to assess and grant credit for prior learning.

Keywords: e-Portfolios, prior learning assessment, college credit, diffusion of innovation theory, MOOCs, collective case study, PASSHE system, Learning Counts initiative
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Chapter One: Introduction

The purpose of this study was to examine how certain higher educational institutions in the Commonwealth of Pennsylvania were employing e-Portfolios for prior learning assessment (PLA). The information generated from this study should inform administrators, faculty, and potentially students who plan to adopt or employ e-Portfolios for prior learning or other assessment purposes. This doctoral study utilized a case study approach to examine the topic and address the research questions. This chapter provides a brief overview of the context and background of the research problem. It will discuss the rationale and significance of the study and will include definitions of the key terminology used in this research. The chapter will also include a problem statement, present the research questions, and provide an overview of the organization of this study. A discussion of the theoretical framework chosen for this study, Rogers’ (1983) diffusion of innovation theory, concludes this chapter.

Context and Background

In recent years the Internet has enabled individuals to take courses and complete degrees online. The emergence of Massive Open Online Courses (MOOCs) offers individuals innovative opportunities to learn for free and attain knowledge that could qualify them for prior learning credits. The Council for Adult and Experiential Learning (CAEL) took advantage of this growth by creating LearningCounts.org, a fee-based online service that allows adult learners to take experience acquired in a variety of ways and apply them towards college credit (CAEL, 2010; Kamenetz, 2011b). CAEL recognized early the potential of using e-Portfolios to demonstrate prior learning. Its Learning Counts program offers courses on e-Portfolios and how to use them to apply for credit. Although this potential is growing, e-Portfolio use and credits earned nontraditionally (including through MOOCs and badges) have not earned the respect from all
areas of higher education (Chatham-Carpenter, Seawel, & Raschig, 2010; Glenn, 2011; Perez-Pena, 2012). Although some studies exist related to assessment with e-Portfolios (Mason, Pegler, & Weller, 2004); and PLA and e-Portfolios (Brown, 2011; Hoffmann & Michel, 2010; Stevens, Gerber, & Hendra, 2010), more research is needed. This qualitative investigation of higher education institutions in Pennsylvania focused on their use of e-Portfolios and the Learning Counts initiative in assessing and awarding college credit for prior learning.

The Commonwealth of Pennsylvania has a robust higher education network with numerous private and public institutions. It has 14 community colleges, four state-related institutions including Penn State University, one of the largest public institutions in the country; and the state-owned system (Gammage, Snyder, & Worden, 2012). The Pennsylvania State System of Higher Education (PASSHE) is part of this state-owned system of higher education, (Gammage et al., 2012; Pennsylvania Department of Education, n.d.). PASSHE was officially established in 1983 and includes 14 different institutions located in rural and suburban areas around the state. The universities found in this system have served as an excellent low-cost alternative for students who do not wish to attend larger state-related institutions. In total, the PASSHE system currently enrolls more than 112,000 students (Erdley, 2014; PASSHE, 2014) and offers four-year degrees in many areas.

In recent years, however, PASSHE has encountered a variety of challenges including decreasing enrollments, severe budget cuts, lawsuits, retrenchment, and even some internal schisms where a few institutions have expressed a desire to leave the system (Erdley, 2014; Murphy, 2014; Rivard, 2013b; Schackner, 2014a, 2014b; Snyder, 2014a, 2014b). Joining the Learning Counts initiative in 2012, may be one of the many ways that PASSHE is trying to address these issues and adapt to a changing student population (PASSHE, 2014). This doctoral
study will address how these diverse institutions’ involvement in the Learning Counts initiative and PLA has been very varied.

Many postsecondary institutions, such as those in the PASSHE system award credits for prior learning through portfolio evaluation or test assessments. However, many of these institutions have been slow to adopt e-Portfolios in this assessment because of institutional resistance towards this format. Online services such as Learning Counts have started using e-Portfolios to assess and award credit for knowledge or prior learning experiences gained in various ways. Therefore the purpose of this doctoral thesis was to examine how higher education institutions within PASSHE employed e-Portfolios to link prior learning initiatives to traditional degree programs in order to gauge and encourage further use of this technology in these areas.

**Rationale and Significance**

This study adds to the growing literature related to using e-Portfolios in prior learning and also briefly examines the role of MOOCs. In the short time since MOOCs emerged, they have become buzzwords in higher education. Articles related to MOOCs appear almost daily in popular higher education periodicals such as *The Chronicle of Higher Education* and *Inside Higher Education*. The popular press, alumni newsletters, and student newspapers often feature articles related to this new way of offering college courses. Some individuals (Boilard, 2011; Glenn, 2011; Kamenetz, 2011b; Mazoué, 2012; Ossiannilsson & Creelman, 2012; Ripley, 2012; Selingo, 2013b; Travers, 2012b; Vardi, 2012; White, 2014; Wood, 2014; Young, 2012) view these free online courses as a likely threat to traditional higher learning institutions because they offer quality course content at no (or very low) cost. Other authors predict a future where students, equipped with knowledge obtained through MOOCs or other means could avoid the
“middleman” of college (Glenn, 2011; Ripley, 2012) and go directly to companies to petition for employment (Glenn, 2011) without ever matriculating at a traditional institution. As higher education faces increased competition for both students and funding, it needs to recognize the opportunities and possibilities associated with PLA.

Some scholars (Cooper & Sahami, 2013; Cusumano, 2014; Educause, 2012; Fain, 2012b, 2012c; Kamenetz, 2011a, 2011b; Travers, 2012b) do not view MOOCs ominously and see their potential in the prior learning arena. Prior learning credits might be earned by taking classes through MOOCs and applied towards a degree at a traditional institution. Earning credit for prior learning achieved through nontraditional means currently remains a challenge (Gambescia & Dagavarian, 2007; Hoover, 2010; Travers, 2012a). This study contributes to the scholarship related to linking nontraditional (found in PLA) and traditional learning opportunities through the use of e-Portfolios. It also examines how e-Portfolios could serve as connections between traditional brick and mortar institutions and various prior learning initiatives.

Educators recognize that e-Portfolios can serve as a powerful reflective tool that demonstrates learning, tracks development, and promotes lifelong learning (Batson, 2002, 2010; Carroll, Markauskaité, & Calvo, 2007; Goldsmith, 2007; Jenson & Treuer, 2014; Stevens et al., 2010). e-Portfolio use also continues to grow on a global scale. The European Union recently adopted Europortfolio, a cooperative network of experts dedicated to promoting lifelong learning through e-Portfolio use (Lifelong Learning Programme, 2013). e-Portfolios also hold significant potential with the current tech-savvy generation of students matriculating to college. Future generations of students will possess even more media and technological skills (Herring & Notar, 2011). They should feel comfortable using online tools such as e-Portfolios as part of their educational process.
Although using e-Portfolios to assess prior learning contributes to increased college degree completion (CAEL, 2010), many individuals in higher education including students, faculty, and administrators remain resistant to their use (Jafari, 2004; Jenson & Treuer, 2014; Meyer & Latham, 2008; Tosh, Light, Fleming, & Haywood, 2005; Wetzel & Strudler, 2005). This doctoral study examined how e-Portfolios were being used at particular institutions and if any resistance existed towards this use. It also discussed how e-Portfolios employed for prior learning assessment could possibly serve as a conduit between new and traditional spheres of higher learning. e-Portfolios could potentially link these two spheres and reconcile potential credit and other ownership issues. By examining e-Portfolio use to assess prior learning, this research contributed to the scant scholarship in this area. This study underscored the importance of staying relevant in a changing educational field with many competitors. Higher education institutions should consider using e-Portfolios for assessment purposes and also recognize the emergence of MOOCs as a possible opportunity to grant prior learning credits in a new way.

In the near future, prior learning credits earned through e-Portfolio assessment may have a greater impact on higher education. By employing and supporting e-Portfolios to award credit for prior learning, traditional colleges and universities would not only stay competitive and marketable, they would also recruit and graduate more students (CAEL, 2010). In examining current e-Portfolio use, this research advocates for strengthening connections between new delivery methods and traditional institutions in order for higher education to stay relevant and competitive in the global marketplace. This doctoral research measured institutional use of e-Portfolios to award prior learning credits within the PASSHE system.

This study examined a particular higher education system that had begun to use the Learning Counts program as part of their prior learning initiatives. By exploring how PLA e-
Portfolios were being adopted, the researcher intended to appraise how this technology could be used at a variety of traditional higher educational institutions (from community colleges to research universities) for prior learning purposes. The researcher intended to obtain more buy-in for using this educational tool in order to assist both students and institutions. By investigating this area and reporting on the results, higher education administrators might recognize a connection between using e-Portfolios for PLA and student success. This study might also benefit students who could earn more college credits by using e-Portfolios to demonstrate prior learning. These credits would apply towards a degree program and contribute to increased college completion rates. This study attempted to demonstrate the potential links that can exist between prior learning initiatives and traditional higher education. e-Portfolios might serve as a conduit that eliminates the barriers that still exist between various forms of PLA and traditional institutions of higher learning.

**Definitions of Key Terminology**

**Electronic portfolios (e-Portfolios)** - An online educational tool that allows users to collect and reflect on materials created over time (Goldsmith, 2007; Wang, 2009). It is used in a variety of disciplines for a variety of purposes.

**Prior learning (PL)** - A practice where students earn college credit for past coursework or job experiences gained prior to matriculating to a current institution.

**Prior learning assessment (PLA)** – Assessment of knowledge earned either in past courses or on a job. This assessment can take the form of tests or portfolio assessment.
Problem Statement

Prior learning assessment (PLA) has existed for decades within higher education but has become increasingly popular in recent years (Hoffmann & Michel, 2010; Tate, Klein-Collins, & Steinberg, 2011; Travers, 2012a). Currently PLA finds itself at a crossroads with both educational delivery methods and student populations becoming more diverse. Electronic portfolios (hereafter e-Portfolios) can serve as a link between traditional higher education and PLA. Although e-Portfolios have grown in popularity at all educational levels in recent years (Batson, 2002, 2010; Henry, 2006; Lorenzo & Ittelson, 2005), resistance towards their implementation by faculty, administrators, and students remains (Jafari, 2004; Tosh et al., 2005). Institutions that award credit for prior learning have often resisted employing e-Portfolios for prior learning assessment purposes (Chatham-Carpenter et al., 2010; Glenn, 2011; Jafari, 2004).

Statement of Purpose and Research Questions

The purpose of this research was to examine how certain higher education institutions in Pennsylvania were employing e-Portfolios in prior learning initiatives. The research questions that guided this study included:

Central Question

- How are postsecondary institutions in the Commonwealth of Pennsylvania using e-Portfolios to link traditional college degree programs with prior learning initiatives?

Sub-Question

- In what ways are institutions in the Pennsylvania State System of Higher Education (PASSHE) employing e-Portfolios to assess prior learning achieved through MOOCs or other means?
The central question assisted the researcher in establishing an overall context related to the adoption (or non-adoption) of e-Portfolios for PLA. This question guided the researcher when gathering data from different sources including surveys and a review of numerous documents. The sub-question allowed the researcher to explore e-Portfolios and different prior learning opportunities in depth especially when conducting interviews with particular research participants. Collectively, these research questions enabled the researcher to assess the current status of e-Portfolio adoption and use for prior learning.

**Summary and Organization of the Study**

This thesis is organized into five chapters that discuss how the researcher examined the adoption and implementation of e-Portfolios to assess prior learning. Chapter one concludes with a discussion of the theoretical framework. This theoretical section presents Rogers’ (1983) diffusion of innovation theory as the framework through which to analyze the research problem. The researcher selected one aspect of this framework, the attributes of an innovation, in order to investigate the research problem. Chapter two provides a review of the literature. This literature review surveys the current status within higher education of prior learning initiatives including Learning Counts, e-Portfolios, and potential prior learning opportunities such as MOOCs. It also examines the challenges associated with these different areas especially the lack of buy-in that often exists toward using e-Portfolios. The literature review includes peer-reviewed articles, seminal monographs, and other bodies of literature related to these topics. This review of the literature also examines how the e-Portfolio can be used to link and assess prior learning (gained through nontraditional or others means) to traditional degree programs. It also includes a description of the deficiencies in the literature and the current state of the research in these areas. Chapter three provides a description of the research design, a collective case study, used to
examine the problem. This section includes information about the selected participants, data collection, and analysis. It describes how the researcher collected, triangulated, analyzed, and safeguarded the validity of the data from the selected PASSHE sites. This section also explains the steps taken to protect the study’s participants. Chapter four includes an analysis of the data collected through surveys, interviews, and a document review. The final chapter discusses the findings as they relate to Roger’s diffusion of innovation theory and the current literature. This chapter concludes with recommendations based on the findings and also implications for future research related to this topic.

**Theoretical Framework**

This study focused on institutional willingness and attitudes toward employing e-Portfolios for prior learning assessment. The author used diffusion theory to examine perceptions and acceptance of e-Portfolios. This study’s research problem concentrated on the institutional adoption of a new innovation and matches principles discussed in Everett Roger’s (1983) diffusion of innovation (DOI) theory. In 1962 Rogers introduced this theory in his book *Diffusion of Innovations* (Cheng, Kao, & Lin, 2004; Kapoor, Dwivedi, & Williams, 2014; Lundblad, 2003; Rogers, 1983). Currently in its fifth edition, the theory discussed in this monograph has been employed in a variety of disciplines including: anthropology, apparel design, communication, computer science, education, gaming theory, information technology, organizational development, and sociology (Bennett & Bennett, 2003; Cheng et al., 2004; Hallahan, 2005; Lundblad, 2003; Marckett & Angstman, 2013; Mustonen-Ollila & Lyytinen, 2003; Rogers, 1983). Over 4,000 articles (Hallahan, 2005) have employed this framework in some way to examine innovations and how rapidly individuals or institutions adopt these innovations in different areas.
**Rationale for using DOI theory.** Diffusion theory examines the process in which an innovation spreads into a social system over time (Rogers, 1983). It focuses on how innovations are adopted and why some innovations are accepted more quickly than others. An innovation could include an idea, practice, or object (such as a technology) that an individual or a unit of adoption perceives as new (Rogers, 1983). The adoption of anything new such as smartphone technology, the use of social media, or a new fashion trend can be examined using this theory’s lens. Diffusion theory enables a researcher to examine the various processes behind the adoption (or rejection) of an innovation at either the individual or organizational level (Rogers, 1983; Wejnert, 2002). This study used DOI theory to focus on prior learning e-Portfolios as a particular type of innovation and how this technology is diffused within a particular social system. Any reluctance in embracing this technology can correspond to factors discussed by Rogers (1983) in his theory.

**Critics of DOI theory.** Although diffusion theory has offered a helpful framework for many researchers, criticism of the theory also exists. Critics have noted that the exact processes for a particular adoption can vary so significantly that the theory may overgeneralize a particular technology and/or its implementation (Hallahan, 2005). Bayer and Melone (1989) observe that in DOI theory the adoption of an innovation is described as a binary occurrence – either it is adopted or not adopted. They criticize this description as too simple and that instances of partial adoption should also be recognized by DOI (Bayer & Melone, 1989). DOI theory also does not include any discussion of the discontinuance of an innovation. This aspect is completely overlooked by Rogers according to Bayer and Melone. Although diffusion of innovation theory has existed for decades, Rogers only briefly mentioned the impact of the Internet in the fifth (and last) edition of his work that appeared in 2003 (Kardasz, 2013). Not only does Rogers’
discussion of the theory not adequately address the Internet’s potential in diffusing an innovation, it predates social media and its potential impact on diffusion (Kardasz, 2013). Additionally, individuals who conduct DOI-related research often possess a preconceived notion that any innovation should be diffused (Kardasz, 2013). As a result, they ignore the failure of adoption or resistance rates to an innovation (Ruttan, 1996). Critics have recognized that most of the literature that employs diffusion theory is marked with this “pro-innovation” bias (Kardasz, 2013; Ruttan, 1996) which can weaken the validity of this framework.

Some critics also argue that Rogers’ (1983) theory places too much emphasis on the individual and not enough on organizations (Lundblad, 2003). However, other studies have found that organizations predominate as adopter units in recent research (Kapoor et al., 2014). Other scholars criticize the lack of a clear distinction between an organization and an individual that often exists within this theory (Bayer & Melone, 1989). Ruttan (1996) finds that DOI theory pays inadequate attention to the interrelated processes involved in the use of an innovation. Wolfe (1994) recommends that more studies examine the potential influence of organizational types on how quickly an innovation is adopted. Rogers acknowledges that many of the characteristics outlined in his theory accentuate the individual even though implementation issues often also exist at the organizational level. However, other critics such as Wejnert (2002) believe that diffusion research should expand its study of the individual. Such an expansion could examine particular actor characteristics such as the interaction between individuals and their environment (Wejnert, 2002).

**Applying DOI to this study.** This study examined organizational adoption of an innovation, the PLA e-Portfolio. Sahin (2006) believes that Rogers’ theory is the most appropriate lens for investigating the adoption of technology in higher education and educational
environments in general. In presenting his theory Rogers (1983) discusses various elements that influence the diffusion of an innovation. These elements include: (a) the innovation itself, (b) the communication channels used to broadcast an innovation, (c) the amount of time needed to adopt an innovation, (d) and the social system involved in the innovation (Rogers, 1983). Rogers’ theory suggests that many facets can influence the adoption of an innovation including the types of adopters, the attributes of an innovation, and the rate of adoption. Other variables can influence adoption rates in this theory including the novelty of an innovation. As an innovation becomes less novel, adoption rates tend to increase (Wejnert, 2002). The elements found in DOI theory fit this research study well.

Several articles have applied various elements of Rogers’ framework to educational technology (Bennett & Bennett, 2003; Demir, 2006; Lu, Quan, & Cao, 2009; Shea, Pickett, & Li, 2005; Soffer, Nachmias, & Ram, 2010; Tabata & Johnsrud, 2008). DOI theory has served as a theoretical framework for researchers examining faculty attitudes toward using a new technology such as online learning (Shea et al., 2005; Soffer et al. 2010; Tabata & Johnsrud, 2008) and Wi-Fi Internet access (Lu et al., 2009). As distance education became increasingly popular in higher education, articles related to its adoption and faculty attitudes toward this way of delivering instruction often employed DOI theory. Shea et al. (2005) used Roger’s DOI model in their quantitative study that measured faculty members’ acceptance of online learning and the possible barriers to the adoption of distance education at a variety of institutions. Tabata and Johnsrud (2008) employed DOI theory in their quantitative study that investigated faculty attitudes and characteristics associated with participating or not participating in distance education.

Not as much research exists that employs DOI theory to examine e-Portfolio use in higher education. However, e-Portfolio studies do exist that employ Rogers’ (1983) framework
to focus on faculty attitudes toward adopting this technology (Kardasz, 2013; Kelly & Lewenson, 2010; Strudler & Wetzel, 2008). These three qualitative studies concentrate on the attributes of an innovation to measure e-Portfolio acceptance and use. In their examination of Wi-Fi use Lu et al. (2009) also used the attributes of an innovation outlined by Rogers to measure the perceived attitudes of faculty toward this technology. How various faculty viewed these different attributes of Wi-Fi technology framed this particular study and helped establish the rate of diffusion of this technology (Lu et al., 2009). Studies that examine the five attributes of an innovation have effectively captured how both attitudes toward a particular technology and the various characteristics of this technological innovation (such as the e-Portfolio) can play a significant role in its adoption. This doctoral study focused heavily on the attributes of an innovation aspect of DOI theory since it was the most applicable part of the theory to the research question.

Rogers (1983) describes five attributes of an innovation that affect how quickly innovations are adopted. These attributes include: (a) relative advantage, (b) compatibility, (c) complexity, (d) trialability, and (e) observability (Rogers, 1983). According to Rogers, these attributes influence whether a particular innovation is adopted or rejected. This research study specifically utilized these attributes and how they affected the rate of e-Portfolio adoption. The attributes outlined by DOI theory helped explain the differences found in the adoption rates of any innovation. They served as the frame when analyzing this study’s research problem. These attributes also provided a basis for identifying particular characteristics associated with the likelihood of participating or not participating in adopting a technology (Lu et al., 2009; Tabata & Johnsrud, 2008).
Rogers (1983) defines relative advantage as the degree to which an innovation is perceived as being better than the idea it supersedes. He considers relative advantage as one of the best predictors of an adoption rate for a particular innovation (Rogers, 1983). e-Portfolios, for example, are often viewed as having characteristics that make them superior to traditional paper portfolios (Batson, 2002; Chatham-Carpenter et al., 2010; Lorenzo & Ittelson, 2005; Strudler & Wetzel, 2008). The second attribute, compatibility, examines the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters (Rogers, 1983). An innovation’s compatibility relates positively to its rate of adoption.

The third attribute, complexity, measures the degree to which an innovation is considered relatively difficult to understand or use (Rogers, 1983). Complexity focuses on the challenges behind understanding or employing an innovation. Studies have addressed the direct correlation between low adoption rates of e-Portfolios when they appear too complex to use (Kelly & Lewenson, 2010). The fourth attribute, trialability, relates to how much an innovation can be experimented with on a limited basis before it is adopted. The more “triable” an innovation the less uncertain it becomes for the adopter (Rogers, 1983). The last attribute discussed in this framework, observability, marks the degree to which the results of an innovation are visible to others (Rogers, 1983). These attributes have been used in numerous technology-focused diffusion studies to measure attitudes and/or adoption rates (Bennett & Bennett, 2003; Jwaifell & Gasaymeh, 2013; Kapoor et al., 2014; Kelly & Lewenson, 2010; Lu et al., 2009; Mustonen-Ollila & Lyytinen, 2003; Strudler & Wetzel, 2008).

The researcher used the attributes described by Rogers (1983) as a lens to examine if and how prior learning assessment e-Portfolios were used. The likelihood of an adoption or rejection of a technology is influenced by these five attributes (Bennett & Bennett, 2003). By examining
institutional attitudes toward e-Portfolio use in prior learning assessment, this study employed two specific areas of Rogers’ theory: (a) the five attributes associated with this particular technology and (b) how these particular characteristics affected the adoption rate of e-Portfolios. This study revealed that some skepticism, apathy, and resistance existed toward using a new technology, the e-Portfolio for assessing prior learning. By considering these attributes and examining how they played a role when institutions attempt to adopt prior learning e-Portfolios, it may be possible to determine how these characteristics influence participants’ attitudes toward this technology. Particular attitudes related to an e-Portfolio’s qualities ultimately affected whether this technology was adopted or rejected.

When presenting his DOI theory, Rogers uses the term technology and innovation interchangeably (Sahin, 2006). Many studies have examined the five innovation attributes found in the diffusion of innovation theory paradigm especially as it applies to technology (Moore & Benbasat, 1991). Cheng et al. (2004) used these attributes to examine the diffusion of online gaming in Taiwan. Bennett and Bennett (2003) employed these characteristics to measure how they influenced the adoption of specific instructional technologies by faculty members. Similarly, Jwaifell and Gasaymeh (2013) also utilized this theory to discuss the degree of teacher adoption of particular classroom technologies. Tabata and Johnsrud (2008) applied this theory to gauge faculty attitudes toward technology and distance education. They used diffusion theory to explain why various faculty members adopted particular online learning technologies differently (Tabata & Johnsrud, 2008).

The e-Portfolio literature includes studies that have examined various issues through the lens of Rogers’ theory especially when analyzing the degree to which particular individuals buy-in to adopting this technology (Strudler & Wetzel, 2008). Kelly and Lewenson (2010) employed
this theory to study the adoption rates of faculty e-dossiers. They used the setting of a nursing program where they focused on administrator and faculty resistance toward employing this technology. These various studies examined very different innovations. However, despite their differences, they all demonstrated that the diffusion of innovation theory offers valuable insights into the acceptance and adoption of particular technologies.

