A Comparison of Student Technology Acceptance between Traditional and Non-Traditional Students Using Online Learning Technologies

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Abstract

Online learning has changed higher education, emerging as a primary source for delivering courses and programs to students. As online learning has grown, more non-traditional students have entered college, many for the first time. Consequently, many of these non-traditional are experiencing online learning, and the technologies that deliver them, for the first time. Retention rates for online non-traditional students have been low and therefore understanding technology acceptance of these students is crucial to deploying online learning systems that help drive student success and retention. This quantitative research study developed and tested technology acceptance of online learning technologies using the technology acceptance model (TAM) with variables perceived ease of use (PEOU), perceived usefulness (PU), attitude (A), and intention to use (IU). The TAM variables were compared against the two dependent variables, traditional students (TS) and non-traditional students (NTS). Findings from 80 valid responses, 40 TS and 40 NTS, in an online survey and Mountain Empire Community College (MECC), showed that PEOU had a significant effect on PU, which is consistent with TAM. Findings showed that PEOU had no effect on (A) for TS but did have a significant effect on (A) for NTS. Further, PU had a significant effect on (A) and (A) had a significant effect on IU, which is consistent with TAM. Comparing TAM variables showed that there was a difference in technology acceptance between TS and NTS.

Introduction

The Internet provided a means of delivery of education and educational resources to a broader audience. Colleges, universities, and community colleges are now offering online courses and entire online programs of study. According to Travers, community colleges have been at the forefront of the development and delivery of online learning to students (Travers, 2016). Community colleges provide a way for students that cannot afford to attend a larger college or university to get a quality education or to get a lower cost start on their way to a four-year institution. A community college provides transferable programs in Arts and Science, Business, Technology, and Health Sciences while also providing programs in trades such as industrial technology, welding, and electrical engineering. In rural areas and small communities that many community colleges serve, the credential-based programs and workforce programs are essential to many displaced workers.

With the opportunities that online learning technologies provide colleges and universities, how students accept these technologies can affect their success with online classes. The acceptance of students with the online learning environment, including online collaborative tools, can lead to overall educational success and improve student retention (Thompson, Miller, & Franz, 2013). Kuo et al. (2014) found that post-secondary students that accept online learning technology are more likely to be successful in their educational journey.

Literature Review

The study of technology acceptance of online learning technologies among non-traditional students in comparison to traditional students has remained a gap in research. There are multiple studies of technology acceptance of traditional students; however, technology acceptance of online learning technologies among non-traditional students has been lacking. For traditional students, the transition to learning online may be more

comfortable than the transition for non-traditional students. The non-traditional student, in many cases, does not have the comfort level with online learning technology and therefore may have a harder time transitioning to online learning (Thompson, Miller, & Franz, 2013). The purpose of this quantitative study was to gain insight and understanding into the technology acceptance of non-traditional students in comparison to traditional students.

Traditional Students

Traditional students can are those college students between the ages of 18 and 24 that enrolled in college directly out of high school. Since traditional students have grown up in the computer age, they are more comfortable with computer technology and using the Internet. Parkes, Stein, and Reading (2015) found that traditional students are well prepared for online learning activities. Since the use of online learning technologies is likely to be more quickly utilized by traditional students, the design of the online learning technologies to engage these students could be considered more natural to plan to ensure student acceptance.

Several studies sought to understand student acceptance of online learning technologies among traditional students. According to Stantchev et al. (2014) research shows that traditional student's levels of technology acceptance of learning management systems in conjunction with online collaboration tools are high. For traditional students, having computer technology and the Internet in the classroom is not a new concept. Traditional students typically get some formal computer training in school and have grown up using computers and the Internet (Hew & Kadir, 2016). High schools, Middle schools, and Elementary schools offer some form of computer-based learning.