Anfara and Mertz (2006) note that, “a useful theory is one that tells an enlightening story about some phenomenon” (p. xvii). Rogers’ (1983) theory fits that description. The researcher chose diffusion of innovation theory because it can measure perceptions toward the adoption of a new technology. The research problem was analyzed through the diffusion of innovation lens to assess how particular aspects of an e-Portfolio affect its adoption rates. This study used this theory as a framework to investigate institutional opinions toward the adoption and use of e-Portfolios in prior learning assessment. By employing this framework this study incorporated the five attributes of an innovation postulated by Rogers. The interview questions designed for this study incorporated language found in DOI theory. In the decades that have followed since Rogers first conceptualized the diffusion of innovation theory, it remains a popular theoretical framework that researchers continue to apply in various disciplines. User attitudes and perceptions have been a classic issue for this theory (Moore & Benbasat, 1991). Employing Rogers’ theory achieved the goal of this study which aims to find ways to increase buy-in for the use of e-Portfolios in prior learning assessment processes. Fifty years since Rogers’ theory first appeared in the literature its principles remain an important and relevant lens through which to examine the adoption of new innovations and technologies such as the e-Portfolio.
Chapter Two: Literature Review

A review of the literature addresses the following themes: (a) How can postsecondary institutions use e-Portfolios to demonstrate and grant credit for prior learning? (b) What are college faculty and administrators’ perceptions toward using student e-Portfolios and newer technologies to earn college credits? (c) How can e-Portfolios be used to link learning achieved through a variety of means including Massive Open Online Courses (MOOCs) to traditional college degree programs? In addressing these questions and merging these diverse topics together, this literature review provides an overview of the prior learning movement, a brief introduction to MOOCs, and a discussion of e-Portfolios. It also examines the challenges and potential impact of implementing e-Portfolios as part of prior learning initiatives in higher education.

Prior Learning (PL) in Higher Education

Prior learning (PL) has existed for almost 40 years and numerous definitions of it exist in the literature. Tate et al. (2011) provide an accurate definition for PL and its assessment processes: it measures what students have “learned outside of the college classroom” (p. 12) in order to apply this learning toward college credit. This learning could have been acquired while working or through training. When enrollments of traditional learners began to decline in higher education during the 1970s, institutions introduced prior learning initiatives in order to attract students (Fehnel & Sundberg, 1976; Schultz, 1976). The Council for Adult and Experiential Learning (CAEL), a non-profit organization established in 1974, began to publish guidelines that defined and outlined prior learning within the context of college-level learning (Hoffmann & Michel, 2010; Travers, 2012a). This organization also assisted higher education institutions in creating policies and procedures for evaluating and accrediting prior learning (Fehnel &
Sundberg, 1976; Flint et al., 2004). By the late 1980s, over a third of higher education institutions participated in PL (Howard, 1993).

Higher education, federal agencies, and state governments have recently become more interested in prior learning (Glancey, 2007; Klein-Collins & Wertheim, 2013; Price, 2014; Sherman, Klein-Collins, & Palmer, 2012; University System of Ohio [USO], 2014) partially due to advocacy by the Lumina Foundation and Complete College America (Fain, 2012c; Tate et al., 2011; Travers, 2012a). The recent development of a lifelong attitude to learning, the current economic climate, and the rise of new technologies (Starr-Glass, 2002; USO, 2014) have contributed to PL’s continuing and rising popularity. In addition, the push toward creating more competency-based education (CBE) degree programs has further legitimized PL (Laitinen, 2013; Ordonez, 2014; Weise, 2014). Adult students and their prior learning credentials have become an important issue in recent years and the demand for more prior learning opportunities has increased (Price, 2014; Ryu, 2013). Higher education institutions have awarded prior learning credits for military training since the 1940s. Currently millions of veterans deployed in Afghanistan or Iraq are returning to college and may apply their experience and knowledge while in service toward college credit (Boerner, 2013). Some resistance to PL continues in some higher education circles (Fain 2012a, 2012b, 2013b; Flint et al., 2004; Hoover, 2010; Price, 2014; Tate et al., 2011); however, these attitudes are changing.

**Advantages and criticisms of prior learning.** PL has helped boost enrollments of adult learners who have an increased interest in completing a bachelor’s degree when they can receive credit for prior learning (Gambescia & Dagavarian, 2007; Ordonez, 2014). Adult learners frequently attend more than one institution and can lose credit hours when they transfer to a new college. Credits earned from PL often offset these losses (Gast, 2013; Strimel et al., 2014).
These earned credits also help lessen the costs of obtaining a college degree. Statistically, students who have PL credits on their transcripts have higher graduation rates (CAEL, 2010; Flint et al., 2004). Overall students with prior learning credits had better outcomes especially in terms of graduation rates and persistence compared to other adult students (Brigham & Klein-Collins, 2011). Students from low-income, African-American, and Latino backgrounds who earned prior learning credits also had higher graduation rates (CAEL, 2011). One should note that much of this positive data originates from CAEL, an organization with an agenda to promote prior learning. Opponents of PL may potentially view this data as skewed or weighted, having originated from CAEL. Currently it appears that not much literature with an opposing viewpoint toward CAEL and its studies exists. However, CAEL has been the forerunner in conducting studies related to prior learning, and its research has been the most prevalent in this area (Travers, 2012a).

Detractors to prior learning exist on many college campuses (Hoover, 2010). PL has grown in popularity, but remains unavailable to some (Brigham & Klein-Collins, 2011) partially because of institutional resistance (Flint et al., 2004; Hoover, 2010; Price, 2014). Some institutions continue to believe that standards are lowered with such assessments because it “dumbs-down” and diminishes college learning (Lambe, 2011; Price 2014) with no real learning being measured. Select critics also consider PL as nothing but a moneymaking, marketing tool created by admissions officers to attract more student enrollment (Lambe, 2011). Other detractors view it as giving away credit (Fain, 2012a; Hoover, 2010; Lambe, 2011). Critics often believe that PL lacks quality (Stenlund, 2010) and cheapens college education (Fain, 2012c), with no effort expended on the part of the student. Certain colleges create this negative image by heavily advertising prior learning as a way to market their degree programs. In the long run, PL
can save money for students (and not necessarily the institution) as students avoid having to take and pay for more course credit than they need.

Community Colleges have used some form of prior learning for years (Schultz, 1976), but a recent CAEL survey revealed that their participation rate in prior learning is not as high as originally thought (Brigham & Klein-Collins, 2010). In 2010 CAEL produced a study of prior learning initiatives and community colleges (Brigham & Klein-Collins, 2010). As part of this study CAEL conducted a survey that revealed that many community college students do not take advantage of prior learning opportunities even though they are offered. At the community college level, PL is not heavily promoted or advocated by faculty or college advisors (Brigham & Klein-Collins, 2010). The same survey demonstrated that although community colleges recognized the possibilities of PL, they had no plans to expand their PL initiatives in the future (Brigham & Klein-Collins, 2010). President Obama’s call to double graduation rates at community colleges by 2020 has influenced a change in attitude toward the prior learning initiatives at the community college level (Boerner, 2013). However, many community colleges currently remain far behind four-year colleges in advancing prior learning opportunities.

Certain four-year colleges such as Empire State College, part of New York State’s public college system (SUNY), enthusiastically embrace prior learning initiatives. Empire State remains the pioneer in the prior learning movement (Lambe, 2011) and has used PL for decades (Kamenetz, 2011b; Schultz, 1976). Students at Empire State can pursue college credit for learning they gained through prior academic experiences (Lambe, 2011). Evaluators assess student essays for credit and recommend the number of credits a student should receive based on the knowledge conveyed in the essay. Faculty committees and then an administrative office review these recommendations before earned credits are officially rewarded (Fain, 2012c;
Hoover, 2010). Before the Internet emerged, students at Empire State could take self-instructed correspondence courses (Schultz, 1976). Currently Empire State offers more than 300 courses online and students can write their own degree plan (Hoover, 2010). It recently has played a significant role in promoting prior learning and its assessment at the university level in New York State (Fain, 2012c).

**Assessing prior learning.** In this current age of accountability at all educational levels, proper assessment of prior learning is crucial for its acceptance. Before the 1970s, PL existed in the form of standardized exams such as the Advanced Placement (AP) test and the College Level Examination Program (CLEP). Students with a certain score on these exams earned college credit. These exams remain the most popular way to assess prior learning (Klein-Collins & Hain, 2009; Ryu, 2013). However, critics of these tests find them inappropriate for some students with different cultural or work backgrounds (Fehnel & Sundberg, 1976; Gambescia & Dagavarian, 2007). As a result of this criticism, discussions on other ways to assess prior learning and work experience emerged including portfolio assessment.

**Portfolios.** Assessment by portfolio was introduced in the 1970s thanks to the efforts of CAEL. When students use portfolios for prior learning, they create a document which details learning acquired through a variety of non-college experiences (Brown, McCrink, & Maybee, 2004; Mann, 1997) such as on the job or military training. Portfolios usually contain a narrative that includes statements of life experiences and of the learning that may have resulted from these experiences (Brown et al., 2004; Mann, 1997). They also include documentation (certificates, etc.) to support these experiences. Prior learning portfolios require students to take an experience, such as a training seminar in public speaking, and reflect on this experience through writing. In the portfolios students discuss and demonstrate what they learned in the training or
on a job. Ideally the portfolio would serve as a complex document where students assess learning from prior work/life experiences to demonstrate that this learning meets the objectives corresponding with a college-level course (Gambescia & Dagavarian, 2007).

Unlike most exams, portfolios provide a more holistic approach to prior learning (Mann, 1997) and a unique opportunity for students to demonstrate learning, make connections between theory and practice, and engage in meaning making (Stevens et al., 2010). In most cases found in the literature (Gambescia & Dagavarian, 2007; Hoffmann & Michel, 2010; Stevens et al., 2010), faculty review prior learning portfolios and assign the number of credits a student could possibly receive based on what students who submitted the portfolios learned from an experience. Portfolios used for prior learning will earn credit for students only when they successfully demonstrate what they learned. If the experience described and detailed in the portfolio demonstrates learning, it should earn some credit for the student. Using a portfolio is an empowering way for students to assess prior learning because it can demonstrate the value of life experiences (Klein-Collins & Hain, 2009). Adult learners have found that portfolio assessments further both their personal and professional competencies (Brown et al., 2004). Portfolios serve as excellent tools for students to reflect on their experiences and impart what they learned from them. However, higher education adopted portfolio assessment very slowly after they first emerged as an option (Fehnel & Sundberg, 1976; Tate et al., 2011; Travers, 2012a).

Despite this slow growth, portfolio assessment has gained in popularity since the 1970s. In 2010 a CAEL survey of institutions that participated in PL revealed that portfolios were the second type of assessment employed by 88% of these institutions. One major problem with portfolio prior learning assessments is that they are not standard. Other countries such as the
United Kingdom and Australia have adopted national standards for PL (Travers, 2012a). The Flemish region of Belgium has also attempted to standardize PL portfolio assessment (Sweygers, Soetewey, Meeus, Struyf, & Pieters, 2009). Scholars have noted that in the United States these assessments vary from college to college and even from one academic department to another (Brown et al., 2004; Gambescia & Dagavarian, 2007; Hoover, 2010; Starr-Glass, 2002; Tate et al., 2011). CAEL recently began to address these discrepancies in assessment when creating Learning Counts.

**Learning Counts.** The prior learning movement has also transformed itself into an online endeavor as the Empire State example demonstrates. CAEL has acted proactively in the online world and recently created the Learning Counts service to further facilitate the prior learning process (Brigham & Klein-Collins, 2011; Glenn, 2011; Kamenetz, 2011b; Tate et al., 2011; Travers 2012a). Learning Counts works directly with colleges to extend prior learning’s reach (Fain 2012a; Kamenetz, 2011b). It offers students an online six-week portfolio class on how to create e-Portfolios that showcase learning achieved outside a traditional classroom. In the fall of 2010, CAEL selected 100 diverse institutions to participate in the pilot phase of Learning Counts (Brigham & Klein-Collins, 2011). Learning Counts currently has 500 faculty evaluators who review portfolios and grant credits that are added to a transcript (Kamenetz, 2011b). Students can use these transcripts and apply these credits toward a degree if they enroll in any of the participating Learning Counts institutions. Other non-participating colleges may eventually accept these credits if students transfer into their programs (Kamenetz, 2011b; Tate et al., 2011).

In her online book, *The Edupunks’ Guide to a DIY Credential*, Kamenetz (2011a) mentions the Learning Counts program and credit-earning exams such as AP and CLEP. This
work serves as a guide to students who are interested in taking charge of their own learning. It includes a section that lists ways to earn college credit without taking a college class (Kamenetz, 2011a). The author champions the process of using open learning to earn college credit and promotes the term “Do it Yourself University” (DIY U). Kamenetz alludes to open access education such as Open Educational Resources (OERs) and questions why students would pay exorbitant tuition amounts if open educational content exists.

**OERs.** OERs opened an innovative route for students interested in earning prior learning credits. MIT’s OpenCourseWare initiative inaugurated the OER movement when it launched in 2002 (Bossu & Tynan, 2011; Brown & Adler, 2008; Kamenetz, 2011b; Smith & Casserly, 2006; Wiley & Gurrell, 2009). OpenCourseWare offers a variety of online college course content that students can access for free. In the years since OpenCourseWare began it has influenced other colleges and universities to create their own open educational resources (Brown & Adler, 2008). Numerous institutions including, Carnegie Mellon, Stanford, and Yale have created OERs (Kamenetz, 2011b; Kolowich, 2011). In addition to colleges and universities, other organizations such as the Saylor Foundation offer full college courses for free where students can listen to lectures, participate in activities, and take tests to gain knowledge in a variety of subjects from art to zoology (Kamenetz, 2011a, 2011b). Other sites include Apple’s iTunes U, open textbooks, and open access libraries (Klein-Collins & Wertheim, 2013). OERs influenced the rise of MOOCs. Some scholars believe MOOCs have superseded OERs (Lin, 2014). The recent emergence of MOOCs has introduced a new challenge to the traditional means of earning college credits.
MOOCs

Massive open online courses (MOOCs) represent the next generation of OERs. Although the first MOOC appeared in 2008 (Barnes, 2013; Decker, 2014; Kazakoff-Lane, 2014; Pence, 2013), this term officially emerged in the literature in late 2011/early 2012 (Carey, 2012; Kolowich, 2011; Ripley, 2012). Stanford University Professors Norvig and Thrun put MOOCs in the spotlight by offering their artificial intelligence courses freely available online for anyone to access and use. MOOCs offer content on a grander scale than traditional OERs by not only offering course materials such as lectures and handouts but also including the accompanying tests and homework assignments to any online participant (Kolowich, 2011) who wants to take them. Students enrolled in MOOC classes can take tests and receive grades to gauge their learning. Participation in MOOCs is voluntary and students rely on self-organized study (Bliwise, 2014; Educause, 2012). Kolowich (2011) writes that MOOCs create opportunities for “edupunks” to experiment with course work without enrolling in a particular institution. Although just a few years old as a concept, MOOCs have quickly gained in popularity as millions of people worldwide have signed up for MOOCs (Klein-Collins & Wertheim, 2013). They have created a new energy around e-learning that converges technology and culture (Educause, 2012).

In January 2012 Norvig and Thrun expanded their efforts and created Udacity, an online venture that offers hundreds of college-level courses online (Ripley, 2012). Two other Stanford professors founded Coursera in March 2012. Coursera had doubled its partnerships and added universities such as Brown, Ohio State, the University of Maryland, and Wesleyan University to its MOOC offerings by September 2012 (Kolowich, 2012). Other MOOC platforms such as edX and Udemy have also recently started to deliver courses over the web (Educause, 2012). The
MOOC arena continues to grow as many other elite universities such as Columbia, Duke, and Notre Dame recently began offering MOOCs (Bliwise, 2014; Educause, 2012). Some questions have emerged as to whether MOOC enrollees can earn college credit for these offerings (Cusumano, 2014; Klein-Collins & Wertheim, 2013). One institution, Colorado State University-Global Campus, began accepting full transfer credit to students who completed Udacity’s, Introduction to Computer Science course in the Fall of 2012 (Mangan, 2012). Antioch University made a licensing arrangement with Coursera that incorporates selected Coursera offerings into Antioch’s curriculum (Delbanco, 2013).

**Badges.** In addition to MOOCs a recent badge system offers another alternative to traditional education. In the badge system, students can earn a badge for watching 30 minutes of an instructional video from OER sites such as the Khan Academy (Mazoué, 2012; Travers, 2012b; Young, 2012). These badges certify skills and abilities, and when paired together, can earn distinctions such as “Master of Algebra” or form patches for a particular discipline, including computer programming or public speaking (Young, 2012). Education reformers and members of certain industry sectors advocate the use of badges (Bencini, 2013; Grant, 2014; Mazoué, 2012; Young, 2012) to gauge skills and experience. Awarding badges through peer recognition already exists in open-source computer programming and gaming sectors (Ossiannilsson & Creelman, 2012). The University of California at Davis recently began experimenting with a digital badge program in its College of Agriculture. Participating students demonstrate learning outcomes for seven competencies through badges created by the institution’s agricultural program. Students can display these badges through learner dashboards or e-Portfolios (Fain, 2014).
Mozilla, the Firefox Internet browser developer, designed a badge framework that allows anyone with a web page to issue educational badges (Young, 2012). These badges could serve as a virtual resume of skills (Mozilla Foundation, 2012). In partnership with Peer-to-Peer University, Mozilla seeks to create a credentialing system that entirely bypasses the necessity to progress through a formal college curriculum or the awarding of a university degree (Bencini, 2013; Mazoué, 2012). In such a system, individuals can use these sites to have a peer evaluation conducted of their skills in order to earn badges based on the evaluation results. Earned badges can be stored or displayed in an online backpack (Sharples et al., 2013; Travers, 2012b) or like in UC Davis’ project, in a portfolio. The badges would serve as a low-cost alternative to traditional college work (Pence, 2012). Klein-Collins and Wertheim (2013) consider badges a type of micro-credential that could substitute for a credit unit depending on the subject. Higher education institutions such as MIT, Purdue, and Seton Hall have recognized the potential of badges and have also recently begun to experiment with them (Bowen & Thomas, 2014).

The United States Secretary of Education, Arne Duncan, recognized that badges constituted a new strategy in higher education (Grant, 2014; Selingo, 2011). Travers (2012b) believes the badge system fills a gap that higher education has failed to fill. Employers often complain about poorly prepared college graduates who received degrees the traditional way. Selingo (2011) imagines a future where some employers take a chance and hire people with a different kind of credential like a badge. Eventually some employers could prefer badges to the current educational system since traditional college diplomas and course transcripts currently contain little detail about what a recipient actually learned (Bowen & Thomas, 2014; Carey, 2013; Grant, 2014; Weise, 2014; Young, 2012). The badges movement appears revolutionary and possibly a challenge to future prior learning programming (Travers, 2012b). However, if
online sites can provide quality learning that enables students to earn badges, write credit-producing portfolios, or pass assessment tests; then a promising future partnership between prior learning and the nontraditional entities that award badges could exist. Prior learning initiatives could support learners who try to credential earned badges (Klein-Collins & Wertheim, 2013). Currently traditional institutions still own the right to credential prior learning, but these newer modes of learning found in MOOCs and the badges movement have begun to question that ownership (Bencini; 2013; Fain, 2014; Godwin-Jones, 2014; Grant, 2014; Klein-Collins & Wertheim, 2013; Travers, 2012b; Vardi, 2012; Young, 2012).

**Breaking a monopoly.** The literature shows that MOOCs and badges are still in a fledgling phase in terms of truly competing with traditional institutions, but in the future they could pose a threat to higher education. Many of the courses currently found online do not compare with traditional higher educational offerings, (Bliwise, 2014; Guzdial & Adams, 2014; Pence, 2013; Ripley, 2012) but with time, as more ventures emerge, quality should improve with competition. Currently traditional colleges still hold the monopoly on college credits but this monopoly could wane with the extremely high costs of college tuition and exorbitant student loan debt (Carey, 2012; Delbanco, 2013; Lin, 2014; Wood, 2014). Students who enroll in MOOCs usually do not receive official credit but this trend is changing. At Thomas Edison State College students have applied for prior learning credits for learning attained through MOOCs (Educause, 2012; Kamenetz, 2011b; Ripley, 2012). Students who participate in MOOCs often gain knowledge from these courses that could enable them to take credit-granting assessment tests such as the CLEP exam. MOOC “graduates” could also demonstrate what they learned in a portfolio.
DIY U could become a future facet of prior learning if partnerships between traditional universities and MOOCs were strengthened. Boilard (2011) claims that traditional colleges and universities may eventually turn a significant share of the educational mission to DIY U. Currently DIY U still needs buy-in from many sectors and MOOCs have yet to gain mass acceptance (Gast, 2013; Kolowich, 2015). Some institutions such as Amherst have rejected joining the edX MOOC program (Calderwood, 2013; Heller, 2013; Pence, 2013). Despite announcing that it would accept transfer credits from certain Udacity courses, Colorado State University’s-Global Campus did not have one student apply for these credits a year after making this announcement (Johnson, Adams Becker, Estrada, & Freeman, 2014; Kolowich, 2013c). Student interest toward Antioch’s partnership to incorporate some Coursera courses also remains low (Delbanco, 2013). However, Kamenetz (2011b) sees the potential of the prior learning movement in propelling MOOCs forward. The Gates Foundation also sees potential in MOOCs by recently funding the MOOC Research Initiative, a project that examines the effectiveness of MOOCs at the student and systems level (Calderwood, 2013). Some of these grants include research projects spearheaded by ACE (the American Council of Education) to issue credit recommendations for students who take certain MOOCs (Fain, 2013a). In early 2013 ACE endorsed five MOOCs for credit (Kolowich, 2013a).

Students who take courses through MOOCs could use what they learned on these sites and apply for credit toward a degree at a traditional university. Some scholars view MOOCs as an opportunity to enhance higher education instead of a threat to traditional institutions (Cusumano, 2014; Fain, 2013a; Kelly, 2014; Lin, 2014; Monson, Bunney, & Lawrence, 2013; Pence, 2012; Strimel et al., 2014). e-Portfolios could assist in this enhancement of current higher education practices. Many researchers advocate the use of portfolios to demonstrate knowledge
learned thorough MOOCs or other unconventional modes of learning (Fain 2012c, 2013a; Kamenetz, 2011b; Klein-Collins & Wertheim, 2013; Strimel et al., 2014; Tate et al., 2011; Travers, 2012b; White, 2014). e-Portfolios could play a significant role in this area in several ways: (a) by demonstrating student learning through MOOCs or other nontraditional means, (b) by serving as a link between the MOOC world and traditional universities, and (c) by strengthening connections between an individual’s learning and industry/educational standards.

**e-Portfolios in Higher Education**

Outside the prior learning arena, the rise in student portfolio use dates back to the mid-1980s. Originally in hardcopy format, they were used in such disciplines as art, communications, and teacher education (Lorenzo & Ittelson, 2005). In the mid-1990s e-Portfolios emerged as a new way to showcase selected student work (Chatham-Carpenter et al., 2010; Lorenzo & Ittelson, 2005). As an online educational tool, the e-Portfolio revolutionized the traditional paper portfolio (Chatham-Carpenter et al., 2010) and has been widely adopted in Europe, the United Kingdom, Australia, and the United States (Cheng, 2008; Kim, Ng, & Lim, 2010; Light, Chen, & Ittelson, 2012). The Internet further increased the popularity of e-Portfolios. In 2008 more than half of higher education institutions in the United States used some form of e-Portfolio system (Kim et al., 2010). This increase in use is not surprising as Internet-based e-Portfolios can provide institutions with an innovative tool that enhances learning (Chatham-Carpenter et al., 2010). e-Portfolios also assist in improving retention and graduate rates (Kahn, 2014).

Students are responsible for developing evidence of their learning with e-Portfolios. This technology is student-centered and customizable allowing students to choose what content they want to include to demonstrate learning (O’Sullivan et al., 2012; Wang, 2009). According to a
recent study by EDUCAUSE, there has been a dramatic increase in e-Portfolio usage among students since 2010 and approximately 54% of undergraduates students have used some sort of e-Portfolio in the past year (Dahlstrom, Walker, & Dziuban, 2013). The introduction of capstone courses at many higher education institutions has contributed to this increase in e-Portfolio use by students (Kahn, 2014; Matthews-DeNatale, 2013; Seal, 2014).

e-Portfolios allow users to collect and reflect on materials created over time (Goldsmith, 2007; Wang, 2009). These materials are often called “artifacts” (Carroll et al., 2007; Chatham-Carpenter et al., 2010; Kim et al., 2010; Light et al., 2012; Peacock, Gordon, Murray, Morss, & Dunlop, 2010; Wang, 2009) and these artifacts can be linked or evidenced from other data sources (Peacock et al., 2010). e-Portfolios allow for the exchanging of ideas or feedback between the author and those who view the e-Portfolio and its artifacts (Lorenzo & Ittelson, 2005). They are also easily accessible (Strudler & Wetzel, 2008). The use of e-Portfolios enables students to gain self-knowledge and develop skills using narratives to identify strengths (Graves & Epstein, 2011). As a dynamic and interactive tool, e-Portfolios are used in a variety of ways and according to Batson (2002) have the potential to alter higher education at its very core, more than any other technology. Their various uses in higher education ensure them a positive future as a successful reflection and assessment tool in multiple areas (Batson, 2010; Jafari, 2004; Kahn, 2014; Yancey, 2009).

**Types of e-Portfolios.** In higher education, e-Portfolios can have more than one function. e-Portfolios often serve numerous purposes including: (a) to facilitate reflection on learning, (b) to showcase career skills and, (c) to assist in program review and assessment (Chatham-Carpenter et al., 2010; Dorn, 2001; Goldsmith, 2007; Kahn, 2014; Matthews-DeNatale, 2013; Parker, Ndoye, & Ritzhaupt, 2012; Reese & Levy, 2009; Singer-Freeman,
Bastone, & Skrivanek, 2014; Wang, 2009; Yancey, 2001). Lorenzo and Ittelson (2005) discuss the variety of functions e-Portfolios have in higher education such as documenting learning, tracking development, planning academic programs, finding employment, and evaluating course/program performance. Some e-Portfolios are considered “showcase portfolios” and are primarily used for accountability and summative assessment while others are considered formative, “learning portfolios” that are used to support learning processes and personal/professional development (Carroll et al., 2007; Henry, 2006; Treuer & Jenson, 2003; Wang, 2009). Various stakeholders in higher education may use these types of e-Portfolios to track student progress, apply for a promotion, or assess learning (Strudler & Wetzel, 2011; Wang, 2009). For years LaGuardia Community College has successfully employed student e-Portfolios for assessment purposes and to track growth (Kahn, 2014; Kamenetz, 2011a; Light et al., 2012). Fitch, Peet, Reed, and Tolman (2008) found that e-Portfolios assisted in evaluating not only student learning but also curricular assessment.

**e-Portfolios and prior learning assessment.** Portfolio assessments have been used in prior learning departments for years. Approximately 50% of participating institutions that offer prior learning credits currently allow applicants to submit e-Portfolios for prior learning assessment purposes (Klein-Collins, 2007). e-Portfolios may play a larger role in the future of prior learning assessment. Both reflective portfolios and showcase portfolios (or a combination of both) could highlight what students have learned or gained from an experience. By creating the Learning Counts site CAEL has attempted to establish some quality control to both assessment and using e-Portfolios (Klein-Collins & Wertheim, 2013). Other education companies have taken note of these initiatives including Kaplan Higher Education which recently created Knext, a competitor to Learning Counts (Glenn, 2011; Mazoué, 2012; Travers,
These online services assist students in creating portfolios and offer an online course in e-Portfolio development which could eventually standardize the assessment processes of prior learning.

As an educational tool, the e-Portfolio allows students to display their learning and knowledge of a topic acquired outside a classroom. It can also assist adult learners in juggling the various demands on their time by providing an area to refocus on their learning experiences (Matthews-DeNatale, 2013). e-Portfolios also emphasize reflection, self-assessment, and metacognitive skills (Goldsmith, 2007). By having students reflect on knowledge attained through prior learning experiences, e-Portfolios allow individuals to examine their own life experiences and reflect on strengths and weaknesses (Acosta & Liu, 2006; Strimel et al., 2014).

When CAEL established Learning Counts it recognized the utility of employing e-Portfolios to assess prior learning. Learning Counts requires that digital portfolios be uploaded to their site (Fain, 2013a; Kamenetz, 2011b) for prior learning credit assessment to take place. Students who use prior learning e-Portfolios can include test scores and document their skills in reflective essays or even video clips. Faculty teams or other experts assess these portfolios and tests (Kamenetz, 2011b; Sweygers et al., 2009) in order to ensure quality and assign credit. With the possibility that competency-based degree programs may eventually replace the traditional credit-bearing degree, e-Portfolios would serve as an excellent way to demonstrate these competencies and any acquired learning (Klein-Collins & Wertheim, 2013; Sweygers et al., 2009).

**The Relational Age and e-Portfolios.** In today’s networked and participatory society, Travers (2012b) discusses a new phenomenon referred to as the Relational Age. The Relational Age impacts higher education significantly (Travers, 2012b) because it takes away higher education’s role as the major source for acquiring and synthesizing information (Travers, 2012b).
This new age no longer supports the traditional well-structured curriculum found at most brick and mortar institutions of higher learning. The traditional curriculum cannot always provide students with all the knowledge and skills needed in today’s global economy (Travers, 2012b). Other scholars have noted that experiential learning and the participatory culture of the Internet in today’s society (Bass, 2012) have put pressures on the formal university curriculum (Mazoué, 2012; Ossiannilsson & Creelman, 2012; Wood, 2014). The Relational Age has helped propel the popularity of MOOCs. In a MOOC environment students may not acquire learning as they did in the past but instead self-author their learning (Travers, 2011b). e-Portfolios have the potential to assist students when they self-author and they may serve as a bridge between learning and society (Acosta & Liu, 2006; Strimel et al., 2014).

The Relational Age and these new educational opportunities could bring changes that higher education institutions must recognize. The literature related to e-Portfolios demonstrates that they can play a role during this transitional period. Learners could add badges earned (for a skill achieved or a concept learned) to their e-Portfolio sites in order to demonstrate their skills and knowledge to prospective employers. These learners may not necessarily have a degree (Selingo, 2011). Acosta and Liu (2006) also underscore that in traditional academic environments “it is difficult for students to make meaningful reflections of the knowledge they have learned and the contribution they can make to society because of their lack of connection to society” (p. 19). They argue that e-Portfolios help establish these connections and link knowledge to possible occupations (Acosta & Liu, 2006). Students who prepare e-Portfolios for presentation to potential employers create meaning to their learning and value to their work (Brown et al., 2004; Ciocco & Holtzman, 2008; Light et al., 2012). Although the Relational Age
has disrupted traditional ways of providing educational content, e-Portfolios adopted for prior learning could help fuse the traditional with the new.

**Creating connections.** The current literature recognizes that traditional universities still have the monopoly on granting credit (Cooper & Sahami, 2013). However, with the Relational Age and some MOOCs aiming to go straight to employers and cutting out the “middleman” (Ripley, 2012), these traditional institutions need to reevaluate their roles. Traditional institutions struggle to find connections between their formal curriculum and the experiential co-curriculum found in most prior learning or MOOC experiences (Bass, 2012). e-Portfolios by their nature can create this connection. Plater (2006) recognizes that as a dynamic, flexible, and adaptable educational tool, e-Portfolios become the process behind granting credit. Student e-Portfolios present evidence of learning by including reflective essays and other artifacts. With the e-Portfolio, the student becomes the co-owner of his/her learning record (Plater, 2006). The institution no longer has the monopoly on the credits. As in DIY U, students play a direct role in certifying credits or degrees by describing their experiences and applying acquired knowledge in their e-Portfolios (Fain, 2013a; Plater, 2006).

**Challenges**

Many contemporary scholars describe the positive aspects of prior learning. Boilard (2011) finds today’s prior learning framework more flexible and robust than traditional educational systems. He upholds the idea that prior learning is less concerned with *how* the learning occurred. Boilard contends that many colleges’ restrictions on the number of PL credits allowed may be changing. Travers (2012a) optimistically claims that prior learning departments are no longer the “stepchild” found in basement offices. Prior learning has become an important issue on many institutional, state, and national agendas (Boerner, 2013; Travers, 2012a; USO,
Despite this optimism and potential shift in attitude, one must recognize that this positive spin often originates from CAEL employees and DIY U promoters such as Kamenetz. Challenges continue to exist including issues related to credibility, assessment, and institutional resistance.

The Internet has increased the popularity of e-Portfolios, prior learning initiatives, and MOOCs. Unfortunately issues that often arise in an online environment including verifying identity, privacy, copyright, access, assessment, costs, plagiarism, and credibility also dominate the literature (Carroll et al., 2007; Chatham-Carpenter et al., 2010; Conrad, 2008; Dawn et al., 2011; Educause, 2012; Goldsmith, 2007; Guzdial & Adams, 2014; Jafari, 2004; Lorenzo & Ittelson, 2005; Ossiannilsson & Creelman, 2012). Implementing an e-Portfolio system that will enable adequate assessment could also be problematic, time-consuming, and a difficult process for many institutions (Conrad, 2008; Kahn, 2014; Meyer & Latham, 2008).

**Assessment.** The literature often discusses issues related to assessment and the lack of a standardized process in measuring prior learning when using e-Portfolios (Lorenzo & Ittelson, 2005; Sweygars et al., 2009; Travers, 2012b). Questions emerge as to who qualifies as a credible evaluator (Ossiannilsson & Creelman, 2012; Travers, 2012b). The possible lack of academic rigor behind some badges and MOOC initiatives (Guzdial & Adams, 2014; Mazoué, 2012; Ripley, 2012; Travers, 2012b; Vardi, 2012) undermines their validity in the prior learning assessment process. Even with efforts by CAEL to create some formal assessment processes through their Learning Counts service, questions about rigor and validity remain. Issues related to assessment signify a crucial impediment to the adoption of prior learning initiatives despite studies (CAEL 2011; Fain, 2012c; Hoffmann & Michel, 2010) that detail the strengths of the process. Faculty in many institutions are often unaware of the benefits of prior learning
assessment and e-Portfolios (Bossu & Tynan, 2011; Gambescia & Dagavarian, 2007; Henry, 2006; Light et al., 2012; Meyer & Latham, 2008; Plater, 2006; Travers, 2012a) which leads to institutional resistance.

**Institutional buy-in.** Travers (2012a) acknowledges that despite progress, faculty and administrators often remain uninformed about prior learning and its benefits. Many institutions lack top-down support or administrative directives and many e-Portfolios initiatives have to rely on bottom-up grassroots efforts (Chatham-Carpenter et al., 2010; Kardasz, 2013). Formal professional development activities related to prior learning rarely exist (Travers, 2012a). Currently not all colleges recognize or grant credit for prior learning (Fain, 2012a, 2012c) despite the increase in its popularity. Even where institutional buy-in does exist such as at CSU-Global Campus, students there have not taken the opportunity to apply a MOOC course toward degree credit (Kolowich, 2013c). As MOOCs become more competitive and Obama’s graduation initiative builds momentum, this resistance to prior learning may diminish. In Pennsylvania, 14 universities in the state system of higher education recently formulated an agreement with CAEL to accept prior learning credits (Fain, 2012b) into the curriculum. The Pennsylvania system is one of the largest public university systems to partner with Learning Counts (Fain, 2012b). Partnerships with traditional institutions, such as those in Pennsylvania and other states, may change some of the residual resistance to prior learning. If successful, other colleges and universities will recognize its potential.

Articles related to e-Portfolios often discuss the institutional resistance to this technology as a learning and assessment tool. Faculty often find e-Portfolios difficult to use and a very time-consuming addition to their regular duties (Chatham et al., 2010; Jenson & Treuer, 2014; Kardasz, 2013; Meyer & Latham, 2008; Straumsheim, 2014a; Wetzel & Strudler, 2005). They
often resist using e-Portfolios and confuse them for an actual assessment system when they are just the technology behind the assessment process (Light et al., 2012; Meyer & Latham, 2008). Higher education administrators often face difficulties in changing the institutional culture toward e-Portfolios and their value as an educational tool (Goldsmith, 2007; Henry, 2006; Kahn, 2014). Changing institutional culture toward e-Portfolios can occur with effective leadership that initiates e-Portfolio training and continual support to all faculty who may need it (Henry, 2006; Light et al., 2012; Shepherd & Bolliger, 2014; Wetzel & Strudler, 2005). Offering release time to faculty to acquaint themselves with the framework and structure behind e-Portfolios would help secure more buy-in for them as a learning tool. If faculty do not feel positively about e-Portfolios, students may also question their worth.

**Student resistance.** Some students seem confused by the usefulness of e-Portfolios (Dawn et al., 2011; Jafari, 2004; Light et al., 2012) or find them too time-consuming (Driessen, Muijtjens, van Tartwijk, & van der Vleuten, 2007; Sharples et al., 2013). They do not always see the incentive behind spending the time to create them if they will not earn a grade (Tosh et al., 2005). Students also often cease using e-Portfolios once they are no longer enrolled in courses that require their use (Jenson & Treuer, 2014; Shepherd & Bolliger, 2014). However, students who use portfolios for prior learning assessment purposes should have more of a vested interest in them and see their value. An e-Portfolio requires students to write and reflect on their experiences and what they learned from them (Bolliger & Shepherd, 2010). Students must have strong writing skills (Kamenetz, 2011b) which could impede some individuals from using e-Portfolios. Ideally the portfolio should serve as a complex document where students assess learning from prior work/life experiences to demonstrate that this learning aligns with the outcomes and objectives of existing college-level courses (Bolliger & Shepherd, 2010; Brown et
Students who use e-Portfolios often voice concerns related to ownership, privacy, and who has access to their personal information and online artifacts (Cheng, 2008; Fitch et al., 2008; Tosh et al., 2005). Easily accessible e-Portfolios lend themselves to privacy breaches and could encourage plagiarism from others who could steal e-Portfolio content (Cheng, 2008; Light et al., 2012). In surveys related to e-Portfolios many users expressed concerns with plagiarism and privacy breaches (Carroll et al., 2007; Chatham-Carpenter et al., 2010; Cheng, 2008; Tosh et al., 2005). With adequate training and the proper technical mechanisms in place, privacy and plagiarism issues should hopefully become a moot point.

**MOOCs uncertain future.** Although prior learning initiatives and e-Portfolios still face institutional resistance, they pale to the resistance faced by MOOCs (Baggaley, 2014; Delbanco, 2013; Fain, 2013a; Heller, 2013; Johnson et al., 2014; Kolowich, 2013b; Pence, 2013; Rivard, 2013a). It will take some time before traditional institutions accept transfer credits for badges or completed MOOC courses. Some MOOCs currently do not offer high quality courses and many students drop out (Calderwood, 2013; Guzdial & Adams, 2014; Kazakoff-Lane, 2014; Pence, 2013; Ripley, 2012; Straumsheim, 2014b). There are also no standards on how to transfer credits earned by taking MOOC courses. However, MOOCs have only just entered the educational landscape, and their presence should not be ignored or diminished. MOOCs seem further legitimized by the elite colleges partnering with Coursera and Udacity to offer free online courses. Even though most colleges currently do not accept transfer or prior learning credits for MOOCs, it appears that MOOCs will endure in some capacity (Cooper & Sahami, 2013; Lin, 2014). As students successfully demonstrate the knowledge acquired from free online course
offerings, more colleges may reevaluate whether to reward credits earned by MOOCs.

Most MOOCs remain free to all enrollees, but this open access will probably not last indefinitely. Costs associated with maintaining and staffing these sites may be minimal but will require assessing some fees especially when producing MOOC content (Bliwise, 2014; Cusumano, 2014; Fischer, 2014; Heller, 2013; Kazakoff-Lane, 2014). MOOCs offered through Harvard’s HarvardX program now assess a small fee in order to cover costs (Heller, 2013). Coursera charges for course certification (Head, 2014). However, in comparison to the high tuition costs of most traditional colleges and universities, MOOCs will remain an attractive alternative (Lucas, 2014; Ripley, 2012; Vardi, 2012). In 2013 Udacity and Georgia Tech announced a partnership where they would develop the first MOOC-based master’s degree in computer science that would cost 80 percent less than the traditional program (Kendrick & Gashurov, 2013; Lucas, 2014).

Although many colleges do not currently accept MOOCs as transfer credit, this situation has started to change (Cooper & Sahami, 2013; Kolowich, 2013a). The Commonwealth of Pennsylvania’s partnership with Learning Counts may represent the beginning of more acceptance of prior learning and eventually MOOCs. MOOCs have gained further credence in recent months with the launch of MOOC2Degree (Lucas, 2014; Mazoué, 2013). MOOC2Degree is a collaborative endeavor between various public universities including Arizona State and the University of Arkansas that offers free courses for college credit that could ultimately lead to a degree (Godwin-Jones, 2014; Lewin, 2013; Mazoué, 2013). Interested students can access MOOC2Degree’s website to see the growing number of available courses.

Getting buy-in for MOOCs from traditional institutions may become easier especially if MOOCs begin to approach employers directly. Udacity has already set up partnerships with six
companies including Google and Microsoft to offer training (Ripley, 2012). Starbucks has initiated a pilot program with Learning Counts where the company provides tuition assistance and CAEL provides career and education advising. This partnership enables Starbucks baristas to earn course credit for their training in the hospitality and restaurant management areas (Kamenetz, 2011b). In the future, students could potentially enroll in MOOCs, create e-Portfolios to demonstrate learning achieved from these courses, and take these packaged portfolios directly to employers when searching for a job (Glenn, 2011). Traditional higher education routes could possibly be bypassed altogether if students choose to seek such alternatives outside of a college network (Lucas, 2014; Selingo, 2013a).

**Summary of Literature Review**

A review of the literature reveals that prior learning has transformed itself since the 1970s as a result of societal and technological changes, including the emergence of e-Portfolios, MOOCs, and badges. As e-Portfolios continue to take hold as an educational tool in higher education, the literature related to it has also grown significantly. More institutions could grant credit for prior learning by employing and evaluating this learning through student e-Portfolios. However, the concept of MOOCs only recently emerged and the academic literature related to this topic remains small. Gaps in the literature also exist concerning the creation of a standardized e-Portfolio assessment framework or national prior learning standards. Without proper assessment techniques, institutional buy-in for MOOCs, prior learning, and e-Portfolios will remain low.

The need exists to create an assessment tool that can effectively assess prior learning experiences in order to gauge and award credit (Gambescia & Dagavarian, 2007; Hoffmann & Michel, 2010; Tosh et al., 2005; Travers 2012a). The literature has yet to really address
standardizing prior learning assessments through using specific instruments such as e-Portfolios. Klein-Collins and Wertheim (2013) discuss competency-based assessment as the future boost to prior learning and e-Portfolios. The positive literature related to the prior learning movement, MOOCs, and e-Portfolios tends to originate from CAEL (Brigham & Klein-Collins, 2010, 2011; CAEL, 2010, 2011; Klein-Collins, 2007; Klein-Collins & Hain, 2009; Klein-Collins & Wertheim, 2013; Tate et al., 2011). Sweygers et al. (2009) also warn that too much standardization of assessment could jeopardize the e-Portfolio’s functionality. However e-Portfolios and the literature related to this technology continue to increase in popularity (Kahn, 2014). Resistant institutional attitudes toward this technology and their use in prior learning assessments may change. Change may not come right away, but change is inevitable. In order for some higher education institutions to stay viable, they may eventually have to recognize and accept prior learning credit earned in these various nontraditional ways.

Proactive institutions will recognize the impact that nontraditional offerings and e-Portfolios will potentially have in the future. The literature has only recently begun to recognize the potential opportunities in offering credit for prior learning by connecting with MOOCs (Boilard, 2011; Fain, 2013a; Gast, 2013; Kamenetz, 2011a, 2011b; Kolowich, 2013a; Lucas, 2014; Mazoué, 2013; Ossianilsson & Creelman, 2012; Ripley, 2012; Travers, 2012b).

Nontraditional adult students who have returned to college currently outnumber traditional students on many campuses (Buchanan, 2013; Sweygers et al., 2009). This population would find the convenience and low-cost potential of MOOCs as an attractive alternative to traditional courses (Buchanan, 2013; Fain, 2013a). Not every prior learning experience or MOOC course will necessarily transfer or apply to a degree program, but higher education institutions should remain receptive to change and to the possibilities of collaboration.
This literature review highlighted the potential of e-Portfolios to link traditional, experiential, and open modes of learning. Using e-Portfolios could also establish strong connections between MOOCs and traditional institutional degree programs. The current scholarly literature has not really examined the potential links found between credits earned by MOOCs and traditional degree programs. As the MOOC movement further establishes itself, this body of literature should grow especially with the launch of such initiatives as MOOC2Degree. e-Portfolios could play a role in strengthening the learning process that might arise by linking MOOC courses to traditional curricula. Traditional institutions should consider programs such as Learning Counts, Knex, or MOOC2Degree and also explore using e-Portfolios to link prior learning credits to their degree programs.

If MOOCs continue to increase in popularity, institutional culture on traditional campuses may no longer resist these new methods of learning. Ideally higher education institutions will recognize the possibilities of linking prior learning experience (including MOOC learning) to traditional degree programs by using e-Portfolios. Achieving buy-in and support for creating these links will remain a challenge in the near future (Hoover, 2010; Mazoué, 2013; Ossiannilsson & Creelman, 2012; Ripley, 2012). However, creating strong associations between these areas should attract future students to institutions who embrace such partnerships. Properly implementing e-Portfolios to ensure these connections would facilitate and validate this process.

Prior learning and MOOCs have the potential to grow exponentially in the next decade. As an online assessment tool, e-Portfolios could strengthen ties between traditional and nontraditional modes of learning. e-Portfolios may also play a greater role in assessing and awarding prior learning credits in the future. However, standardized assessment tools that adequately gauge prior learning need to be created in order to achieve more buy-in and
credibility for e-Portfolios. Administrators and faculty also have to support and link e-Portfolios to prior learning in order to assess knowledge and learning gained through these various means. Without support, these links will not form or solidify. Achieving buy-in for using e-Portfolios within the stolid culture of many institutions will remain one of the biggest challenges. Students, especially nontraditional students reentering college with prior learning experiences, will also have to willingly utilize this technology. Scarce research also exists related to this topic. The purpose of this doctoral study was to address this gap in the literature and examine how higher education institutions employed e-Portfolios to link prior learning to traditional degree programs. Measuring such use might improve support for this technology, creating connections between various types of learning, and furthering possibilities for students and higher education institutions.
Chapter Three: Research Design

The purpose of this doctoral study was to examine how higher education institutions were employing e-Portfolios in prior learning assessment initiatives. The researcher sought to gauge how e-Portfolios are being used or implemented in these processes within particular Pennsylvania universities. This study used a qualitative research design and collected usage data that measured how frequently e-Portfolios are being implemented and employed. Rogers’ (1983) diffusion of innovation paradigm was used to measure the adoption rate of this technology. The main goal of this study was to understand how e-Portfolios were being used to assess and award credits for learning achieved outside the classroom. This type of study aligned with a qualitative research design and corresponded well to a case study methodology. A case study allowed for the collection of detailed data that included multiple sources of information (Creswell, 2012b). Multiple data sources enabled the researcher to use triangulation (Creswell, 2012b; Stake, 2005). Collected data illustrated some of the issues associated with adopting and using e-Portfolios to assess prior learning.