Having exposure to technology in the classroom from an early age allows the traditional student to understand the online learning environment and the requirements to be successful with online learning (Mallya & Lakshminarayanan, 2017). Mallya and Lakshminarayanan (2017) found that perceived usefulness and attitude significantly influences the behavior intention to use online learning technologies. The traditional students have not only had the use of technology for academic purposes in regards to grade school and high school purpose but the increased offerings of dual-enrollment classes with local colleges while in high school has given them access to college courses using online learning technologies (Capra, 2014). These students are very well prepared to make the transition to online coursework. Swanke and Zeman (2015) found that there is a relationship between time accessing online courses and academic performance. The relationship between using online learning technologies and academic achievement is an important data point for colleges and universities when designing online learning technologies.

Non-Traditional Students

A non-traditional student is an adult with student delayed college enrollment, continued education enrollment, did not complete high school, and is over the age of 24 (National Center for Education Statistics, 2016). According to Pratt (2017), a non-traditional student could have fuzzy academic skills and limited exposure to online learning (Pratt, 2017). While many non-traditional, or adult learners, may have used computer technologies for work or pleasure, many have not used these tools for learning. There has been very little research into the acceptance of adult learners, or non-traditional students when using these technologies (Ke & Kwak, 2013). Non-traditional students are the most substantial number of student enrolled in community colleges (Pratt, 2017). The average age of community college students is 29, and nearly half of the community college population is 25 or older (Pratt, 2017). Non-traditional students are students that typically have re-joined the education system after taking a break from learning after high school (Deschacht & Goeman, 2015).

Many non-traditional learners may have had little to experience with online learning. (Deschacht & Goeman, 2015). Non-traditional students are older students that have not been in a formal educational setting for several years (Travers, 2016). Online learning requires a good grasp on Internet-related actions, and for those not comfortable with these actions, online education could be challenging (Kuo et al., 2014). With this in mind, to successfully plan and develop programs that efficiently use learning management systems and cloud-based collaboration tools, it is essential to understand the acceptance of non-traditional students when using these

technologies for online learning.

For non-traditional students, the face-to-face interaction of their earlier academic experiences, and their day-to-day work lives is very interactive. These experiences create a learning style that is more suited to the interaction. Ke and Kwak (2013) found non-traditional students favored face-to-face instruction and had lower acceptance with online learning. For online learning to be enhanced in a way that provides the interaction needed by non-traditional students, the design of the courses and technologies should create an environment that promotes, or simulates, this interaction (Ke & Kwak, 2013). A combination of course design with media richness and communication technologies provided the environment non-traditional students needed to be successful (Ladyshewsky & Pettapiece, 2015).

Providing learning management systems with tools, such as collaboration tools, give the non-traditional student the tools for interaction with the instructor and other students. For example, discussion boards are a tool that non-traditional can utilize for interaction. Chyung (2007) found that when using discussion boards as part of an online course, non-traditional students posted more messages than the traditional students. The non-traditional student learns socially and needs the interaction with the instructor and other students (Capra, 2014). Designing the online learning environment, and courses, with this in mind can allow the non-traditional student to be successful (Xu & Jaggars, 2013).

Technology Acceptance Model

The technologies that make up an online learning environment, such as Learning Management Systems (LMS) and its tools, have evolved since their inception and many times change with new enhancements (Rhode et al., 2017). Research has shown that interaction between students and online learning technologies can influence learning outcomes and processes (Yuan & Xiaoyu, 2015). According to Yuan and Wu (2015), past research has examined technology on measurable outcomes, such as academic performance, grades, and retention. Online learning has grown to a point where understanding the role of technology acceptance among the student population with online learning technologies is crucial for higher education institutions (Butler-Lamar et al., 2016). By understanding how a student accepts the technologies that make up the online learning environment, institutions can develop and implement technologies that drive student academic success.