Methodology

Case study research is a robust methodology that can be used in various disciplines (Hartley, 2004; Yin, 2009). Merriam (1998) advocates using a case study approach in educational settings. Depending on the research topic and the researcher, case studies can either be deductive (Stake, 1978; Yin, 1981b), inductive (Eisenhardt, 1989; Hays, 2004), or use a combination of both approaches (Eisenhardt & Graebner, 2007; Evers & van Staa, 2010; Hartley, 2004; Perry, 1998; Stake, 1995). Most of the case study theorists share similar perspectives and approaches toward data analysis. Evers & van Staa (2010) state that three traditions in qualitative case study analysis predominate: the Yin tradition that uses more of an empirical-
analytical approach to data analysis to test an hypothesis, the Miles and Huberman (1994) tradition which uses charts and matrices to graphically represent data (also found in Stake’s method), and a basic (qualitative) interpretative tradition that is influenced by the grounded theory approach.

According to Yin (2009) the research question in a case study approach seeks to explain how a specific phenomenon works. Yin believes that a case study is the methodology of choice when examining a contemporary event. In this study, the researcher examined institutional adoption and use of e-Portfolios. Using e-Portfolios for prior learning assessment is a recent occurrence that fits the criteria of a contemporary event. A case study methodology explores real-life contemporary bounded systems such as particular higher education institutions (Creswell, 2012b; Merriam, 2002). Miles and Huberman (1994) define this bounded system as the phenomenon in which the case occurs. Stake (2005) considers a case to be a system with working parts and specific purposes. The various departments involved in prior learning assessment found within a select number of PASSHE schools constituted the bounded system in this study.

The researcher examined the same problem at multiple sites so the employed approach could be considered a collective case study (Creswell, 2012b; Stake 2005); a multiple case study (Merriam, 1998); or a multi-case study (Yin, 1981a). In this study the term collective case study is used to describe the methodology. By using a collective case study one issue (e-Portfolio usage), was examined with multiple cases (various PASSHE prior learning departments). A case study searches for meaning by seeking patterns, consistencies, and repetitions in the data (Stake, 1995; Yin, 2009). A collective case study approach often includes some charting (Stake, 2006) which the researcher used when analyzing the data to facilitate the examination of this study’s
research question. Additionally, a collective case study approach allowed the researcher to conduct a cross-case analysis and make comparisons between PASSHE sites (Darke, Shanks, & Broadbent, 1998; Stake, 2006; Yin 2006). With such an analysis the researcher sought differences and similarities (Eisenhardt, 1989) in addition to emerging themes (Merriam, 1998). Case studies use a variety of data sources including surveys, interviews, direct observations, physical artifacts, and other documents (Creswell, 2012b; Darke et al., 1998; Eisenhardt, 1989; Hays, 2004; Stake, 2006; Yin, 2009). The data sources for this doctoral research had the variety found in most case studies. The researcher collected data from online survey answers, face-to-face interviews, and through a document review of specific institutional policies related to prior learning and e-Portfolios.

**Participants**

The Council for Adult and Experiential Learning (CAEL) created LearningCounts.org, a fee-based online service that allows adult learners to take knowledge acquired in a variety of ways and apply it towards college credit (CAEL, 2010; Kamenetz, 2011b; Tate et al., 2011). In 2012, the 14 universities in the PASSHE system joined an initiative where they would partner with Learning Counts to award prior learning credits earned through various means (Fain, 2012b; Sherman et al., 2012). For this dissertation the researcher used a purposeful sampling strategy with a homogeneous sampling approach and selected participants found in the PASSHE system from departments that were involved with prior learning assessment processes. Creswell (2012b) describes homogeneous sampling as an approach where the researcher purposefully samples individuals or sites that have defining characteristics, in this study, administrators involved in PLA. Purposeful sampling often leads to cases that will provide information of
central importance to a research problem (Merriam, 2002; Stake, 2006). Stake (1995) also underscores that case studies do not use random sampling research.

This doctoral research aimed to measure specific institutional use of e-Portfolios to assess prior learning and award credits as part of the Learning Counts initiative. By using a sample that included stakeholders from a select number of PASSHE institutions, the researcher gathered different perspectives and attitudes related to using e-Portfolios in this way. The researcher attempted to recruit participants from all 14 of the PASSHE institutions for the initial survey and then solicited participants from three of the PASSHE institutions to interview. The researcher used information gathered from the document review and the results of the initial survey to select the particular institutions used for the interviews. The three institutions represented in the interviews were located in both rural and suburban locations. All three institutions belonged to the PASSHE system, offered both undergraduate and graduate programs in a variety of disciplines, and enrolled over 30,000 students combined.

**Procedures**

Before beginning the process of surveying and interviewing particular individuals, the researcher obtained IRB approval from Northeastern University (Appendix A). The researcher intended to gather data from all institutions in the PASSHE system and then sought local IRB approval from all 14 PASSHE institutions in order to survey and interview selected participants. After contacting the main PASSHE office, the researcher learned that the PASSHE system had an IRB process in place where one institution served as the “lead university” for a particular time period. Once the lead university approved the study it was shared with the 13 other institutions in the system. After receiving IRB approval, the researcher began the process of emailing the
initial survey to particular individuals at participating institutions. The email included a copy of
the informed consent form for the online survey (Appendix B). Participants who agreed to be
interviewed were also provided with a consent form (Appendix C).

Data Collection

This study collected data from various sources to address the research questions. These
sources included: a document review where the researcher examined various documents and
policy pages related to prior learning at all 14 PASSHE institutions, an online survey directed at
specific individuals involved in prior learning assessments at PASSHE institutions, and in depth
interviews of a smaller sample of individuals. These different data sources allowed the
researcher to triangulate the data and improve its validity. The table below outlines and
describes the data collection methods used for this study.

Table 1

Triangulation of Data

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Participants</th>
<th>Overview of Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document Review:</td>
<td>Public websites of all 14 PASSHE institutions</td>
<td>Reviewed:</td>
</tr>
<tr>
<td></td>
<td>Main website for PASSHE</td>
<td>PASSHE website</td>
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<tr>
<td></td>
<td>The APSCUF (Association of Pennsylvania State College and University</td>
<td>• Strategic Plan</td>
</tr>
<tr>
<td></td>
<td>Faculties – union that represents PASSHE faculty and coaches) website</td>
<td>Public web sites of each PASSHE institution</td>
</tr>
<tr>
<td></td>
<td>CAEL’s Learning</td>
<td>Documents reviewed included</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Prior Learning Assessment Pages (if they existed)</td>
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<tr>
<td></td>
<td></td>
<td>• Policy Pages related to transferring or earning credit through other means</td>
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<tr>
<td></td>
<td></td>
<td>• Course catalogs</td>
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<td></td>
<td></td>
<td>• Any documentation related to e-Portfolios</td>
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<tr>
<td></td>
<td></td>
<td>• Middle States reports from certain schools</td>
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<td></td>
<td></td>
<td>• Press releases</td>
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<tr>
<td></td>
<td></td>
<td>• e-Mails from particular individuals located at various PASSHE schools</td>
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<tr>
<td>Counts Website</td>
<td>Statement by APSCUF related to the CAEL/Learning Counts agreement announced in 2012.</td>
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<tr>
<td><strong>Survey:</strong> Short Introductory survey sent out to all individuals involved in prior learning assessment at the PASSHE schools that granted IRB approval.</td>
<td>11 of the 14 PASSHE institutions responded to the research request. Survey was sent to over 30 individuals at these institutions that lead to ten responses – with a response rate of 30%. Received IRB and then CAO/Provost approval from 11 of the 14 schools found in the PASSHE system. The researcher never heard from three of the PASSHE institutions despite making more than one request to their IRBs and CAOs. In the end employees located at 11 of the 14 schools received the survey request. Employees from eight of the institutions completed the survey.</td>
<td></td>
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<tr>
<td><strong>Interviews:</strong> Open-ended questions that explored in depth attitudes and perceptions toward using e-Portfolios for prior learning assessment. These questions also explored issues with prior learning and the Learning Counts initiative.</td>
<td>Three individuals located at three different PASSHE institutions. 30-45 minute semi-structured interviews with individuals directly involved in prior learning initiatives at their institutions. The researcher asked some standard and open-ended questions to gain insights related to the research questions. Researcher recorded these interviews that were then transcribed and coded.</td>
<td></td>
</tr>
</tbody>
</table>

Not only did all three data sources assist the researcher in triangulating data, they also provided insight into a variety of issues. These issues included the current state of prior learning assessment (PLA) at the various PASSHE schools, current opinions toward e-Portfolio usage in PLA, and the present status of the Learning Counts initiative within PASSHE institutions.

**Document Review**

Before sending out the survey and conducting follow-up interviews, the researcher conducted a document review. Yin (2009) recognizes the importance of document reviews in case study research. Such a review provides specific details and can substantiate other data.
gathered in a study (Yin, 2009). These documents also offer important information related to the central phenomena of a qualitative research study (Creswell, 2012a). This review can also provide the researcher with an understanding of particular policies and their possible ideological or political underpinnings (Bazerman, 2006). Reviewing documents sometimes also reveals how individuals or institutions respond to directives or initiatives (Bazerman, 2006). The document review further assisted the researcher in obtaining information not culled from the surveys and interviews since the response rate to these requests was lower than anticipated.

The researcher culled relevant information by conducting a document scan as discussed by Creswell (2012a). Relevant documents were analyzed in order to gather some historical background. Documents were also reviewed to identify contextual factors and supplemental information related to each PASSHE institution. The researcher also examined the main website for the PASSHE organization and its strategic plan. The PASSHE site stresses that each university in the system has its own set of institutional policies and procedures. The 14 institutions in the PASSHE system are very diverse especially in terms of demographics, geographic location, and the types of academic programs they offer. Conducting the document review furnished the researcher with preliminary information about each of the PASSHE schools and their involvement (either active or inactive) with the Learning Counts initiative.

Yardley (2000) underscores that being aware of the socio-cultural settings of a study is important especially in qualitative studies. This document review helped establish this setting and also furnished background on whether institutions used e-Portfolios or provided any kind of prior learning assessment at all. The data collection provided some insight as to how the institutions located in the PASSHE system used e-Portfolios and also assessed prior learning. It also placed the research topic in context at each institution and supplemented information
gathered from the surveys and interviews. The document review substantiated the diversity of the PASSHE universities and their institutional policies related to the prior learning assessment process.

In gathering documents, the researcher selected public documents found on the Internet that were easily searched using a variety of terms related to prior learning, e-Portfolios, the Council for Adult and Experiential Learning (CAEL), and the Learning Counts program. The document review went on continuously with the researcher referring to various websites and documents throughout the entire data collection process. During this timeframe (approximately six months), some websites at particular schools changed or were redesigned so that documents accessed at an earlier date were either no longer accessible or had changed web addresses making the review process somewhat challenging at times. When reviewing the documents, the researcher “triaged” the materials by the centrality of the study as suggested by Yin (2009). Documents identified as relevant to the research questions were organized into categories. These categories included specific policy pages related to prior learning credits and course catalog pages. When available, other documents reviewed included press releases/online ads, school publications such as employee bulletins or student newspaper articles, Middle States accreditation reports, strategic plans or planning documents, and meeting minutes for various campus groups.

Surveys

The document review assisted the researcher in identifying the most appropriate individuals to contact for the survey phase of the data collection process. Occasionally a CAO at a particular institution would also provide or suggest names of people to survey, occasionally
another individual who received the email request forwarded the survey link. In other instances the researcher e-mailed the surveys to individuals whose names appeared during the document review. The researcher sent an introductory email to individuals or departments identified as being involved in prior learning or the PASSHE-Learning Counts initiative (Appendix D). The introductory email explained what the study intended to address and how it might contribute to the prior learning process. This email included a link to the online survey which contained open-ended and closed questions (Appendix E). The online survey was created using Google Forms (Appendix F) which enabled the researcher to send the survey easily through email.

The researcher emailed the survey to 30 individuals located at all 11 institutions that had granted IRB approval to account for the possibility of a low response rate. The researcher sent out the online surveys over a staggered timeframe based on when the IRBs at each institution approved the researcher’s request to conduct research. This timeframe was also centered on when approval to survey institutional employees was granted by each CAO. Over a period of five months (June to October) the researcher sent out survey emails to employees located at the 11 institutions that responded and granted approval to the study. As an institution granted IRB and employee approval, the researcher would then send out the survey. The email encouraged individuals to forward the survey to other relevant or interested participants who might exist on each campus so the survey numbers could be higher. The initial email survey assisted the researcher in further identifying individuals that would be the best candidates for the follow-up interviews.

The researcher purposely kept the survey relatively brief with five short questions. Although the researcher underscored the brevity of the survey when emailing it to every individual, the response rate to the survey was not very high. The researcher sent a reminder
email to every non-respondent a month after sending the initial survey request but the response rate remained low. Approximately 30 individuals received the survey request. This number may have been slightly higher because some respondents informed the researcher that they had forwarded the survey link to other individuals who might be interested in filling it out. The initial email had encouraged the forwarding of this survey where possible. Of the 30 surveys sent out, the researcher received ten responses from eight of the 11 institutions for an approximate response rate of 30%. Despite the low number of responses, the survey revealed some interesting facts about individual PASSHE schools including their involvement with Learning Counts and their use of e-Portfolios.

**Interviews**

The researcher then conducted follow-up interviews (via the phone) with a smaller sample based on the data culled from the initial survey and the document review. In some instances the researcher used the document review to contact appropriate individuals. The survey results also assisted the researcher in following-up with specific individuals located at various PASSHE institutions. In other cases the CAO assisted the researcher in finding individuals to interview. Both the surveys and the document review also assisted the researcher in identifying pertinent people to contact. The researcher contacted four individuals at four different PASSHE institutions to request an interview. Three individuals responded to the request and were interviewed for this study. The individuals interviewed for this study all played significant roles as administrators in departments that offered some sort of assessment for prior learning. The three interviewees had over 50 years combined experience with prior learning assessment processes. In order to maintain confidentiality of the particular institutions where these participants worked the researcher will provide generic descriptions about each institution.
The interview protocol had eight to ten open-ended questions (Appendix G). The researcher included questions in the interview protocol that accounted for the attributes of an innovation outlined by Rogers (1983). The interviews typically took 30 minutes to complete. All interviews were conducted via the telephone, and were recorded (after obtaining permission) using a digital voice recorder. The digital audio recordings were stored on the researcher’s computer and transcribed using transcription software. The interviews helped the researcher delve further into some of the issues raised by the initial survey. It also enabled the researcher to evaluate the actual situation as it concerned Learning Counts, e-Portfolios, and PLA within selected PASSHE schools.

**Data Analysis**

Case study research offers a variety of data analysis techniques that vary depending on the nature of the data collected (Eisenhardt, 1989; Yin, 2006). The researcher collected all data produced from the examination of institutional policies, surveys, and interviews. For the document review the researcher created a spreadsheet that tracked all information related to these Learning Counts, e-Portfolios, and PLA for each school in the PASSHE system. Creswell (2012a) suggests creating a qualitative text database to gather information related to a document scan. The document review spreadsheet helped the researcher take notes and identify similarities between the various PASSHE institutions.

The Google Forms software used in the survey assisted the researcher in collating survey data. This software automatically gathered responses into a separate spreadsheet that assisted the researcher in eliciting and coding key points from the surveys. This data collation found in this software also helped identify institutions engaged (or not engaged) in the practice of using e-Portfolios for prior learning assessment that was the focus of this dissertation. Interviews were
transcribed using the transcription software, HyperTRANSCRIBE. Before starting the data analysis of the interview transcripts, participants had the opportunity to review copies of their transcripts to ensure accuracy and confidentiality, a process defined as member checking by Creswell (2012b). Merriam (1998) recommends starting data analysis as the researcher collects data rather than waiting until all the data is collected. Employing this process allowed the researcher to compare the first set of data immediately in order to possibly tweak subsequent data collection activities.

During first cycle coding the researcher coded transcripts by hand and with the coding software HyperRESEARCH. This first cycle used an In Vivo coding technique. According to Saldaña (2013), In Vivo coding refers to a word or phrase from the actual language found in the qualitative data record. Since the goal of this research was to gauge e-Portfolio use, this type of data coding acknowledged the participants’ voices (Saldaña, 2013). After the initial coding, the researcher used axial coding. Axial coding fit the wide variety of data forms (interview transcripts, document review) that the researcher used (Saldaña, 2013). Identifying recurring patterns in the form of themes or other categories (Merriam, 1988), in both the In Vivo and axial coding, assisted the researcher in determining the level of e-Portfolio use and involvement with Learning Counts. This analysis resulted in categories or themes that conceptualized the data culled in all the cases (Merriam, 1998).

Yin (2009) recommends using data analysis software but underscores that the researcher still has to find patterns and code frequencies independent of this software. He discusses “playing with data” drawing from the Miles and Huberman tradition of creating flowcharts and other graphics (Yin, 2009). The researcher used a collective case study analysis as described by Merriam (1998), Stake (2006), and Yin (2009). When collecting data from the diverse research
sites, the researcher created a visual representation of the interview codes and also used charts for the document review to make connections and establish patterns. Yin discusses a variety of analytic techniques including explanation building which fit the data analysis approach in this study. Explanation building is a special kind of pattern matching that explains a phenomenon and can apply in both single and multiple case studies (Yin, 2009). It attempts to create causal links between the how and the why related to a phenomenon (Yin, 2009). In this study, explanation building was applied across the different PASSHE institutions to examine and link whether e-Portfolios were being adopted or used as prior learning assessment tools.

**Ethical Considerations**

Ethical issues may arise at any time during the research process (Creswell, 2012b). They often emerge during the data collection stage when a researcher mishandles informed consent procedures or participant confidentiality (Creswell, 2012b). Creswell (2012b) and Rubin and Rubin (2012) discuss the importance of maintaining ethical conduct and protecting human subjects. The purpose of the study should be disclosed when a researcher initially approaches a selected site (Creswell, 2012b) even before the distribution of informed consent forms. This study did not present any obvious risks to the selected participants. However, the researcher did change the consent form at the request of the IRB of one particular PASSHE school to further underscore how data would be protected. Unpopular opinions related to the research topic might have also put some individuals in jeopardy so the researcher protected participant and institutional identities to ensure confidentiality and reduce this risk.

**Informed Consent**

All participants involved in this study were provided with a copy of the informed consent form. The consent form language was also embedded in the online survey. A separate interview
The consent form was sent to all interviewees. These forms explained the purpose of the study. They also stressed that participating in the study was completely voluntary and confidential. The forms also clearly stated that participants could withdraw from the study at any time with no repercussions (Appendices B and C). The consent form was designed with the assistance of Northeastern University’s Institutional Review Board.

Confidentiality

At all stages of the process participant information was kept confidential. All data files (survey information, interview transcripts, policy manuals, audio recordings, and field notes related to particular policies) were stored in a locked cabinet and/or password-protected computer. Only the researcher had access to this cabinet and the password-protected computer files (found in the researcher’s home). The researcher destroyed the data after all analysis was finalized. All participant information found in this data was also kept confidential. Institutions selected for the interviews found in this study were also given pseudonyms and all human participants were assigned made-up names. The institutions represented in the interviews were labeled Institution A, Institution B, and Institution C with each participant’s pseudonym corresponding to their institution (Alex, Bristol, Carter). During both data collection and analysis all interviews were also assigned a letter and number. The researcher underscored in the IRB application and consent forms that all data gathered for this study would be managed in such a way that the confidentiality of participants was preserved. Interview participants had the opportunity to review copies of their transcripts not only to confirm accuracy but also to ensure confidentiality.
**Trustworthiness**

This dissertation included participants from a variety of institutions who had varying opinions about the research problem topic. Capturing the different viewpoints that emerged from the data was a crucial part of this study. The trustworthiness of the research was important as a result of the different attitudes and usage data. Different data sources were used and validating this data strengthened the trustworthiness of this study. Creswell (2012b) recommends using at least two validation procedures to ensure trustworthiness. This study employed member checking and also clarified researcher bias as two validation procedures (Creswell, 2012b). It also used triangulation as a third validation option. After transcribing the interviews, the researcher provided a transcript to each interview participant so that they could review their responses. This member checking technique encouraged feedback. Member checking can also provide information about what might be missing in the transcription and data collection process (Creswell, 2012b). Interview participants had the opportunity to comment on omissions or errors in their interview transcripts before coding began.

Yin (2009) describes how potential problems with data validity can be addressed with triangulation. The researcher triangulated the data with three different data sources (online surveys, interviews, and the document review). Not only did these different sources assist in triangulating the data, they also helped identify similar themes. Triangulation made use of different sources to reveal a theme or perspective (Creswell, 2012b; Stake, 2006). Stake (2005) notes that triangulation can also clarify meaning by identifying various ways that the case is perceived and it can help identify different realities. Using this validation strategy further enhanced the validity of the study and helped minimize potential threats.
Potential Research Bias

The researcher has a background in e-Portfolios and could possess a bias towards their adoption and use. While in a tenure-track faculty position, the researcher employed an e-Portfolio as a tenure file instead of the paper binder traditionally used during this process. The researcher’s experience with e-Portfolios sparked an interest to conduct further research on how they could be used in higher education including in the area of rewarding credit for prior learning. By recognizing the important role e-Portfolios could play at all educational levels the researcher has a vested interest in them as a scholar-practitioner. As Machi and McEvoy (2009) discussed, having a personal attachment to a topic could carry a bias that must be controlled even if it cannot be completely removed.

Having used e-Portfolios with positive results, the researcher acknowledged that not everyone would enthusiastically embrace them. Many individuals may not have a positive experience when using educational technology such as e-Portfolios especially if they struggle to grasp the technology with little support or training. In examining e-Portfolios, the researcher recognized that not all participants might have had opportunities to create online content and experiment with different technological tools. Briscoe (2005) discussed how tools of the educationally privileged (such as an e-Portfolio) might further marginalize particular groups or individuals. e-Portfolios could also be viewed as a tool of the privileged that serves no practical purpose. Such perceptions and negative reactions toward e-Portfolios could pose a major challenge to their potential implementation and to the researcher’s research topic.

The researcher monitored this bias when collecting and interpreting data (Merriam, 2002) and examined the research problem from the perspective of administrators and faculty who may have never used e-Portfolios. The attitude of participants toward e-Portfolios and prior learning
could also have threatened the validity of the topic. Butin (2010) warns of “response effect bias” which can occur when interview participants provide responses that they think the interviewer wants to hear. The researcher accounted for this potential effect by carefully structuring the interview protocol to avoid any biases (Butin, 2010).

**Limitations**

Even with the increased popularity of both e-Portfolios and PLA, this study had limitations that could have potentially affected its outcomes. The novelty of the topic posed a potential threat to the research study. The Council for Adult and Experiential Learning (CAEL) only recently created LearningCounts.org (CAEL, 2010). Although Learning Counts is growing and has partnered with the institutions selected for this study, it has also not earned the respect from all areas of higher education (Fain, 2012a, 2012c; Glenn, 2011). When the PASSHE initiative was launched, it was also met with some suspicion in a few academic circles (Hicks, 2012). The novelty of the program and the potential lack of respect held by some academics toward the initiatives found in the Learning Counts program could have affected the validity of the study. Another potential issue was not being able to control for or factor in the contextual or cultural differences found across various PASSHE institutions especially as they affected the research topic.