Technology acceptance is a measure of an individual intention to use technology (Fathema et al., 2015). TAM is a theoretical model created by Davis (1989) and is widely used to study technology acceptance. Researchers studying technology acceptance across various industries and disciplines (Fathema et al., 2015) have validated TAM. TAM has been widely utilized in technology acceptance research because its constructs have been validated and found to be highly reliable (Yuan & Xiaoyu, 2015). Unlike other models, TAM has explained that individuals will accept the technology system if they believe in the technology (Sondakh, 2014). Davis (1989) based TAM upon the theory of reasoned action (TRA) (Butler-Lamar et al., 2016). Using TRA as a base, Davis (1989) developed (TAM), which is now one of the most popular theoretical models for measuring technology acceptance (Butler-Lamar et al., 2016).

According to Wingo, Ivankova, and Moss (2017), in technology acceptance research, TAM has been found to be a robust and powerful predictive model. TAM has been empirically validated as a theoretical model for explaining end-user willingness to use new technologies (Wingo et al., 2017). Research has shown that TAM is the most influential, highly predictive, and widely used model for technology adoption (Fathema et al., 2015). The use of TAM for research concerning technology acceptance has been validated by many researchers (Fador, 2014).

The key determinants of TAM are the constructs of perceived usefulness and perceived ease of use. Past research has shown that perceived usefulness and perceived ease of use are predictors for attitude (Fador, 2014). According to Fador (2014), attitude and perceived usefulness are indicators of behavioral intention. The combined constructs of perceived usefulness and perceived ease of use, attitude, and behavioral intention can be applied to technology research in order to measure the actual use of an information technology system. The application of TAM when examining and information technology system allows the researcher to understand

how an end-user has perceived usefulness and perceived ease of use of the systems impacts his/her attitude, which in turn impacts his/her behavioral intention to use the system.

TAM has been used to measure technology acceptance in higher education for many years. The perceived usefulness and perceived ease of use of the technology systems are contributors to student success (Fathema et al., 2015). However, there is very little research comparing the perceived usefulness and perceived use of technology among traditional and non-traditional students (Swanke & Zeman, 2015). When designing online learning technologies, the knowledge of how each group perceives the technology would be a critical factor in the design. Each group has different life experiences that could impact their perceived usefulness and ease of use of technology. Thus technology acceptance levels with online learning technologies may be different (Swanke & Zeman, 2015).

Technology acceptance in online learning can influence outcomes, such as academic performance and retention. The same way technology acceptance findings in the corporate world have crucial significance for the organization and employees, so too does technology acceptance findings for higher education institutions and their faculty and students (Butler-Lamar et al., 2016). Past research has shown that technology acceptance among faculty and traditional students of higher education institutions is high; however, there is little research on the technology acceptance of non-traditional students. With online learning being a critical component in higher education, understanding technology acceptance is beneficial for higher education institutions (Yuan & Xiaoyu, 2015). Studying technology acceptance in higher education is critical for higher education institutions that consider online learning a fundamental part of their strategic plan (Wingo et al., 2017). As the population of non-traditional students on college campuses and online programs continues to grow, understanding the technology acceptance of non-traditional students with online learning technologies is increasingly important.

Research Method

The research effort used a quantitative research methodology. The purpose of the effort was to compare traditional students and non-traditional students using online learning management systems to determine if there is a difference in the levels of technology acceptance when using technology. The quantitative methodology is selected for this effort because data analysis using statistical methodologies may prove enlightening and lead to the development of additional strategies to assist non-traditional online students. Quantitative research in technology acceptance using TAM predicts end-user behavior and intention to use technology with a validated theoretical model. According to Park and Park (2016), quantitative research can be successful and predict behavior by providing an overview of an area of study and reveal patterns.

Research questions related to TAM constructs

RQ1. As measured by TAM, does perceived ease of use have a positive effect on the perceived usefulness of online learning technologies in online courses at MECC?
RQ2. As measured by TAM, does perceived ease of use have a positive effect on user attitude toward online learning technologies in online courses at MECC?
RQ3. As measured by TAM, does perceived usefulness have a positive effect on attitude toward online learning technologies in online courses at MECC?
RQ4. As measured by TAM, does attitude have a positive effect on intention to use online learning technologies in online courses at MECC?
RQ5. As measured by TAM, is there a difference in technology acceptance of non-traditional students when compared to traditional students when using online learning technologies at MECC?