The potential limitations found in this study were minimal despite these issues. Interviewing and sending surveys to a cross-section of individuals at particular institutions helped guard against participant bias or a particular attitude skewing the data. The Learning Counts initiative was also accepted and adopted by all the PASSHE institutions (Fain, 2012b) so it had purported institutional support. Lastly, the ultimate purpose of this study was to contribute
to the growth of this learning initiative, PLA, which strives to assist all students who aspire to attain a college degree.

**Conclusion**

Higher education has witnessed many changes in recent decades from the emergence of the Internet, to the growth of online education, and the recent advent of MOOCs. Many institutions also currently struggle to stay relevant in a changing educational field with many competitors. Today’s students may take various paths to attain college credit or complete a degree program. Higher education institutions need to recognize the various opportunities that exist for students to earn prior learning credits. Although prior learning opportunities have existed for over six decades they have also experienced change as a result of technological revolutions such as the introduction of assessment by e-Portfolio. e-Portfolios could serve as one tool to keep institutions relevant and assist students toward degree completion. However, resistance towards employing e-Portfolios continues which can impede their use in prior learning initiatives.

This study’s goal was to gain a better understanding of how institutions’ potential adoption and use of e-Portfolios could facilitate the prior learning assessment process. The purpose of this research was to explore how particular institutions use e-Portfolios in prior learning initiatives to better understand how this technology was being used to improve credit attainment. This qualitative study employed a collective case study approach where particular institutions were selected to explore their use of e-Portfolios in prior learning assessments. The research design supported the purpose of the study and guided the data analysis. The researcher collected data from the various institutions selected for this study through surveys, interviews, and a document review. This data was coded and analyzed for themes. Finding patterns in this
data provided information on how e-Portfolios were being used (or not used) to assess prior learning.
Chapter Four: Research Findings

The purpose of this study was to examine how certain higher education institutions in the Commonwealth of Pennsylvania were employing e-Portfolios to link prior learning initiatives to traditional degree programs. Three sources of data were employed to explore this topic including a document review, a survey, and interviews. Documents from each of the PASSHE institutions were perused, 11 institutions received surveys (with employees from 8 institutions responding), and three participants from separate PASSHE institutions were interviewed. This chapter describes the case study’s central findings and the data results gathered from the document analysis, surveys, and selected interviews. Three main themes and eight corresponding subthemes emerged from the data: 1) e-Portfolios are currently not being used for PLA (1.1 paper portfolios persist, 1.2 standardization issues exist, 1.3 there is minimal or no interest to adopt e-Portfolios); 2) Learning Counts exists in theory, but there is currently little or no involvement in this initiative (2.1 A systems level initiative, 2.2 too costly); 3) Prior learning assessment processes endure but seem to be on tenuous ground at some institutions (3.1 issues with acceptance, 3.2 faculty resistance, 3.3 departments in flux).

The majority of the themes were identified from the interviews. However, this chapter also discusses the findings culled from the surveys and document review that supported these themes. The researcher conducted the document review and distributed the surveys prior to interviewing particular participants. This preliminary collection of data assisted the researcher in identifying interview participants and establishing the central themes of the study. The researcher introduces each main theme found in this chapter by describing the findings from the surveys and document review that often supported the interview data. The main themes and most of the subthemes frequently appeared in the interview data for all three participants. To
preserve anonymity, these interviewees were given gender-neutral pseudonyms and referred to as Alex, Bristol, and Carter who worked at Institutions A, B, and C respectively. In addition to the identified themes, the researcher, when interviewing participants, also sought to measure the future of the e-Portfolio as a prior learning assessment tool. The data findings related to this issue conclude this chapter.

**e-Portfolios are Not Being Used for PLA**

Despite the technological revolution of recent decades, the ubiquity of the Internet, and the impetus to use e-Portfolios for PLA especially in the literature and by the Learning Counts initiative, this technology is not being used by any of the PASSHE schools interviewed or surveyed for this study. When reviewing the survey data, the researcher discovered that most of the respondents (six out of 10 respondents) had no interest in using e-Portfolios as part of the PLA process. Four out of the 10 survey respondents also had no experience with PLA e-Portfolios. The surveys also revealed that a few individuals were interested in adding e-Portfolios to their prior learning assessment options but they were in the minority (three out of 10 responses).

Triangulating the data allowed the researcher to identify several factors that influenced this non-use of the e-Portfolio. The document review confirmed that most of the PASSHE schools offered some sort of prior learning assessment. The survey results and the interview data revealed that most of the PASSHE schools that participated in this study (eight out of the ten institutions represented in the survey and interviews) provided some sort of prior learning assessment process through a variety of means including testing, portfolio evaluation, or transcript evaluation. The numerous choices available to students when applying for prior
learning credits possibly made e-Portfolios less appealing as an option. Institutions offered PLA through standardized examinations such as the CLEP (College Level Examination Program) and the military’s DSST (DANTES Subject Standardized Tests – formerly DANTES) exams. These standardized tests were the most popular PLA option according to all three interviewees even though institutional examinations, such as a challenge exam, and a portfolio review were also offered. The three interviewees’ institutions offered assessment by portfolio but in paper format only.

**Paper Portfolios Persist**

Although not as popular an option, the three participants’ institutions offered PLA by portfolio as another route for students. Despite having this option, the three interview participants all stated that; overall, assessment by exam remained the most popular PLA option through which to gain credit. However, Carter noted that at his/her institution particular academic departments actually used portfolios more frequently than exams for PLA because students had to produce professional certificates and demonstrate learning in ways more easily done by portfolio than exams. Institutions A and B only offered the paper portfolio option, the e-Portfolio was not even a possibility. Despite having the opportunity to develop a portfolio, one institution had witnessed very little usage of this option even in the paper format. According to Alex, although PLA by portfolios was an option for students where the department would:

> Arrange to have a faculty member from that discipline who was willing to work with the student to develop the document that would demonstrate depth and breadth. It really didn't take off and has been… and it has never really been what I would call a real burning successful program.
Institution C gave students the choice between choosing a paper portfolio or an e-Portfolio, but no students had selected the electronic version despite being given this option. Institution B only permitted paper portfolios according to Bristol but these dossiers could take a variety of forms and sometimes contained elements that could actually have online components:

So the student then puts together what sometimes amounts to a portfolio, sometimes it amounts to, “hey here's a PDF file that I have made that is a scanned representation of all the things that I have done,” that sometimes might include a sort of like a pseudo interview/discussion on the phone. It might involve a “hey, you know, can you, can we sit down and have a talk?”

As the above quotes demonstrate, within one institution the concept of what could be considered a PLA portfolio could vary depending on the discipline or the student applying for credit.

Even though some sort of assessment by portfolio remained an option at all three institutions, students located at Institutions A and B did not use this option very frequently for PLA. Students at Institution C had the choice between paper and e-Portfolios but no students had chosen to create the electronic version. Although e-Portfolios existed and were also heavily promoted by Learning Counts for PLA, no one in this study’s survey or interview sample had yet used them. Where PLA portfolios were used they remained as paper entities only. In addition, the interview data revealed that no standards existed for portfolio assessments.

**No Standardization**

The lack of standardization to the portfolio process suggests that it was less desirable as a tool to demonstrate prior learning credentials for some individuals. The literature review revealed issues related to standardization especially when assessing prior learning through any
type of portfolio process. The popularity of using standardized exams such as CLEP and/or DSST may be a result of their prescriptive nature that makes it easier for institutions to grant (or not grant) credit based on a student’s performance using a particular instrument. This finding also suggests that PL departments might also consider exams to be a more objective way to assess credits in comparison to a portfolio that requires a detailed review by specific faculty. Portfolios and institutional challenge exams used to assess prior learning will vary based on the subject area being assessed or the faculty member assessing the learning. In many cases, a CLEP exam takes only a few hours to complete in comparison to compiling a portfolio for evaluation especially if there is no standard to work from when putting the necessary materials together. Most students would prefer the quickest, easiest route to obtain credits and if an exam is a choice they may choose it.

In discussing the possibilities to augment portfolios use in PLA, Alex agreed that standardizing the process might help improve their popularity as an assessment option:

I think having a standard for what should be in the portfolio or some kind of model would be helpful. Because every - you get different people doing the same, even the same course, you get different presentations, different formats and I think it would be helpful if people had at least a basic understanding of what should be the components of a portfolio. You know, documentation, experiential learning, how do you, how you present that, so yeah, I think that would be helpful. There's no, we don't have any training for portfolio.

The Learning Counts initiative offers training on using e-Portfolios to assess prior learning, but the three institutions represented in the interviews (and at least two other institutions represented
in the survey) were not actively involved with any aspect of this program at the time of the interviews. The data suggests that students were most likely not taking advantage of these training opportunities or learning how to employ e-Portfolios for PLA purposes.

From the answers to the second question on the survey (related to how institutions were assessing prior learning) and the interview data, it appears that no standardization of the PLA process currently exists within the individual PASSHE schools or at the systems level. Exploring options with national organizations such as CAEL’s Learning Counts program to improve standardization could possibly increase overall portfolio use for PLA. However, students and staff located at individual PASSHE schools seem to have little interest in using the CAEL option or even an in-house e-Portfolio system.

**Lack of Interest**

The survey and interview participants indicated that there was little interest on the part of students, faculty, or administrators within the PASSHE system to employ e-Portfolios for prior learning assessment. All three interview participants underscored this apathy toward using e-Portfolios to demonstrate learning earned in a nontraditional way. Alex stated, that on an individual level, “There is so little traffic in portfolio that I'm not sure that the investment would have any return on it.” At the institutional level, this same participant noted, “I see no institutional interest in that area” when discussing potentially using e-Portfolios for PLA. At Institution C students have the option to use e-Portfolios but the PLA coordinator, Carter, had yet to see one e-Portfolio version despite almost a decade in the position.

According to the interview and survey data, PASSHE employees involved with PLA and students applying for PL credits appeared to have minimal to no interest in using e-Portfolios to
demonstrate this learning. Sitting for an exam or using the paper portfolio option to demonstrate prior learning for credit continued to be the preferred choice or only options at most institutions. The interview data bolstered the initial survey and document review findings that established the persistent prevalence of assessment by exam or paper portfolio. This continued emphasis on only the paper version method of doing things did not help move the adoption of a PLA e-Portfolio forward.

Although the Learning Counts initiative actively promotes using e-Portfolios as part of the PLA process, none of the institutions surveyed or interviewed appeared to use this technology for PLA despite their involvement in this program. This non-adooption of e-Portfolios at these institutions would fall under Rogers’ (1983) description of passive rejection of an innovation, where an innovation is never really considered as a possibility for adoption. It was never trialed or seriously contemplated by either individuals or institutions. Although both the literature and the Learning Counts initiative underscore the positive outcomes when using e-Portfolios to assess prior learning, this format was not being used by any of the PASSHE schools selected for the interviews and represented in the survey data.

The Learning Counts program touts how the e-Portfolio can streamline and facilitate the PLA process. The lack of interest in using this technology and the continued emphasis on testing and/or paper portfolios by particular PASSHE-PLA departments seem to suggest that e-Portfolios remain an unnecessary technology for PLA. The non-adoption of this technology also implies that the Learning Counts initiative has not had much influence on changing past PLA practice at least within the PASSHE system. According to the Learning Counts website, hundreds of colleges and universities have established partnerships with this program. However, according to the data gathered for this study, no institutions or students within the PASSHE
system appear to be taking advantage of the opportunities offered by Learning Counts. As this initiative moves forward, officials at both PASSHE and CAEL need to acknowledge this non-adoption and how it might affect its future success.

**Learning Counts Exists in Theory**

When conducting the document review and the interviews, the researcher also attempted to examine the pervasiveness of the Learning Counts initiative within the PASSHE institutions. The researcher sought to measure what influence this program might have on possibly changing the culture, negative attitudes, and apathy toward using e-Portfolios to assess prior learning. When the Learning Counts partnership with the PASSHE system was announced in August 2012 it was touted as an initiative that would boost enrollments at all the PASSHE institutions and target populations around the state that had no close proximity to a community college (Fain, 2012b). Despite the CAEL and PASSHE announcement of the Learning Counts partnership, and the resulting media attention, the document review demonstrated that many institutions had yet to embrace it or even mention CAEL or Learning Counts anywhere in their public documents. The findings from the document review seemed to suggest that, despite this partnership, the Learning Counts program had not yet been incorporated at any of the PASSHE schools.

The document review revealed that the Learning Counts initiative is still in a fledging stage within the PASSHE system. At the time of the review eight institutions (out of the 14) made no mention of this initiative in their PLA-related documentation even though this documentation revealed that they all award prior learning credits through other means. Only four institutions appear to have acknowledged the Learning Counts initiative and include information related to CAEL’s polices and the e-Portfolio review process in their college
catalogs and/or policy pages. Two PASSHE institutions mention the CAEL initiative briefly. The document review also uncovered that the union that represents PASSHE faculty, the Association of Pennsylvania State College and University Faculties (APSCUF), had issued a statement shortly after the PASSHE-CAEL partnership was announced (Hicks, 2012). The APSCUF cited concerns about this initiative and where it might possibly violate the core principles of the college academy because it appears that there was little faculty involvement before the launch and establishment of this program.

The accessibility of documents was restricted to what was available on the public sites for these institutions. The researcher distributed the survey in order to gather additional information and assess the current climate at the PASSHE institutions related to the Learning Counts partnership. Although the survey data did not contribute as significantly to the overall findings, the survey results revealed that many of the PASSHE institutions had not started the Learning Counts initiative. The answers to the survey question related to this initiative indicated that little awareness of Learning Counts existed. The indifferent response to the numerous survey requests also suggests that many individuals involved with assessing credit for prior learning at these various institutions currently have little knowledge or interest in Learning Counts.

The survey data revealed that the majority of the respondents were unaware of their institution’s involvement with CAEL’s Learning Counts initiative. The few respondents (three) who did know about the initiative stated that students had not used it. One respondent replied to the survey request by email and stated that her institution:

As part of the Pennsylvania State System of Higher Education, signed with CAEL Learning Counts in 2012. As an institution, we fully support the opportunity for our
students to earn credits for life experience/prior knowledge. To date, we have not had any students use this wonderful opportunity.

A survey respondent from another institution echoed this response that, although students had the opportunity to use CAEL to receive PLA, no students had used this program. The survey responses and the document review revealed that despite the existence of PLA most institutions and their students were either not participating in the Learning Counts initiative or were not even aware that this program existed. The interviews confirmed this disinterest in Learning Counts for a variety of reasons discussed in the following sections.

A Systems Level Initiative

All three interview participants stated that although they were directly involved in the administration of prior learning processes at their institutions, they had not been included in any Learning Counts planning or implementation. The partnership appeared to originate between CAEL and the main PASSHE office located in Harrisburg, Pennsylvania. Any disseminated information only went to senior administration officials at each PASSHE institution with little involvement by the administrators in any of the local institutions’ prior learning areas. Carter stated:

What happened was, several years ago when this was coming down the pike. I had no clue, no one had filled me in that this was going to be instituted at each of the universities. I am still kind of not in the loop.

The other two participants echoed similar sentiments, that they had no involvement in this initiative and that no communication had been passed down to any of them by senior administrators. The entire process had started at a systems level and remained at the systems
level with little communication with the individual PASSHE schools involved with this partnership. One participant only learned of the initiative when the provost finally brought the initiative to his/her attention after several months had passed. Despite the positive press in both the news and educational media, internal communication related to the Learning Counts program remained limited with no established dialogue with the individuals directly involved with coordinating or assessing prior learning credits.

Like many initiatives that start with good intentions, the decisions made to formalize the partnership between CAEL and PASSHE started at the systems level and remained there. The interview findings demonstrated that employees at individual PASSHE institutions had little involvement or say in the establishment of this partnership. They also continued to receive scant information about this program and its potential merits to students who sought prior learning credits. Months after its inception, any communication related to this program stayed at a level that prevented most PASSHE institutions from embracing these initiatives with any real enthusiasm.

**Too Costly**

Another major issue with the Learning Counts initiative was the greater cost. Students paid a significantly higher price if they took the Learning Counts-sponsored e-Portfolio classes. Upon completion of these classes, the students then had to have the learning detailed in their portfolios assessed by someone *outside* their institution who was contracted by CAEL. The prior learning assessment and transcript fees charged by Institutions A, B, and C were significantly cheaper and gave students who applied essentially the same number and types of credits on their transcripts. Carter explained why Institution C did not use Learning Counts by stating:
My understanding for why we don't is that it's a much more costly initiative then our own portfolio initiative - my understanding is that students have to take a course on how to put the portfolio together and then the cost of that whole system would cost actually more than actually you know, taking the class here.

The fees associated with the portfolio skills class and the assessment of the prior learning contributed to the lack of interest by both students and administrators to participate in the Learning Counts initiative. Bristol made similar observations related to Learning Counts and the lack of interest related to this program. At Institution B, the rates were also considered very high:

   It would be cost prohibitive and most of the ones that we do, you know, a reasonable adult can sit down and say, “Here's what I have to offer.” And they can sit down with the faculty member, they can talk, they can show, and that's usually all we need.

Although CAEL’s Learning Counts initiative touted the low costs of their services the three participants found the costs superfluous to services they already rendered at their institutions. Bristol underscored that:

   We found that what students are required to do, to build a portfolio to get credit, it was too expensive to run through CAEL because it would have been another few hundred dollars for them to take the CAEL course on how to build the portfolio. And we kind of said, “You know, building a portfolio is not really rocket science.”

The costs also put into question the transferability of credits earned through the Learning Counts program. CAEL uses contracted faculty to assess prior learning portfolios and charges
for this service. The credits earned through this assessment are put on a transcript but according to Carter, at Institution C:

There's a question of whether we can really consider these credits that would come from the Learning Counts - if that would be considered transfer credits because technically it's not our faculty that are evaluating it, it's an outside agency doing that so technically they should be considered transfer credits not, you know, “Institution C” credits.

One of the merits of PL is that it helps students earn credits for past experience at a very low cost. Institutions A, B, and C offered exams or a portfolio review to students that cost significantly less than the current Learning Counts programs. The higher costs charged by the Learning Counts program and the questions about the transferability of credits generated from their assessment process further impeded its changes for success.

The survey responses revealed that the PASSHE institutions polled were not employing Learning Counts for prior learning. The interviews provided even richer information concerning some of the reasons why this program appeared to have languished since its articulation in 2012. Although in the popular press and scholarly literature this initiative was described as an excellent new way to offer prior learning credits, the costs associated with this program were significantly higher than the in-house costs of applying for prior learning credits. In addition, as Carter noted, credits assessed, evaluated, and granted by the Learning Counts/CAEL evaluators might be considered transfer credits and not credits granted by the institution. Students have a limited amount of credits they can transfer into any institution which could hamper their interest to use Learning Counts. The various issues raised by the interviewees about Learning Counts underscored the lack of communication when this initiative was initially being discussed.
Individuals located at the higher administrative end of the PASSHE system apparently did not communicate the formation of this partnership. They also did not consider the potential opportunities and weaknesses that might arise, setting this program up for lackluster results.

**Prior Learning Exists but Tenuously**

Although the document review, the surveys, and interviews revealed the differences found between the various PASSHE schools in the ways they provide and support prior learning assessment, it also demonstrated that all these institutions did offer some sort of prior learning assessment process. The analysis of these data sources confirmed that PL continues to exist in some capacity at most PASSHE institutions. The survey responses revealed that some institutions did not assess PL on campus but encouraged students to go through CAEL to earn credits. The survey data also revealed that at some PASSHE institutions a kind of confusion reigns over the whole prior learning process. At one of the same PASSHE institutions, two individuals who worked within the same department filled out the survey and provided contradictory answers to the same question. One respondent claimed that the institution provided no assessment of prior learning whatsoever; while another respondent in the department answered that the institution *did* provide opportunities to obtain PL credit. This contradiction between the responses seemed to suggest either a lack of understanding of what PL means or also an unfamiliarity related to the existence of these opportunities within some of the PASSHE schools.

The process through which students applied for prior learning credit differed slightly between the PASSHE institutions but the faculty within the appropriate disciplines at each school did the actual review and assessment of any prior learning application. Both the
document review and the interview data confirmed the faculty’s role in this process. If students
demonstrated that they possessed the background or skills to earn credit for prior learning, they
paid a small fee for each credit earned. Faculty who helped assess the prior learning received
compensation for their assessment services. Each institution provided special compensation to
faculty who assisted in assessing prior learning. The document review and the interviews
revealed that this compensation varied from institution to institution. Both sets of data
corroborated that the APSCUF, PASSHE’s faculty union, articulated this compensation during
collective bargaining. Although Alex described this payment as “a pittance” it was a guaranteed
recompense in the contract for faculty who assessed and awarded PL credit.

The interview data demonstrated that PL existed at Institutions A, B, and C but that it had
undergone many administrative and organizational changes. PL was also in different states of
flux at all three institutions. Alex also underscored that although Institution A had a prior
learning assessment process, its student population consisted mainly of recent high school
graduates with little need for PL credits. Although all three interviewees played an active role in
both supporting and coordinating PL, they grappled with a variety of issues that further
complicated using e-Portfolios or the Learning Counts initiative.

**Issues with Institutional Acceptance**

Despite PL’s continued popularity and the recognition in the literature that students who
earned PL credits have better chances for degree completion, Carter stated that not everyone at
Institution C accepted PL or used prior learning assessment consistently. Carter, as the
coordinator of the PL program, served as the gatekeeper and sent the various prior learning
instruments turned in by students (portfolios, exams etc.) to the appropriate academic
departments. At Institutions A, B, and C, the department chairs oversaw any student prior
learning applications received from the PL department. These chairs forwarded the materials to the appropriate faculty for prior learning evaluation. However, according to Carter, not every department within Institution C supported assessment for prior learning and it was inconsistently utilized. Carter noted:

And so, if it's a department that is not very keen on offering life experience credits then, you know, it's probably not going to happen but there are some departments that are very very good about offering life experience credits.

Carter very candidly described the inconsistent support for PLA at Institution C. PLA as a concept also faced many challenges at Institution C in terms of acceptance. Despite the existence of a well-established PL department, many academic areas either resisted using PL assessment or knew very little about these opportunities. Carter worked constantly to promote these initiatives and attempted to change attitudes stating:

And it's pretty much the same all across campus, now in some departments where the department chair has been the department chair forever and that's never going to change, but for the departments that are constantly changing department chairs - it's like I have to - I have to kind of - teach them on what life experience is because they may have never heard of it and, you know, I try to encourage them. So it depends.

Some academic areas and department chairs at Institution C had also voiced concerns about accreditation and how the official accrediting body for the institution or discipline might not recognize prior learning credits:

Now, the current department chair actually wants to do away with life experience in his department. He wants them to all agree that they won't do life experience portfolios
because he feels that it's an accreditation issue…So it *definitely* depends on who the department chair is at that moment.

By constantly promoting PL to newer departments chairs, Carter hoped to change the more negative attitudes held by former department chairs related to prior learning but resistance and disinterest remained an issue. Department chairs at Institution C feared that credits earned through PLA would undermine the integrity or academic rigor of their disciplines despite Carter’s attempts to convince them otherwise.

Carter’s candor about the difficulties related to promoting and finding support for PL at Institution C demonstrated that many individuals were not even familiar with the true nature of this kind of assessment. These individuals did not recognize the many benefits to students and how PL assessments could boost degree completion rates. As a result, these individuals resisted using any kind of prior learning assessment to grant credits to students who might have merited them.