Hypotheses related to TAM constructs

H10. Perceived ease of use has a positive effect on perceived usefulness of online learning technologies in online courses at MECC
H20. Perceived ease of use has a positive effect on user attitude toward online learning technologies in online courses at MECC?

H30. Perceived usefulness has a positive effect on attitude toward online learning technologies in online courses at MECC
H40. Attitude has a positive effect on intention to use online learning technologies in online courses at MECC
H50. There is no difference in technology acceptance of non-traditional students when compared to traditional students when using online learning technologies at MECC
H5a. There is a difference in technology acceptance of non-traditional students differ when compared to traditional students when using online learning technologies at MECC

Data Collection and Analysis

Data Collection. The data collection method is an online questionnaire utilizing Zoho Survey and consisting of questions using the TAM scales to measure perceived usefulness, perceived ease of use, attitudes towards using, and intention to use (Butler-Lamar et al., 2016). Zoho Survey is an online survey tool that allows the delivery of the questionnaire to the students via a hyperlink in an email or Blackboard. The questions are from the Intention to Use Information Technology instrument, Perceived Usefulness Scale, Perceived Ease of Use Scale, and the Attitude instrument (Butler-Lamar et al., 2016). The questionnaire included demographic information, specifically age, gender, educational background, and education level. According to Edmunds, Thorpe, and Conole (2012), the TAM scales help to measure end-user satisfaction of technology. The TAM scales used for this study are perceived ease of use, perceived usefulness, technical competencies, attitudes towards use, and intention of use.

Analysis. The results were analyzed using Structural Equation Modeling (SEM) to examine the TAM constructs. The structural equation modeling (SEM) approach was used to develop a model of the relationships between the four factors in the study, perceived usefulness (PU), perceived ease of use (PEOU), attitude (A), and intention to use (IU) the online learning technology. A path analysis was completed to measure the effect of each factor on the other factors as described in the hypotheses.

Results

A total of four independent variables based on technology acceptance model (TAM) were measured and then compared against the two dependent variables. Table 1 shows the descriptive statistics for the TAM variables for traditional students. The means for the TAM variables of (PU) and (PEOU) were 5.77 and 5.88 respectively with standard deviations of 1.92 and 1.88 respectively. The means for the TAM variables of (A) and (IU) were 3.55 and 5.44 respectively with standard deviations of 1.25 and 1.61 respectively.

Table 2 shows the descriptive statistics for the TAM variables for non-traditional students. The means for the TAM variables of (PU) and (PEOU) for non-traditional students were 6.13 and 6.07 respectively with standard deviations of 1.71 and 1.88 respectively. The means for TAM variables (A) and (IU) for non-traditional students were 3.55 and 5.44 respectively with standard deviations of 1.25 and 1.61 respectively.

Table 3 shows the descriptive statistics for the TAM variables for all respondents. The means for the TAM variables of (PU) and (PEOU) were 5.97 and 5.96 respectively with standard deviations of 1.79 and 1.73 respectively. The means for (A) and (IU) were 3.52 and 5.68 respectively with standard deviations of 1.16 and 1.35 respectively.

Table 1. *Descriptive Statistics for Independent Variables for Traditional Students*

Variables	Mean	Standard Deviation
Perceived Usefulness (PU)	5.77	1.92
Perceived Ease of Use (PEOU)	5.88	1.88
Attitude (A)	3.55	1.25
Intention to Use (IU)	5.44	1.61

Table 2. *Descriptive Statistics for Independent Variables for Non-Traditional Students*

Variables	Mean	Standard Deviation
Perceived Usefulness (PU)	6.13	1.71
Perceived Ease of Use (PEOU)	6.07	1.69
Attitude (A)	3.53	1.09
Intention to Use (IU)	5.82	1.17

Table 3. *Descriptive Statistics for Independent Variables for all students*

Variables	Mean	Stand Deviation
Perceived Usefulness (PU)	5.97	1.79
Perceived Ease of Use (PEOU)	5.96	1.76
Attitude (A)	3.52	1.16
Intention to Use (IU)	5.68	1.35