**Faculty Resistance**

The struggles Carter encountered when promoting and finding buy-in for prior learning assessment often stemmed from a lack of knowledge about its advantages. At Institution C newer faculty often had no idea about PL, and this ignorance often fed their resistance to employing it. Carter had many ideas on how to better promote PL to make both faculty and students aware of the opportunities found in prior learning assessments:

Maybe I should do a separate web site for the faculty on life experience and what it is and why it's valuable and why it's not like we're just giving credits away and you know, try and make a case for it. And especially with new faculty orientation I've tried to be a part
of that but they always say that they don't have any room for me... so (laughter) because definitely when you advise a student, you know if you don't know about these options, students aren't going to know about them either because my connection with students is not as good as their connection with students.

According to Carter, better outreach and promotion would improve the issues Institution C continued to grapple with in terms of gaining more faculty support for PL. However, it remained difficult to find the time and the opportunities to advance these initiatives. The PL department at Institution C rarely had opportunities to present or promote its services to other campus constituents who could have helped support this process. Little understanding of how the prior learning assessment process actually worked served only to fuel the resistant attitudes toward it.

At Institution B, the issues with PL resistance originated from more seasoned faculty members who questioned how students could learn material outside of a traditional classroom either through a MOOC or through work experience. Bristol encountered more resistance to PL by faculty who had more conventional attitudes about classroom learning and the institution’s role:

And it's a mind change that you know, perhaps students can learn your classroom material without you and it's not... it's the older generation of faculty - the ones that have been doing this for 20 plus years who are kind of like, "wait a minute, you know I'm kind of the expert here how can you tell me that these people don't need my class. Everybody needs me." The younger faculty tend to say, "Wait a minute, let's help these students get good." There's a mind shift - of, of, who's more important me as the faculty member or the student? So that's a tough nut to crack.
Although the nature of the faculty resistance differed between these institutions, it posed a major challenge to these interviewees in promoting and garnering support for PLA initiatives.

Establishing support for PL is essential before an e-Portfolio platform should even be considered as part of the process. PL remains as an option at all the PASSHE institutions, but at some schools it appears that the administrators support the initiatives more than some faculty who worry about accreditation and the loss of control over the curriculum. MOOCs as an option to gain knowledge and possibly future prior learning credit were not even a consideration by any of the interviewees. The cutting edge opportunities presented in the current literature related to DIYU, badge credentialing, and MOOCs credits are nowhere near the horizon at any of these institutions according to the interview and document review data.

**Departments in Flux**

The inconsistent support for PL was compounded by the many changes in recent years to the departments where these individuals worked. The document review assisted the researcher in sending the survey invitation to a variety of individuals involved with PL. Some of the survey responses revealed that departments that had overseen PL were no longer doing this assessment and that it had been moved to another area of an institution. In the interviews, Alex, Bristol, and Carter, all mentioned departmental changes in recent years that had affected not only how PLA was administered but also how PL issues were (or were not) communicated. Institution A had the assessment processes for prior learning scattered between different departments. Assessment by examination was housed in one area while portfolio assessment was housed in a completely different department within this institution. At Institution B the prior learning department had never had a formalized process until very recently. Bristol described past practice:
Sometimes it was kind of crazy so we don't even look at that as valid data - we just say ok somebody just took the liberty to approve this and we don't know who. And that was before I took this position and, but now we have a very formalized process that we walk through.

A recent reorganization of particular departments and job vacancies at Institution C left Carter juggling numerous tasks that had originally been completed by two different people. This individual could not focus solely on PL and felt like the adult students seeking such credits were being “short-changed” by this current situation.

The document review had established that a PL process existed at most PASSHE institutions. Despite the continued existence of PL, the survey and interview findings suggested that it struggled to remain relevant. The three participants interviewed for this study were all employed at institutions that had witnessed a lot of changes in their prior learning areas. Some departments had been split up which could have further complicated the PLA process for students. The survey data also revealed that at some of the other PASSHE institutions, students had to work directly with CAEL to apply for PL credit because it appeared that no prior learning office existed on these campuses. This mercurial situation made the PLA process confusing. It also seemed to diminish the overall importance of earning credit for life or work experience.

Although PL continues to have a presence within the PASSHE system, the interview data suggests that many institutions struggle to keep PL relevant. The Learning Counts initiative may have been deemed a way to help promulgate prior learning in new and different ways. Unfortunately, the lack of communication by the higher levels of the PASSHE system has inhibited this initiative from moving forward. In addition, the chaotic state that prior learning
departments appear to be in at many PASSHE institutions has not helped the situation. Students and faculty alike also seem unaware of the benefits of PL. With all these issues in existence, the role e-Portfolios might play to assess prior learning seems even further diminished. However, the researcher asked all three interview participants other questions related to e-Portfolios that sometimes were hypothetical in nature in order to assess what the possible future might be for a prior learning e-Portfolio process at their respective institutions.

**The e-Portfolio’s Future**

The data analysis revealed that e-Portfolios had yet to be adopted for prior learning assessment processes at any of the 10 PASSHE schools represented in the surveys and interviews. This lack of adoption did not permit the researcher to measure how e-Portfolios were currently being utilized for PLA purposes at these institutions. However, to compensate for this issue, the researcher instead asked hypothetical questions during the interviews related to how e-Portfolios might be used in this area in the future. The researcher also asked the interview participants questions related to current e-Portfolio use in other areas of campus.

Although all three institutions did not employ the e-Portfolio as a way to assess prior learning, e-Portfolios were being used in other campus areas for different purposes. The document review revealed that many of PASSHE institutions used e-Portfolios in other disciplines for a variety of purposes. All three interviewees also noted that students in teacher education programs used e-Portfolios in the College of Education. At Institution A, an e-Portfolio platform had been used for almost a decade in the College of Education as part of the teaching dossier requirement. The College of Education in Institution A had been actively involved in promoting e-Portfolios to their students according to Alex. Bristol and Carter also
stated that most students enrolled in the College of Education at their institutions put their work and other relevant information on an e-Portfolio. At all three institutions, an e-Portfolio program existed outside of the PL departments. These programs used a robust e-Portfolio product from a reputable software vendor.

After learning about e-Portfolio use in other campus departments, the researcher inquired whether the e-Portfolio might have a future in any of the interview participants’ prior learning departments. Each participant had a very different opinion about this technology’s future vis-à-vis prior learning. In describing his diffusion of innovation (DOI) theory, Rogers (1983) outlines many factors that can influence the adoption or non-adoption of an innovation including how adopters’ technological prowess can affect adoption rates. In considering this aspect of the theory, the researcher included an interview question to gauge the technological expertise of the participants to see how it might influence their attitudes towards adopting and using e-Portfolios for prior learning. The participants rated their technology abilities at three very different levels: novice, intermediate, and expert. Bristol felt comfortable using almost any kind of technology while Alex felt that his/her technological expertise remained fairly limited. Carter’s technological expertise was situated in the middle of the other two participants. Despite these diverse technical levels, all three participants were familiar with e-Portfolios and particular e-Portfolio platforms. Alex, the novice, felt that e-Portfolios might have a future in prior learning but with reservations:

So, an e-portfolio may be a quicker process if you do a lot of it. Here it's individualized - there is no standardized easy access for that. I think it would be an advantage - yes. Is it worth the investment? I can't answer that - I'm not sure from my experience that it would be.
In the immediate future Alex did not anticipate Institution A adopting e-Portfolios for prior learning. However, this participant saw a future for e-Portfolios in the STEM fields especially at the community college-level:

> But I could see the community colleges offering an e-Portfolio in some of the more technical areas - if people are coming from trade schools or military or whatever. So I think there is a place for it and I think there may be a future in it - that's the best I can say at this point.

Carter, the interviewee who considered her/himself at the intermediate technology level, was much more positive about the future of e-Portfolios for prior learning. This participant felt that e-Portfolios would help streamline a process that involved a large number of departments and individuals. As discussed earlier, Institution C permitted e-Portfolios for PLA. Unfortunately no students had chosen this format. However, Carter would welcome the official adoption of PLA e-portfolios and recognized how this technology could speed up the PLA process:

> e-Portfolios would be useful because then I think I would be able to track them better - sometimes our campus mail is not the most reliable. I think definitely the time it takes to evaluate the Portfolio would be greatly reduced because instead of you know, having it go through campus mail, to the department chair, and then if the department chair has to send it to down to a faculty member - and then you know from the department once credit is recommended then it goes on to the Dean's office and so then they have to put it in the campus mail to go to the Dean's office and then the Dean approves or denies and then it goes back to campus mail back to me and so if everything could be done electronically I
think it would take a lot quicker to go through the process.

Carter had not yet used this technology for assessing prior learning but recognized how e-Portfolios could assist an assorted group of individuals involved in the process of assessing and issuing PL credits.

Alex and Carter felt that their technological expertise fell at the novice and intermediate levels respectively, while Bristol had an extensive background in using computer applications and a variety of software products. Bristol fell on the expert end of the technology expertise spectrum. One of the more interesting findings to come out of the interview data was Bristol’s attitude toward using e-Portfolios. This participant felt that using e-Portfolios for prior learning would further complicate a procedure that should remain an uncomplicated process. In describing Institution B’s non-use of e-Portfolios for PLA Bristol stated:

Part of my MO or my belief system is not to make something more difficult than it needs to be, so we realized that for the portfolio we can keep it pretty simple and manageable, we realized that at some point we might have to change how we do things, if these become bigger than what we're, than we can handle. But right now we're sticking to keep it really simple.

These observations were followed by an even longer commentary by Bristol related to the introduction of technologies, especially a PLA e-Portfolio, to any well-established system:

We sometimes allow technology to replace systems and processes that technology makes more difficult and I've seen it - especially with this - and some other things that it gets in the way rather than making it easier and we don't want to do that because we don't want to take something that's rather simple - showing your credentials and prove
to me that you've met the objectives of the course - and make it more difficult by having students run through a medium of technology to do the same thing they could do by just sitting and talking and showing somebody what they've done so… Our whole philosophy is to keep it simple.

Bristol’s attitude toward using e-Portfolios for PLA suggests that using this technology would only complicate an already well-established process. According to this interviewee, there was no need to adopt or use this technology to assess prior learning, and it might even deter some individuals from applying for prior learning credit. The data analysis revealed that the participant with the highest level of technical skills was the most adamantly against using prior learning e-Portfolios. Introducing this technology to this process would just add another layer of unnecessary work in this participant’s view.

The interview data demonstrated that only one of the three participants positively supported the future use of PLA e-Portfolios. This interviewee viewed this technology as a possible way to streamline and expedite a currently scattered process. The other two interview participants did not see e-Portfolios being adopted any time in the immediate future. They also did not believe that students would express interest in using this technology for prior learning assessment purposes. Despite these differences in opinion related to the e-Portfolio, all the interviewees agreed that the Learning Counts partnership would have little effect on the adoption or non-adoption of PLA e-Portfolios in the near future.

A prior learning e-Portfolio was deemed to be an unnecessary piece of technology that, if adopted, would further complicate a fairly straightforward process already in place. In the immediate future, the PASSHE institutions represented in the data had no plans to adopt e-
Portfolios for PLA purposes. However, Carter’s acknowledgement that e-Portfolios would facilitate the process reveals some potential promise for the future of the prior learning e-Portfolio. Carter graciously shared some statistical data with the researcher that revealed how frequently portfolios were used at Institution C for PLA. It appears from these statistics and from the interview data that Institution C used a portfolio process more frequently than the other two institutions represented in the interviews.

Portfolios seem to have been used less commonly at Institutions A and B. This infrequent use would explain the indifference towards adopting an e-Portfolio to their processes. The higher use of paper portfolios at Institution C could explain why Carter’s enthusiasm toward transitioning to an e-Portfolio mode for PLA was so much greater. This participant’s prior learning department used the paper portfolio method frequently and recognized its limitations. The positive receptiveness to adopting an e-Portfolio by the one participant who used a PLA portfolio format most frequently suggested that the future of prior learning e-Portfolios was not completely inauspicious.

**Conclusion**

This chapter described the data findings related to how PASSHE institutions were employing e-Portfolios for PLA. The data culled from the document review, survey responses, and interview transcripts enabled the researcher to gather information about all 14 PASSHE institutions. The researcher succeeded in obtaining a relatively high response rate with 10 institutions out of the 11 schools that had granted IRB approval responding to the survey and/or the interview requests. Using these various data sources enabled the researcher to triangulate the data and discover common themes. Triangulating the data also helped validate the accuracy of
the findings as discussed by Creswell (2012a). The data from the document review, the surveys, and the interviews indicated that neither e-Portfolios nor Learning Counts had been adopted at any of the PASSHE schools to assess prior learning. Triangulating the data also revealed that, although PL exists at most of the PASSHE schools, not all campus constituents have enthusiastically supported it. Despite all the positive press and indications that e-Portfolio use would become more of a trend in PL, the data revealed that little has changed within the PASSHE system despite it joining the highly touted Learning Counts initiative in 2012.

The data revealed that most PASSHE institutions had minimal interest in adopting an e-Portfolio assessment process for prior learning. There also appeared to be little student interest in using this technology. The different data sources also revealed that little interest currently existed related to the Learning Counts partnership that had been established between PASSHE and CAEL over two years ago. This lack of interest stemmed partially from the scant communication most institutions received from PASSHE headquarters about this partnership. Most individuals had no interest in adopting e-Portfolios or participating in an initiative that seemed more complicated and costly than their established prior learning programs. Triangulating the data also revealed that some institutions had witnessed some major changes to their prior learning departments in recent years. Different departments had merged and administrative positions changed that made publicizing PL and its merits even more difficult. All these issues complicated any opportunities to introduce e-Portfolios to PL at most of the PASSHE schools. The concluding chapter will synopsize the significance of these findings and correlate them to the theories that comprised this study’s theoretical framework. It will also tie these findings to the themes found in the current literature and discuss their implications for future practice.
Chapter Five: Discussion and Implications for Practice

The purpose of this doctoral study was to examine how higher education institutions employed e-Portfolios in prior learning assessment initiatives. The researcher sought to measure how e-Portfolios were being used and implemented in these processes within particular Pennsylvania universities found in the Pennsylvania State System of Higher Education (PASSHE). By using a qualitative methodology, a collective case study, the researcher gathered data that gauged how frequently e-Portfolios were being implemented and employed (if at all) to assess and award credits for learning achieved outside the classroom. The researcher used Rogers’ (1983) diffusion of innovation (DOI) theory to measure the adoption rate of prior learning e-Portfolios within the PASSHE system. Three superordinate themes emerged from the data analysis: 1) e-Portfolios are currently not being used for PLA, 2) Learning Counts exists in theory but there is currently little or no involvement in this initiative within the PASSHE system, and 3) Prior learning assessment processes endure but seemingly on tenuous ground at some institutions. This chapter will discuss the findings related to each individual theme and this theme’s position within the current scholarly literature. The researcher will also address the implications of these findings for practice with a focus on possibly increasing the use of e-Portfolios for PLA in the future. Suggestions for changing the current situation related to PL are also included. This chapter concludes with recommendations for future research on how PLA e-Portfolios might be employed to improve student success.

e-Portfolios are not being used for PLA

This doctoral study examined how PASSHE institutions employed e-Portfolios for PLA especially with their recent partnership with the Learning Counts initiative. The researcher sought to gauge how e-Portfolios were being used and implemented. The data findings from this
study revealed that PASSHE schools have not currently adopted nor do they plan to use this technology to assess credit for prior learning. Despite joining the Learning Counts initiative that encourages the development of an e-Portfolio as part of the prior learning process, it appears that none of the PASSHE institutions have adopted this technology to assess prior learning. The literature suggests that e-Portfolios have risen in popularity in the past decade in all areas of education (Batson, 2010; Carroll et al., 2007; Chatham-Carpenter et al., 2010; Dahlstrom et al., 2013; Dawn et al., 2011; Jenson & Treuer, 2014; Kahn, 2014; Kim et al., 2010). A recent ECAR (EDUCAUSE Center for Analysis and Research) study discussed how e-Portfolio use by undergraduates had increased dramatically in recent years with 54% of students in higher education using some sort of e-Portfolio system (Dahlstrom et al., 2013). Several articles highlighted the advantages to adopting an e-Portfolio in comparison to using a paper equivalent (Batson, 2002; Driessen et al., 2007; Goldsmith, 2007; Strudler & Wetzel, 2008; Wang, 2009). Despite the positive literature and the seemingly numerous benefits related to utilizing an e-Portfolio, this study’s findings suggest that prior learning departments in the PASSHE system did not use them.

The researcher used Rogers (1983) diffusion of innovation (DOI) theory to examine the adoption and/or non-adoption of e-portfolios. When developing the DOI theory, Rogers discussed attributes that influence whether an innovation such as an e-Portfolio is adopted or not adopted by individuals or organizations. If an innovation possesses particular attributes, then its chances of being adopted and diffused throughout a system increase. The literature (Batson, 2010; Chatham-Carpenter et al., 2010; Goldsmith, 2007; Kahn, 2014; Wetzel & Strudler, 2005) tends to tout the many benefits of using e-Portfolios and these benefits often mirror Rogers’ five attributes. Relative advantage is considered one of the best predictors of an adoption for a
particular innovation according to Rogers. Both Rogers’ theory and the positive e-Portfolio scholarship (Kardasz, 2013; Strudler & Wetzel, 2008) consider relative advantage as the main reason why an innovation such as an e-Portfolio would be adopted. Articles in the existing literature often accentuate the advantages of using an e-Portfolio over a paper portfolio (Chatham-Carpenter et al., 2010; Lorenzo & Ittelson, 2005; Strudler & Wetzel, 2011). However, the findings for this study did not support the notion that e-Portfolios were more advantageous. Currently within the 10 PASSHE schools that participated in this study, there is a complete non-adoption of e-Portfolios for PLA. It will take some time before any adoption of e-Portfolios occurs at these institutions for PLA. The findings also contradicted Kahn’s (2014) belief that society is on the brink of an era where e-Portfolio adoption will dramatically increase and have a much greater impact on student learning in higher education. This research also questioned Travers’ (2012b) assertion that e-Portfolios challenge current portfolio practices and offer exciting developments that will expand assessment efforts within higher education’s prior learning areas.

However, this study’s findings did support the literature that recognized the many challenges to adopting an e-Portfolio especially in higher education. The findings suggested that institutional and individual resistance toward adopting an e-Portfolio had many reasons that mirrored issues discussed in the literature. Chatham-Carpenter et al. (2010) recognized the problems with implementing an e-Portfolio including the lack of top-down support for these efforts. They also acknowledged that many individuals might not see the point in expending the amount of time or work needed in order to transition to e-Portfolio technology (Chatham-Carpenter et al., 2010). The interview findings revealed that most administrators and faculty had no interest in using e-Portfolios for PLA. Faculty members considered e-Portfolio
implementation as an extra burden or redundant work that would require a lot of precious time compared to maintaining the status quo. This sentiment was frequently discussed in the literature (Jenson & Treuer, 2014; Sharples et al., 2013; Shepherd & Bolliger, 2014; Straumsheim, 2014a).

In his theory, Rogers (1983) claimed that as innovations became less novel their adoption rates usually increased. Reese and Levy (2009) echo this claim stating that the rate of adoption of any technology including an e-Portfolio increases only when this technology reaches critical mass. This phenomenon did not occur with the PLA e-Portfolio at the institutions selected for this study. e-Portfolios are being used at many PASSHE campuses for other purposes. Although many PASSHE institutions have adopted e-Portfolios in other departmental areas especially in the School of Education, this technology has not extended to prior learning departments. The document review also revealed that students have opportunities to take courses in e-Portfolio design on various PASSHE campuses. The findings from the document review corroborated statements made by all three interview participants who were aware of e-Portfolios opportunities used in other campus areas. However, despite their use elsewhere, adoption of an e-Portfolio for prior learning assessment purposes had not occurred nor did it seem feasible in the near future according to the findings.

Some scholars who have examined using e-Portfolios to demonstrate and grant PL credits emphasize the benefits of this technology compared to paper portfolios or other assessment methods (Acosta & Liu, 2006; Goldsmith, 2007; Graves & Epstein, 2011; Light et al., 2012; Sweygars et al., 2009; Travers, 2012a). However, the current situation at the PASSHE sites that participated in this study suggested that the e-Portfolio version was not seen as advantageous over the paper version nor was there much interest to adopt it in the near future. Contrary to
most of the e-Portfolio-related literature, institutions and individuals had not enthusiastically adopted this technology. The survey and interview data collected for this study indicated that paper portfolios trumped e-Portfolios as the format of choice for prior learning assessment.

Although the e-Portfolio literature often describes the benefits of using an electronic version of a portfolio over a paper equivalent (Batson, 2002; Driessen et al., 2007; Strudler & Wetzel, 2008; Wang, 2009; Yancey, 2009), the findings suggest that most students and faculty have not embraced these benefits. Driessen et al. (2007) claimed that e-Portfolios enhanced student motivation and improved ease of access for anyone who reviewed them. The data gathered for this study contradicted this claim as both the interviews and the survey results revealed that e-Portfolios had not been met with much enthusiasm. Klein-Collins and Hain (2009) also claimed that e-Portfolio use was on the rise. They viewed e-Portfolios as adding value and empowering students who apply for prior learning credits (Klein-Collins & Hain, 2009) which ran contrary to the interview data gathered for this study. In addition, Klein-Collins and Wertheim (2013) believed that PLA e-Portfolios would continue to increase in popularity and become more common in the near future. These claims were not supported by this study’s findings. Selingo (2013a) also predicted e–Portfolios as having a huge potential in the future especially with nontraditional students. The interview data from this study suggested otherwise, that most nontraditional students had no interest in using a complicated technology to apply for prior learning credits.

The interview data gathered for this research study supported Conrad’s (2008) notion that e-Portfolios will not have a great impact on PLA as long as they share similar characteristics to a paper portfolio. This study’s findings revealed that e-Portfolios that replicated work done in a paper format were pointless and only complicated a process. The data analysis revealed that e-
Portfolios took more time which discouraged their use, a challenge mentioned frequently in the literature (Dawn et al., 2011; Jenson & Treuer, 2014; Reese & Levy, 2009; Shepherd & Bolliger, 2014). Conrad’s study also supported the data gathered for this research by recognizing faculty resistance to both PLA and e-Portfolios. The interview findings supported Conrad’s view that academic faculty will prefer a paper-based portfolio to the more technically complicated e-Portfolio. At the sites selected for this study, the prior learning e-Portfolio was not considered to have the attributes of relative advantage as described by Rogers (1983) in his DOI theory. The e-Portfolio also had a complexity, another attributed described by Rogers; that rendered it too difficult to adopt or use for PLA. Adding this extra layer of technology could also detract from the main purpose of the portfolio, to assess prior learning (Conrad, 2008); an observation that appeared frequently in the interview data.

The positive literature related to e-Portfolios recognizes the many challenges identified when adopting this technology (Dawn et al., 2011; Henry, 2006; Jafari, 2004; Meyer & Latham, 2008; Strudler & Wetzel, 2008; Yancey, 2009). Any kind of PLA portfolio assessment also has to compete with assessment by exam such as the CLEP or DSST which continues to be the most popular way to seek prior learning credits (CAEL, 2010; Ryu, 2013). Campus receptivity to PLA by exam hovers at 83% compared to 26% for any kind of portfolio assessment, either paper or electronic (Ryu, 2013). The interview and survey data supported the continuing trend of assessment by exam. PLA by exam remains the easiest and most convenient way to earn credits which further puts a damper on e-Portfolio adoption. In addition, PL usually caters to the nontraditional population of adult students including veterans rather than the recent high school graduate (Fonte, 2008). The interview data confirmed this continuing trend and revealed that these nontraditional students preferred taking an exam to creating any kind of portfolio to
demonstrate prior knowledge. Many PL applications originate from nontraditional students (Boerner, 2013; Buchanan, 2013; CAEL, 2011; Fonte, 2008; Sweeney et al., 2009) who might be less technologically adept than traditional students who tend to be fairly proficient with contemporary technology (Jafari, 2004; Tosh et al., 2005). Encouraging PLA e-Portfolio use by this population appears unnecessary and also not a practical way to currently promote PL.

Although the data from this study revealed that the PLA e-Portfolio had not been adopted at the PASSHE schools and that it still had detractors in the literature, some of the study’s participants acknowledged its potential. Gast (2013) recognized that even though PLA e-Portfolios had yet to be accepted by most public research institutions, they still had a probable future. Two of the interview participants and approximately half of the survey respondents in this study recognized the prospective benefits of PLA e-portfolios. They expressed an interest in possibly using e-Portfolios in the future. The Council for Adult and Experiential Learning (CAEL), in promoting Learning Counts, could assist in changing this apathy toward e-Portfolios. Learning Counts heavily promotes this technology and has attempted to standardize the assessment by e-Portfolio process. However, the current non-use of this technology by the PASSHE schools surveyed for this study may have also impacted the lack of interest in this CAEL initiative.

**Learning Counts exists in theory**

The literature related to the Learning Counts initiative has a positive spin with the program described as having great promise when it launched (Brigham & Klein-Collins, 2011; Glenn, 2011; Kamenetz, 2011b; Tate et al., 2011; Travers, 2012b). Kamenetz (2011b) praised Learning Counts as a “game-changing innovation” that would promulgate credit by portfolio (p. 11). When the PASSHE system joined this initiative, the official PASSHE press release stated
that this collaboration would broaden opportunities for students and make earning a college degree more efficient and affordable (PASSHE, 2012). Despite the hype and positive scholarship in support of Learning Counts, this initiative has not been adopted by any of the PASSHE schools surveyed or interviewed for this study. Learning Counts exists in theory as a partnership between CAEL and PASSHE, but it has yet to be implemented or employed by any prior learning department at any of the individual PASSHE institutions represented in this research study.

The articles that extol the Learning Counts program claim that this initiative would support institutions of higher learning in awarding prior learning credit (Brigham & Klein-Collins, 2011; Tate et al., 2011). Brigham and Klein-Collins (2011), both at CAEL, believed that Learning Counts would provide “an efficient delivery mechanism for the awarding of credit through PLA” (p. 111). They also maintained that institutions would clamor for the assistance the Learning Counts program would provide in the prior learning arena (Brigham & Klein-Collins, 2011). Much of the positive scholarship related to Learning Counts originates from individuals at CAEL (Brigham & Klein-Collins, 2011; Klein-Collins & Wertheim, 2013; Tate et al., 2011). However, other individuals not formerly affiliated with CAEL such as Glenn (2011), Kamenetz (2011a, 2011b), and Travers (2012a, 2012b) also describe Learning Counts positively and highlight its merits. The PASSHE administrators who negotiated this collaboration with CAEL probably recognized the potential of this program. However, the data from this study revealed that this initiative had remained at the systems level. None of the individual PASSHE schools represented in the survey or interview data had implemented this program. This partnership with CAEL appeared to be in name only. This lack of interest for the Learning
Counts initiative might have influenced the non-adoption of prior learning e-Portfolios within the PASSHE system since this technology and this initiative continue to be closely linked.

The literature suggests that the Learning Counts program encourages using e-portfolios for PLA (Brigham & Klein-Collins, 2011; Klein-Collins & Wertheim, 2013; Tate et al., 2013). This program offers courses on how to use this technology to demonstrate learning. Individuals at the various PASSHE institutions who were interviewed by the national press about this program viewed this partnership as a way to boost workforce development and as an overall “win-win” (Fain, 2012b) to everyone involved. Some individuals praised Learning Counts as a program that offered a low-cost alternative to earning college credit (Brigham & Klein-Collins, 2011; Kamenetz, 2011a, 2011b). However, the interview data revealed that this initiative was actually considered too costly. The findings confirmed that the fees associated with the Learning Counts program (including the e-Portfolio class and the actual assessment of learning component) were much higher than the fees assessed by the in-house prior learning departments at each institution. The findings revealed the high costs of the Learning Counts program which contradicted the literature. The scholarship related to Learning Counts described this initiative as attractive to students with its lower costs to earn college credit (Brigham & Klein-Collins, 2011; Gast, 2013; Kamenetz, 2011a). The Learning Counts website also promotes itself as an affordable alternative to attaining college credit. Despite this positive press at the national level, the findings demonstrated that at the institutional level Learning Counts was considered cost prohibitive and not an economical alternative.

Brigham and Klein-Collins (2011) asserted that Learning Counts would “expand the capacity of institutions offering PLA to students” (p. 111). However, this study’s findings suggest that the PASSHE institutions currently have no need or any interest in employing this
program. Learning Counts may provide opportunities for students at higher education institutions that do not have any kind of prior learning system in place already. The participants interviewed for this study represented PASSHE institutions that not only had some sort of prior learning department or office, but these areas also offered assessments at a much lower cost than the Learning Counts program. However, colleges and universities with limited prior learning opportunities for their students might find more interest in Learning Counts. As a program, Learning Counts may have more success by reaching out to higher education institutions that currently do not have any kind of PL presence already in existence.

The PASSHE institutions represented in this study’s data results already had a prior learning mechanism or department in place that saw little to no need for the Learning Counts partnership. This finding suggests that Learning Counts could also have been viewed more as a competitor or a threat to PL departments found within the PASSHE institutions selected for this study. According to the interview data, the decision to join Learning Counts was made at the systems level between PASSHE and CAEL with little or no input from individuals at any of the institutions studied. The interview participants all served as administrators in their respective PL departments, but they had had absolutely no involvement in formulating this agreement. This lack of participation may have further alienated individuals’ interest in this partnership and weakened potential support for this initiative at a time when PL departments within many of the PASSHE institutions were seemingly in a period of major instability.

**PLA exists but tenuously**

Most of the institutions that participated in this study had some sort of prior learning program or department available on their campuses. Despite this availability, PL seemed to struggle for acceptability according to the interview data. Although students had opportunities to
apply for PL credits, the data suggested that few students took advantage of this option partially out of a lack of knowledge that these programs even existed. The findings from this study revealed that not only are e-Portfolios and the Learning Counts initiative not being adopted, but PLA has also not really become widely recognized at many of the PASSHE institutions.

The interview data confirmed that where PLA opportunities existed students tended to use exams or paper portfolios. Exams remained the most popular PLA choice with students using this tool most frequently to demonstrate prior learning within the PASSHE system. This finding supported the literature that recognizes the continuing popularity of PLA by exam (CAEL, 2010; Gast, 2013; Klein-Collins & Hain, 2009; Ryu, 2013). However, even at institutions where PLA occurred and students earned credits by choosing either portfolios or exams, issues with institutional acceptance continue to exist. The findings revealed either an institutional apathy toward PLA or a downright resistance to its use in assisting students toward degree completion.

Although PL has existed for decades at many higher education institutions, the literature frequently discusses how issues with institutional acceptance of PLA continue to endure (Fain 2012a, 2012b, 2013b; Flint et al., 2004; Hoover, 2010; Price, 2014; Tate et al., 2011). Current scholarship often describes the ongoing resistance to PLA at many institutions of higher learning (Conrad, 2008; Fain 2012a, 2013c; Flint et al., 2004; Gast, 2013; Hoover, 2010; Klein-Collins & Wertheim, 2013; Tate et al., 2011). Ryu (2013) recognizes that PLA is not well understood. Price (2014) notes that the lack of a coordinated PLA system has further increased institutional resistance at many colleges and universities. The data findings for this study supported these issues related to PLA resistance.
The interview data underscored the struggles particular PL departments faced when attempting to gain acceptance. Many institutions continue to view the process as a lowering of standards with no real learning actually measured. The data findings also revealed that certain individuals at both Institutions B and C believed that PLA took away their control of the curriculum. This sentiment was supported in articles that discussed resistance to PLA and who on campus had the power to grant credit (Conrad, 2008; Fain 2012a; Lambe, 2011). Related scholarship that mirrored these findings also discussed critics who considered PLA as something that diminished college learning, lacked quality, and cheapened the traditional notions of a college education by giving away credit (Fain, 2012a; Hoover, 2010; Lambe, 2011; Stenlund, 2010).

The issues that emerged from the findings related to institutional resistance often stemmed either from an unfamiliarity or a disagreement with the value of PL. Certain individuals resisted using PL out of fear that an accrediting agent would not accept these credits even though regional accreditors tend to accept and recognize PL credits (Klein-Collins & Wertheim, 2013). The findings demonstrated that faculty and some administrators feared that credits earned through prior learning could affect accreditation. This study’s data also revealed how certain departments ceased using PLA or accepting PL credit claiming that the accrediting bodies for their programs would not support this practice since it could compromise the curriculum. This finding supports the literature related to PLA’s struggle with acceptance (Fain 2012a; Flint et al., 2004; Lambe, 2011). Although accrediting agencies accept credit earned from prior learning experiences, the interview data revealed the ignorance of some department chairs related to PLA. Faculty resistance further compounded the issues related to institutional resistance and the lack of knowledge about PLA.
The interview data revealed that prior learning had not truly established a stronghold at any of the PASSHE institutions examined for this study. There existed a lack of understanding of PL’s merits and also a resistance from various campus constituents. Faculty resistance and an unawareness of the opportunities PL could offer students emerged from the data. This finding supported the current scholarship that often recognizes the struggle PL initiatives encounter when faced with faculty resistance (Brigham & Klein-Collins, 2011; Conrad, 2008; Fain 2012a, 2012c). Some faculty, according to the findings, considered PL as a usurpation of their authority and legitimacy. Faculty at some institutions questioned how learning could be achieved anywhere else but within a classroom setting. The data revealed that the more resistant faculty members tended to be “more seasoned” individuals who had taught for over 20 years which suggested that newer faculty might be more amenable to adopting prior learning initiatives if they were made aware of their merits.

The findings disclosed that many campus constituents including faculty were often unaware or uninformed about prior learning. Travers (2012a) confirms this point stating that faculty tend to be “underinformed” about PL. Other articles (Gambescia & Dagavarian, 2007; Hoover, 2010; Klein-Collins & Wertheim, 2013; Price, 2014) also corroborated this finding. The interview data revealed the attempted efforts to better inform faculty (especially newer faculty) about the merits of PL. By trying to participate in new faculty orientations and other forums, some participants struggled to make inroads and change the institutional culture related to PL. Unfortunately, orientation organizers never provided opportunities for PL representatives to promote their services to the new faculty during these events.

Although the data demonstrated that many faculty seemed unaware or resistant to prior learning, the findings also revealed that any assessment of PL continued to be performed by
particular faculty members. At all the PASSHE institutions, participating faculty assessed knowledge earned through prior experiences either through a paper portfolio application or an institution-specific challenge exam. The findings confirmed that the PASSHE faculty union contract even had language that provided compensation for faculty who assessed and awarded credit for prior learning to students who applied. The data supported the literature which recognized that, at most institutions where PLA existed, the faculty often assessed and decided whether to grant PL credits (Gambescia & Dagavarian, 2007; Hoffmann & Michel, 2010; Klein-Collins & Wertheim, 2013; Stevens et al., 2010). Learning Counts on the other hand, employs outside evaluators. The interview data revealed that this external evaluation of PL raised many issues. CAEL’s program was viewed as taking away the PL-credit granting powers of each individual institution and made the integrity of the credits issued by this initiative questionable.

Within the PASSHE institutions that participated in this study, the data confirmed that PL existed, but it was piecemeal and inconsistently used, a situation exacerbated further by the instability of each of the prior learning departments. The data revealed that some institutions had stronger PL programs than others depending on their locations and the demographics of their students. It appeared from both the survey and interview data that in recent years there had been many changes to the prior learning infrastructure at various PASSHE institutions. It had either been moved to a different department or split up between different areas for a variety of reasons depending on the institution and the popularity of the PL programs. The interview data also disclosed that all three of the represented institutions had witnessed either a complete reorganization of their PL departments or a restructuring of the administrative staff who supervised these departments in recent years. The data demonstrated that at some institutions little seemed to be known about PL initiatives or how these areas could assist students. Such a
lack of understanding can often exist between different departments located within the same institution but it also appeared to have undermined the importance and relevancy of PL at the institutions selected for this study. At one institution represented in the interviews, the PL department director served more than one role, having taken over the additional responsibilities of another administrator who had left the institution. This participant felt that the PL area had been short-changed as a result of this situation. Unfortunately the situation that emerges from the findings seems to contradict Travers’ (2012a) claim that PL departments are no longer the “stepchild” found in basement offices.

The tenuous condition of the PL departments represented in the data seemed to suggest that this area lacked institutional buy-in from higher-level administrators and other areas of campus. This lack of institutional support had a negative influence on the success of PL opportunities at these colleges. Much of the literature supports the need for PL buy-in at all educational and societal levels (Klein-Collins & Wertheim, 2013) including at the grassroots (Chatham-Carpenter et al., 2010; Selingo, 2013a), industrial (Fain 2012a; Kamenetz, 2011b), and national/governmental (Glancey, 2007; Price, 2014; Travers, 2012a; USO, 2014) levels. The importance of institutional buy-in tends to be most frequently mentioned in the literature (Gast, 2013; Ordonez, 2014; Ryu, 2013; Travers, 2012a). The data suggested that little institutional support currently existed for PL at the PASSHE schools that participated in this study. This indifference had not assisted these PL areas in moving forward with any kind of new initiatives including assessment by e-Portfolio or the awarding of credit for knowledge gained by MOOCs.

Since the concept of MOOCs appeared in the literature, they have been viewed as another way for students to earn credit for prior learning. Several articles recognize the potential for students to gain knowledge and subsequently college credit from a MOOC offering (Carey,
2012; Cusumano, 2014; Fain, 2013a; Gast, 2013; Kelly, 2014; Kolowich, 2013a; Klein-Collins & Wertheim, 2013; Lucas, 2014; Mangan, 2012; Mazoué, 2013; Ripley, 2012; Selingo 2013a). Despite this frequent discussion in the literature and an acknowledgement that MOOCs may impact the future, none of the individuals interviewed for this study had contemplated this alternative for offering PL credits. Although MOOC detractors exist in the current scholarship (Baggaley, 2014; Delbanco, 2013; Heller, 2013; Johnson et al., 2014; Pence, 2013; Rivard, 2013a), the institutions represented in this study seemed completely unaware of either the benefits or shortcomings related to MOOCs. The interview data indicated that credit for MOOC offerings had not been considered as a way to assess prior learning nor were there any plans to use MOOCs in the immediate future at any of the represented PASSHE institutions. The growing scholarship related to the advent of PLA e-Portfolios, the emergence of PL endeavors such as Learning Counts, the increasing popularity of PL, and the frequent tie-in to MOOCs appeared to have been completely ignored by most of the institutions in the PASSHE system.

The findings revealed that neither PLA e-Portfolios nor the Learning Counts initiative has gained any ground within the PASSHE system despite scholarship (Fain 2012a; Glenn, 2011; Kamenetz, 2011a, 2011b; Travers, 2012a) that foresees great promise for both this technology and the initiative that supports it. Despite having joined the Learning Counts initiative that promotes and actively encourages the use of e-Portfolios for PL, PASSHE institutions have not adopted this technology nor does it appear that they will employ it in the near future. The results of this study seem to suggest that not only are e-Portfolios or Learning Counts not gaining much acceptance, but that PL also still struggles for acceptance within some higher education circles. It is possible that it is still too premature to encourage the use of this technology or initiative as a way to promote prior learning opportunities. However if higher education truly finds itself at a
crossroads and at a point where great change is inevitable, these prior learning possibilities will remain relevant even if particular institutions (such as those in the PASSHE system) do not adopt them right away.

This study also intended to examine in what ways these institutions employed e-Portfolios to assess prior learning achieved through MOOCs or other means. Although frequently discussed in the literature and apparently a practice adopted by other institutions of higher learning, it appears from the data that awarding PL credits through MOOCs has also not gained any acceptance at any of the PASSHE institutions examined in this study. MOOCs, as another alternative to earning PL credit, may be on the horizon for many colleges and universities, but within the PASSHE system it has yet to gain any traction. The apparent dismissal of MOOCs that emerged in this study’s findings contradicted the literature which frequently discusses the MOOC’s potential to possibly disrupt and transform higher education in the near future (Delbanco, 2013; Lucas, 2014; Mazoué, 2013; Selingo, 2013b).

Despite frequent mention in the literature of a renewed government interest in PLA (Glancey, 2007; Klein-Collins & Wertheim, 2013; Price, 2014; Sherman et al., 2012; USO, 2014) and the current impetus to move to competency-based education (Fain, 2012c; Ordonez, 2014; Tate et al., 2011; Weise, 2014), it appears that within most of the PASSHE universities none of these developments have had any impact. At the PASSHE institutions represented in this study, MOOCs, e-Portfolios, and Learning Counts for PL have not been nor will they be adopted any time soon. To some degree even traditional prior learning assessment processes are rarely utilized. Various issues have affected this non-adoption and apathy. PL departments at many of these institutions seem in flux. No one at these institutions appears interested in using e-Portfolios for PLA despite the potential advantages for students. Although the PASSHE
system partnered with Learning Counts to promote PL, there is little awareness of this initiative. The findings suggest that individual PASSHE institutions will not change their PLA processes or practices any time soon.

**Recommendations for Practice**

With this study the researcher intended to measure the adoption rate of e-Portfolios for PLA purposes in order to evaluate how well this technology linked nontraditional learning to college degree programs. This study’s findings revealed that the Learning Counts program and even basic PL opportunities within the PASSHE system are underutilized while e-Portfolios have not been adopted at all. Examining the effectiveness of this technology for prior learning initiatives is currently too premature at least within the PASSHE institutions selected for this study. Challenges exist related to promoting not just e-Portfolios, but also the PLA process overall. Faculty and students are either unaware of these opportunities or have no interest in using them. Many stakeholders would benefit from this research including higher education administrators involved in making prior learning assessment or transfer policies, public relations departments hoping to attract more prospective students, admissions recruiters who market undergraduate degrees to various constituents, nontraditional students with measurable prior work experience who plan to matriculate to college, organizations involved in prior learning initiatives, and individuals who seek to adopt e-Portfolios for any specific educational purpose.

In the immediate future, administrators within the PASSHE system need to focus on how to strengthen PL initiatives before proceeding with adopting e-Portfolio technology. Currently PASSHE faces many issues such as internal schisms, including a lawsuit by one of its members against the state system, and also the threat that another institution might withdraw from the entire organization (Snyder, 2014a, 2014b). Certain state representatives have called for the
Another major problem plaguing many of the PASSHE schools is reduced enrollments (Rivard, 2013b; Schackner, 2014b). The lower enrollments have had major impacts on the system with 13 of the 14 schools (Schackner, 2014b) witnessing dramatic reductions in admission applications since 2010. These plummeting enrollments have led to cutbacks and even a retrenchment in tenured-faculty at particular PASSHE institutions (Rivard, 2013b; Schackner, 2014a). In order to address these enrollment problems and remain competitive, the PASSHE system should explore new ways to attract students. Using PL opportunities to boost enrollments might assist in turning this tide.

The findings demonstrated that PL is not being adequately promoted or used at most PASSHE institutions. The researcher intends to share these findings with Chief Academic Officers (CAOs) at particular institutions in order to highlight the current situation of PL within the PASSHE system. The document review revealed that some PASSHE institutions have recognized the importance of attracting nontraditional students including military veterans. As a faculty member at a community college located near several PASSHE institutions, the researcher also provides academic advising to students including veterans. The researcher suggests that PL departments establish stronger ties with two-year colleges especially transfer counselors at these institutions. Community colleges tend to have significant veteran (Persky & Oliver, 2011; Rumann, Rivera, & Hernandez, 2011) and nontraditional student populations who often plan to transfer to four-year institutions (Handel, 2007). However, currently many PASSHE institutions have done little to boost prior learning opportunities to this population of student who might benefit the most from such credits (Boerner, 2013). In early February 2015, the Pennsylvania Commission for Community Colleges launched a statewide PLA initiative called College Credit FastTrack. This initiative has a website and e-Portfolio platform that provides adult learners in
Pennsylvania with opportunities to earn PL credit for work training or other experiences at any of the 14 community colleges in the state (Fain, 2015). The researcher’s institution is included in this initiative which appears to share similar characteristics to the PASSHE-Learning Counts program (Fain, 2015). The PASSHE schools and these community colleges should explore ways of possibly merging these initiatives in order to achieve some success with their PL endeavors.

The document review revealed that PL and Learning Counts had received very little press or notice within individual institutions. In presenting these findings, the researcher would recommend to both the admissions and public relations offices found at each PASSHE school that they focus on advertising the benefits of PL to not only prospective students but also in-house constituents such as faculty, students, and administrators in all areas. Promotional resources related to PL should find a more prominent place in these institutions’ admissions materials and course catalogs. Student newspapers, employee newsletters, and other comparable publications should attempt to disseminate further information related to the potential opportunities found with PL. Ideally, in addition to print publications, such promotions would target various formats including online through social media and through traditional radio or television advertising.

One of the most crucial areas in which to increase PL promotion would be among the faculty. The data revealed that many faculty are either unaware or are resistant to using PL. Both the current literature (Chatham-Carpenter et al., 2010; Fain, 2012a, 2012c; Fonte, 2008; Kardasz, 2013; Lambe, 2011; Travers, 2012a) and the data affirmed that better communication and marketing related to PL, Learning Counts, and PLA e-Portfolios are needed to improve buy-in for these opportunities. According to the data, at one institution the PL administrator’s attempts to present during new faculty orientations were ignored. Dismissive or unreceptive
attitudes toward PL should be addressed in the face of sinking enrollments that have affected tenured faculty positions (Rivard, 2013b; Schackner, 2014a). The faculty union might explore promoting PL to both its experienced and newer members by hosting workshops to discuss the merits of assisting with PLA. The researcher would suggest inviting representatives from CAEL or faculty from other institutions who have had success with the Learning Counts program. The data revealed that faculty members exist within the PASSHE system who assess prior learning for credit. The researcher would recommend that CAOs encourage these faculty members to serve as mentors to newer faculty who might be unaware of PL and its processes. They could recruit and train newer faculty in evaluating and assessing PL. Representatives of accrediting agencies should also visit campuses to debunk the myth that PL credits will not pass the accreditation process in order to assuage both faculty and administrator fears about the integrity of the PL credit.

In presenting these findings, the researcher would encourage the PASSHE administration at each individual institution to seek the assistance of CAEL in changing the negative culture toward PL and Learning Counts. In the literature CAEL most frequently advocates the benefits of PL (Brigham & Klein-Collins, 2010; CAEL, 2010, 2011; Tate et al., 2011). Despite the positive press, when the Learning Counts partnership formed, the data demonstrated that the implementation of this program remained at a systems level which had not helped in its promotion or adoption. With the formation of the CAEL-PASSHE partnership, individual institutions should invite CAEL representatives onto their campuses. These representatives could meet with administrators and other campus constituents to discuss ways PL could assist these institutions especially in terms of improving enrollments and increasing college completion.
rates. These individuals could also reach out to particular students to discuss the benefits of using PL to complete college more efficiently.

The data suggested that no such initiatives or publicity campaigns related to the Learning Counts partnership had ever been undertaken within the institutions that participated in this study. In order for Learning Counts and PL to gain more credence, more outreach should be done at the grassroots level. Most students participate in orientation programs when they matriculate to an institution. These orientations should include more informational sessions related to prior learning and the possibilities found in the Learning Counts program for students to earn additional credits in conjunction with credits earned via AP courses. The researcher recommends finding support for these initiatives from all campus areas. As a faculty librarian, the researcher suggests that college libraries purchase materials related to prior learning including test preparation manuals for the CLEP and DSST exams. Librarians could also create online pathfinders that contained resources related to e-Portfolios, PLA opportunities, and earning credit through nontraditional means. Prior learning departments might also work with admissions offices to identify nontraditional and transfer students in order to contact these individuals about the possibilities of transferring PL credit before they register for courses or enroll into a particular academic program.

The findings also established that currently Learning Counts was not a cost effective way to seek PL credits. In addition, federal and state financial aid currently cannot be used to cover PL credits (Fain, 2012b; Klein-Collins & Wertheim, 2013; Laitinen, 2013). This lack of funding support could also deter students from applying for PL credits. The interview findings revealed that CAEL charged significantly more for its e-Portfolio course and the outside evaluation of prior learning than the in-house PL departments found on individual PASSHE campuses. The
Learning Counts partnership will most likely not succeed if ways cannot be found to lower the program costs. PASSHE should open a dialogue with CAEL to find opportunities to make the costs associated with earning PL credit less exorbitant. The researcher would recommend that the Learning Counts program investigate instituting a sliding scale payment plan for students based on need in order to cultivate this partnership. Ideally representatives from CAEL should continually assess the progress of the PASSHE-partnership and also communicate with individuals at each institution rather than keep interactions only at the systems level.

Currently it appears that little dialogue exists between Learning Counts representatives and individual PASSHE PL departments. The researcher intends to present this study to CAOs at participating institutions and the central PASSHE office in order to assist in improving this dialogue. Without more communication and interaction, addressing the high cost concerns will remain an issue. In order for the Learning Counts partnership to succeed, CAEL should establish relationships with every PASSHE institution especially with schools that already have PL departments in place. Through these connections, CAEL could potentially offer onsite trainings to faculty and staff to assist with e-Portfolio design and evaluation of prior learning. Having on-campus representatives who are trained on the Learning Counts e-Portfolio assessment process might help defray the costs of having students apply directly to this program.

Another option that could assist in lowering costs would be to explore whether already established processes found on PASSHE campuses would be accepted by the Learning Counts initiative. According to the data gathered from the document review and interviews, PASSHE students in particular disciplines and courses had access to an e-Portfolio software program. These findings suggest that PASSHE institutions might explore whether PL students could employ this institutional e-Portfolio product already in existence but used for other purposes.
PASSHE should seek to formulate an agreement with CAEL where students could use the preexisting institutional e-Portfolio platform to seek PL credit. Rather than take an expensive e-Portfolio course through Learning Counts these students could learn to use the platform with free online tutorials or in-person workshops offered by the on campus e-Portfolio experts. Providing such opportunities might bolster the Learning Counts initiative and also increase the use of PLA e-Portfolios within the PASSHE system.

In order to expand prior learning opportunities and extend the PLA e-Portfolio’s reach, administrators should also focus on the distance or online learning areas of their institutions where nontraditional students often enroll. The online learning divisions might assist PASSHE administrators in promoting Learning Counts and possibly also the implementation of PLA e-Portfolios. Studies have demonstrated that e-Portfolios can foster learning in online communities (Bolliger & Shepherd, 2010). Students who have used e-Portfolios in online courses have also found this technology valuable for future career opportunities (Bolliger & Shepherd, 2010). This population might be more receptive to using e-Portfolios to demonstrate prior learning. The data appeared to indicate that there is currently little dialogue between existing distance learning programs and PL departments within the PASSHE institutions. This online learning environment could be an untapped area where nontraditional students eager to complete a degree quickly could benefit from earning credits through prior learning. By using an e-Portfolio and the corresponding guidelines established by Learning Counts, these online learners might improve the success of this program and increase the adoption of this technology for PLA.

The data revealed that the CAEL-PASSHE partnership was an agreement reached at the systems level with little to no discussion from individuals who actually managed PL areas within
any of the PASSHE universities. Despite the lack of communication and complaints that individual PASSHE institutions made no contribution to this agreement, keeping elements of the whole prior learning process at a systems level could have some benefits. This study revealed that PL exists but it varies greatly between each PASSHE institution. The document review and the survey and interview data confirmed that PLA varied greatly for each PASSHE institution. There was also no standardization to this process. Joining Learning Counts might have represented PASSHE’s attempt to standardize PL. However, current PL practices were already too disparate for an enthusiastic adoption of this program.

PASSHE is part of the Pennsylvania State System and might explore ways to standardize the PLA process at the state level. Together with the Pennsylvania State Board of Education, the system could examine establishing a state standard for PL in such a way that would streamline this method of granting credit. As a state educational organization, PASSHE would ideally have more influence when attempting to systemize prior learning assessment. According to the Pennsylvania Department of Education website, the state formed the Pennsylvania Prior Learning Assessment Consortium (PAPLAC) in 2009 in collaboration with the state’s Department of Labor and Industry. However, little seems to have occurred with this initiative which had been conceptualized under a previous gubernatorial administration. It also appears that only six of the 14 PASSHE schools participated in this consortium. Other states have recently begun to investigate standardizing the PL process at the state level in order to give it more credence. Price (2014) discussed the state of Ohio’s attempts to coordinate a statewide PL program. In June 2013 the University System of Ohio (USO) under the auspices of the state’s board of regents launched “PLA with Purpose,” an initiative that sought to increase access to PLA through statewide coordination (Price, 2014; USO, 2014). This Ohio program outlines best
practices for PLA and also aligns PL credit with the state’s articulation and transfer system (USO, 2014). Ohio’s efforts to standardize PLA resemble other recent PL initiatives found in the states of Kentucky, Tennessee, and Wisconsin (Fain 2012c; USO, 2014). PASSHE administrators might review the other state initiatives to see whether such a project could be strengthened in Pennsylvania.

Contemplating standardizing this process in a similar fashion within the state of Pennsylvania could help PASSHE strengthen its Learning Counts partnership and also increase the PL framework at every institution. It is possible that plans for a stronger Pennsylvania initiative are being formulated especially with the recent election of a new governor in November 2014. However, this study’s findings suggest that this is either not the case or that the planning remains at a level that has not included individual PASSHE institutions. By exploring the possibilities offered by a statewide PL system, PASSHE administrators also need to recognize the importance of garnering grassroots support for any future PL initiatives. The current literature and the findings from this study both confirm that without the participation of all constituents who play any kind of role in assessing prior learning, there will be no backing for any kind of PL initiatives. Everyone involved should have a voice for PL to succeed and move forward in the future.

**Recommendations for Future Research**

The data findings from this current study suggest that it will probably take some time before PASSHE institutions adopt PLA e-Portfolios to assess learning attained through MOOCs or other means. However, the Learning Counts initiative and PLA e-Portfolios are both relatively new options for students. They may need some time to diffuse into higher education institutions before they become adopted on a larger scale if one examines this research problem
through Rogers’ (1983) DOI lens. Future research could explore this question again within a few years when the Learning Counts initiative might have garnered more support especially with promoting PLA e-Portfolios. Although this study managed to include 10 of the 14 PASSHE schools in its survey or interview data collection, future research might also investigate how the four nonparticipating schools utilized either Learning Counts or PLA e-Portfolios, if at all. The findings from this current study also disclosed that at some PASSHE institutions where in-house PL departments already existed, there appeared to be even less of an interest or motivation to utilize Learning Counts opportunities. Future studies could examine this parallel more closely: if a strong PL tradition already exists at a particular institution any attempts to promote the adoption or use of an outside program such as Learning Counts may be unnecessary.

This study revealed that within the PASSHE system the Learning Counts partnership has not yet been implemented in any way. However, this lack of adoption may not be an issue at other colleges and universities. As an initiative, Learning Counts shows promise and has established partnerships with many higher education institutions around the country. However, there currently exists scant literature related to this program and its impact on promoting either prior learning or the use of e-Portfolios in this area. Future research could review the effect of Learning Counts on the success of PL and its promotion of e-Portfolios. Related studies might also examine the efficacy of this program in increasing PL applicants and correspondingly, college completion rates. This current study also discussed the high costs of using this initiative as a reason why some individuals had no interest in employing it or its e-Portfolio platform. Future studies could further explore whether these costs represent a universal problem and a factor in deterring individuals from participating in the opportunities offered by Learning Counts.
The literature related to e-Portfolio use in various areas of higher education continues to flourish. However, only a small number focuses on e-Portfolios that assess prior learning (Fain, 2013a; Kamenetz, 2011a, 2011b; Klein-Collins, 2007; Klein-Collins & Wertheim, 2013; Sweygers et al., 2009; Travers, 2012a) and more research could be conducted in this area. Future research might examine the PLA e-Portfolio situation at any institution that has partnered with Learning Counts. These prospective studies could examine a range of questions including, if e-Portfolios are being used, how effective have they been for PLA, and, how frequently are they being employed. Within the PASSHE system a future study could examine the PL situation at all institutions and measure whether e-Portfolios have become a more frequently utilized assessment tool. Although this current study’s findings suggest that it is doubtful the situation will change in the near future, a reexamination of this research question might possibly reveal different results after the passing of some time.

The e-Portfolio may not have a promising future as a PLA tool in the near future within the PASSHE system. Nevertheless, this study’s findings did reveal that institutions that currently had a paper portfolio option for PLA appeared more amenable to exploring the possibility of eventually transitioning to an e-Portfolio platform for assessment. Future studies could explore other issues that influence whether a PLA e-Portfolio is adopted and used based on factors such as: the prior existence of a paper portfolio process within the institution, the types of e-Portfolio platforms supported for PLA (an open-source product, a product attached to a course management system, etc.), the technical prowess of individuals involved in the PLA process within particular institutions, and the general campus climate toward using e-Portfolios. Future studies could also focus solely on students who apply for PL credits and the various issues they encounter that might influence the adoption or non-adoption of a PLA e-Portfolio.
The current literature has begun to examine prior learning and the role MOOCs might play when students gain knowledge through these offerings that could qualify them for PL credit (Boilard, 2011; Calderwood, 2013; Fain, 2013a; Kamenetz, 2011b; Kolowich, 2013a; Ripley, 2012). In addition to MOOCs, the badges movement continues to gain momentum in the current literature and at professional conferences. The badges system has raised questions about the future of the credit hour in higher education according to recent scholarship (Bencini, 2013; Bowen & Thomas, 2014; Carey, 2013; Klein-Collins & Wertheim, 2013; Lucas, 2014; Mazoué, 2012; Pence, 2012; Travers, 2012b). The whole concept of the college credit hour may radically change in the future as a result of many developments including this introduction of badges. The current literature often discusses how higher education and government officials have also begun to explore moving from a credit-based to a more competency-based system of learning (Klein-Collins & Wertheim, 2013; Ordonez, 2014; Weise, 2014). Future research could examine what kinds of effects badges have had on the credit hour especially as they correspond to PL and college completion.

Despite the rising prominence of these new opportunities, the findings in this current study suggest that none of the participating PASSHE schools have any intention of granting PL credit for knowledge earned through MOOCs or from a badge credential. Although some higher education institutions have begun to accept PL credits for MOOCs, more research will need to be conducted in this area if MOOCs continue to maintain their momentum. Future studies could potentially use DOI theory to explore whether PL has expanded to assess learning earned through MOOCs and how far this practice has diffused within higher education. Related studies could also examine the impact programs such as MOOC2Degree have had on PL and degree completion. If badges continue to increase in popularity they could also influence the adoption
of e-Portfolios for PLA. Recent articles have discussed how earned badges could be placed on e-Portfolios to showcase learning (Fain, 2014; Mozilla Foundation, 2012; Sharples et al., 2013; Travers, 2012b; Young, 2012). Future research could explore in depth the potential role badges might play in creating PLA e-Portfolios and how they would impact the overall PLA process.

Prior learning has been the subject of numerous articles in recent years. Despite this upsurge in the current literature, this study’s findings did not confirm this renewal of interest in PL at least within the PASSHE schools represented in the survey and interview data. A variety of factors influenced this divergence from the current literature. Future studies could examine some of these factors in more detail including student apathy, faculty resistance, financial aid issues, accreditation challenges, and the current absence of any centralized prior learning assessment standards. This study also discussed the recent efforts by certain states to create a statewide PLA set of standards. Future studies could explore the success of these endeavors. Such research might also investigate whether statewide standardization has influenced the increased implementation of PL initiatives at higher institutions located within these states. Future studies could also examine whether these state PL standards have increased the adoption rate of PLA e-Portfolios.

**Conclusion**

The purpose of this study was to measure the adoption and use of PLA e-Portfolios by PASSHE institutions especially since joining the Learning Counts initiative. This study found that e-Portfolios are currently not being used for prior learning and that Learning Counts has played absolutely no role at the 10 institutions that participated in this study. The researcher discovered that larger concerns related to the overall acceptability of PL plagued many of the PASSHE institutions selected for this study. Various issues contributed to this situation and not
one factor played a more significant role than any other. The PASSHE organization also remains a complex and diverse system of higher education institutions that further complicated the dynamics behind the findings that emerged in this study.

The researcher had intended to examine how PLA e-Portfolios were being used and initially felt discouraged by this study’s findings. These findings suggested that there had been absolutely no adoption of either the PLA e-Portfolio or of the Learning Counts initiative. The e-Portfolio and PL ostensibly bolstered by the Learning Counts initiative; appeared to offer much promise not only to students, but also to a state system that has struggled to stay relevant in today’s competitive higher education market. Despite this non-adoption, the researcher believes that this study adds to the growing literature related to PLA e-Portfolios and the potential influence of PL initiatives such as CAEL’s Learning Counts in the future. The most noteworthy contribution made by this study’s findings was the recognition of the continual issues PL departments face on their respective campuses when trying to establish legitimacy or advance their cause. Despite many years of existence within these institutions, PL departments still have to address ignorance and debunk false notions about the value of their programs and the credits they grant. These departments also struggle with institutional resistance and student apathy. Ideally this study will assist in changing these attitudes and also encourage future research that will support PL in moving forward positively within the PASSHE system and all institutions of higher learning.
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Appendix A

IRB approval

Northeastern

Notification of IRB Action

Date: April 24, 2014    IRB #: CPS14-04-05

Principal Investigator(s): Kimberly Nolan
                           Erica Swenson Danowitz

Department: Doctor of Education Program
            College of Professional Studies

Address: 20 Belvidere
         Northeastern University

Title of Project: Making Connections: Using e-Portfolios to Assess and Grant Credit for Prior Learning

Participating Sites: Permission forthcoming from PASSHE

Informed Consent: Two (2) unsigned consents (survey and interview)

As per CFR 45.46.117(c)(2) signed consent is being waived as the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required.

DHHS Review Category: Expedited #6, #7
Monitoring Interval: 12 months

Approval Expiration Date: APRIL 23, 2015

Investigator's Responsibilities:
1. Informed consent form bearing the IRB approval stamp must be used when recruiting participants into the study.
2. The investigator must notify IRB immediately of unexpected adverse reactions, or new information that may alter our perception of the benefit-risk ratio.
3. Study procedures and files are subject to audit any time.
4. Any modifications of the protocol or the informed consent as the study progresses must be reviewed and approved by this committee prior to being instituted.
5. Continuing Review Approval for the proposal should be requested at least one month prior to the expiration date above.
6. This approval applies to the protection of human subjects only. It does not apply to any other university approvals that may be necessary.

C. Randall Colvin, Ph.D., Chair
Northeastern University Institutional Review Board

Nan C. Regina, Director
Human Subject Research Protection

Northeastern University FWA #4630
Appendix B

Unsigned Consent Form – Web-based online survey

Unsigned consent form for web-based online surveys

Northeastern University, Department of: Education, College of Professional Studies
Name of Investigators: Dr. Kimberly Nolan, Erica Swenson Danowitz
Title of Project: Making Connections: Using e-Portfolios to Assess and Grant Credit for Prior Learning

Request to Participate in Research
We would like to invite you to participate in a web-based online survey. The survey is part of a research study whose purpose is to examine how higher education institutions are employing e-Portfolios to link prior learning initiatives to traditional degree programs. This survey should take about 5 minutes to complete.

We are asking you to participate in this study because you are involved with prior learning assessment at your institution. **You must be at least 18 years old to take this survey.**

The decision to participate in this research project is voluntary. You do not have to participate and you can refuse to answer any question. Even if you begin the web-based online survey, you can stop at any time. There are no foreseeable risks or discomforts to you for taking part in this study.

There are no direct benefits to you from participating in this study. However, your responses may help us learn more about e-Portfolio assessments and the future of prior learning initiatives.

You will not be paid for your participation in this study.

Your part in this study will be handled in a confidential manner. Any reports or publications based on this research will use only group data and will not identify you or any individual as being affiliated with this project.
If you have any questions regarding electronic privacy, please feel free to contact Mark Nardone, NU’s Director of Information Security via phone at 617-373-7901, or via email at privacy@neu.edu.

If you have any questions about this study, please feel free to contact Erica Swenson Danowitz, danowitz.e@husky.neu.edu, the person mainly responsible for the research. You can also contact Dr. Kimberly Nolan, k.nolan@neu.edu, the Principal Investigator.

If you have any questions regarding your rights as a research participant, please contact Nan C. Regina, Director, Human Subject Research Protection, 960 Renaissance Park, Northeastern University, Boston, MA 02115. Tel: 617.373.4588, Email: n.regina@neu.edu. You may call anonymously if you wish.

This study has been reviewed and approved by the Northeastern University Institutional Review Board (#xx-xx-xx).

By clicking on the survey link below you are indicating that you consent to participate in this study. Please print out a copy of this consent form for your records.

https://docs.google.com/a/husky.neu.edu/forms/d/1SP1LxA_rGbZUTWJstfpvdDvJmyhNlDuN01QLSWGnl/viewform

Thank you for your time
Erica Swenson Danowitz
UNSIGNED CONSENT DOCUMENT

Northeastern University, Department of:
Name of Investigators: Dr. Kimberly Nolan, Erica Swenson Danowitz
Title of Project: Making Connections: Using e-Portfolios to Assess and Grant Credit for Prior Learning

Request to Participate in Research

We would like to invite you to take part in a research project. The purpose of this research is to examine how colleges are using e-Portfolios to assess prior learning to see how using this technology might be increased in these areas.

You must be at least 18 years old to be in this research project.

The study will take place in person at a quiet location at your institution or online using meeting software the researcher will provide and will take about an hour. If you decide to take part in this study, we will ask you to answer a series of questions about prior learning assessment and e-Portfolios.

There are no foreseeable risks or discomforts to you for taking part in this study.

There are no direct benefits to you from participating in this study. However, your responses may help us learn more about e-Portfolio assessments and the future of prior learning.

Your part in this study is anonymous.

Your part in this study will be handled in a confidential manner. Only the researchers will know that you participated in this study. Any reports or publications based on this research will use only group data and will not identify you or any individual as being of this project.

The decision to participate in this research project is up to you. You do not have to participate and you can refuse to answer any question. Even if you begin the study, you may withdraw at any time.

You will not be paid for your participation in this study.

If you have any questions about this study, please feel free to call Erica Swenson Danowitz at danowitz.e@husky.neu.edu, the person mainly responsible for the research. You can also contact Dr. Kimberly Nolan, k.nolan@neu.edu, the Principal Investigator.

If you have any questions about your rights in this research, you may contact Nan C. Regina, Director, Human Subject Research Protection, 960 Renaissance Park, Northeastern University, Boston, MA 02115. Tel: 617.373.4588, Email: n.regina@neu.edu. You may call anonymously if you wish.

You may keep this form for yourself.

Thank you.

Erica Swenson Danowitz
Appendix D

Sample E-mail Inviting Participants to Fill Out Survey

From: Erica Danowitz <danowitz.e@husky.neu.edu>

I am a graduate student at Northeastern University working on my doctorate in higher education administration. My dissertation is related to using e-Portfolios to assess and grant credit for prior learning.

I would like to invite you to participate in a web-based online survey related to this research. This survey is part of a research study whose purpose is to examine how higher education institutions are employing e-Portfolios to link prior learning initiatives to traditional degree programs. This survey should take about 5 minutes to complete.

This study has been reviewed and approved by the Northeastern University Institutional Review Board (#CPS14-04-05), by the Institutional Review Board at Institution Name, and by Institution Name’s Provost and Vice President for Academic Affairs, Administrator Name.

Participating in this survey is voluntary and all data collected from this survey will be kept confidential. If you have any questions about this study, please feel free to contact Erica Swenson Danowitz, danowitz.e@husky.neu.edu, the person mainly responsible for the research. You can also contact Dr. Kimberly Nolan, k.nolan@neu.edu, the Principal Investigator and Erica’s thesis advisor.

To begin this survey please click on this link:

http://tinyurl.com/1x5n6d6
If you would know of other individuals located at Institution Name who might be interested in filling out this survey please feel free to forward it to them.

Thank you for your time.

Sincerely,

Erica Swenson Danowitz
Appendix E

Online Survey – (Created with Google Forms)

Name:
Title:
Institution:

1.) Does your institution provide prior learning assessment?
   o Yes
   o No
   o Don’t Know

2.) If yes - how does your institution assess prior learning (check all that apply)
   o e-Portfolio
   o testing
   o transcript evaluation
   o other __________ Please specify

3.) Is your institution currently working with the Learning Counts Initiative?
   o Yes
   o No
   o Don’t Know

4.) Are you interested in learning more about using e-Portfolios to assess prior learning?
   o Yes
   o Maybe
   o No

5.) Would someone at your institution be willing to be interviewed about using e-Portfolios for prior learning assessment?
   o Yes Name ______________________________
   o No
Appendix F

Online Survey Google Forms Version
Appendix G

Interview Protocol

Interview Questions

Introductory questions

1.) Can you tell me a little bit about your role in prior learning initiatives at your institution?

2.) Can you tell me how you assess prior learning? (Possible follow-up) Does your department use any standardized assessment tools when assessing prior learning? If yes – what kinds of tools?

3.) Have you had any experiences with using or implementing e-Portfolios in the past?

4.) What is the process your institution used to consider e-Portfolios for assessment?

e-Portfolio attributes

5.) Can you tell me about any problems you have encountered or concerns you have about using e-Portfolios as a prior learning assessment tool?

6.) How do you feel about e-Portfolios? What is your attitude toward them?

7.) What do you think are the primary advantages of using an e-Portfolio for prior learning assessment?

8.) What do you think are the primary disadvantages of using an e-Portfolio for prior learning assessment?

9.) Have you encountered any problems with adopting e-portfolios? If yes, what were they and how did you address them?
10.) How aware are other individuals at your institution about your department’s implementation of e-Portfolios. Has there been much communication about this technology?

11.) What would you suggest that might help increase the use of e-Portfolios for prior learning assessment at your institution? Are there particular issues that need to be addressed?

12.) What factors have promoted or limited the use of e-Portfolios to assess prior learning?

13.) Has using e-Portfolios required a lot of training for you or your staff?

14.) Did the Learning Counts Partnership assist with this training?

15.) Did your department use e-Portfolios for prior learning assessment before joining the Learning Counts initiative?

16.) If no, have you noticed any changes to prior learning assessments or the awarding of credits since the adoption of this technology?

17.) Did you and/or your staff have opportunities to try different e-Portfolio products before one was adopted?

18.) How would you describe your technology level? Novice, intermediate or expert?

Follow-up questions

19.) Do you think using e-Portfolios has been an effective way to assess prior learning? Why or why not?

20.) How would you describe the effect of using e-Portfolios in prior learning?