Hypothesis Testing

The structural equation modeling (SEM) approach was used to develop a model of the relationships between the four factors in the study, perceived usefulness (PU), perceived ease of use (PEOU), attitude (A), and intention to use (IU) the online learning technology. A path analysis was completed to measure the effect of each factor on the other factors as described in the hypotheses. Table 4 shows the hypotheses testing results

Table 4. *Hypothesis testing results*

Hypotheses	Path		Support	Path Coefficient	*t*-value
H_1	PEOU →	PU	Yes	0.84	13.87***
H_2	PEOU →	A	No	0.16	1.93
H_3	PU →	A	Yes	0.66	7.28***
H_4	A →	IU	Yes	1.1	11.19***
*** $p < .001$					

Hypothesis 1: Perceived ease of use and perceived usefulness. The null hypothesis (H10) was: perceived ease of use has a positive effect on the perceived usefulness of online learning technologies in online courses at MECC. As Table 4 indicated, perceived ease of use (PEOU) demonstrated a significant influence on perceived usefulness (PU) (path = 0.84). Thus, based on the path analysis, the null hypothesis (H10) was supported.

Hypothesis 2: Perceived ease of use and attitude. The null hypothesis (H20) was: perceived ease of use has a positive effect on user attitude toward online learning technologies in online courses at MECC. As shown in Table 4, perceived ease of use (PEOU) did not demonstrate a significant influence on attitude (A) toward online learning technologies (path = .16). Thus, based on the path analysis, the null hypothesis (H20) was not supported.

Hypothesis 3: Perceived usefulness and attitude. The null hypothesis (H30) was: perceived usefulness has a positive effect on attitude toward online learning technologies in online courses at MECC. As shown in Table 4, perceived usefulness demonstrated a significant influence on attitude (A) toward online learning technologies (path = 0.66). Thus, based on the path analysis, the null hypothesis (H30) was supported.

Hypothesis 4: Attitude and intention to use. The null hypothesis (H40) was that attitude has a positive effect on the intention to use online learning technologies in online courses at MECC. As shown in Table 4, attitude (A) demonstrated a significant influence on the intention to use (IU) online learning technologies (path = 1.1). Thus, based on the path analysis, the null hypothesis (H40) was supported.

Hypothesis 5: traditional students and non-traditional students. The null hypothesis (H50) was: there is no difference in technology acceptance of non-traditional students when compared to traditional students when using online learning technologies at MECC. The alternative hypothesis (H5a) was: there is a difference in technology acceptance of non-traditional students differ when compared to traditional students when using online learning technologies at MECC. As shown in Table 5, perceived ease of use (PEOU) demonstrated a significant influence on attitude (A) for non-traditional students but was not significant for traditional students. As shown in Table 5 and Table 6, attitude (A) demonstrated a significant influence on both non-traditional and traditional students. Thus, based on the path analysis and difference in the significance of the relationship between PEOU and (A), the null hypothesis is rejected, and the alternative hypothesis is accepted.

Table 5. *Hypothesis testing results for non-traditional students*

Hypotheses	Path			Support	Path Coefficient	*t* -value
H_1	PEOU	→	PU	Yes	0.81	8.90***
H_2	PEOU	→	A	Yes	0.33	3.06*
H_3	PU	→	A	Yes	0.80	6.12***
H_4	A	→	IU	Yes	1.12	5.82***
*** $p < .001$, * $p < .05$						

Table 6. *Hypothesis testing results for traditional students*

Hypotheses	Path			Support	Path Coefficient	*t* -value
H_1	PEOU	→	PU	Yes	0.87	10.86***
H_2	PEOU	→	A	No	0.03	0.261
H_3	PU	→	A	Yes	0.80	6.12***
H_4	A	→	IU	Yes	1.20	10.01***
*** $p < .001$						

Discussion

This research study provides evidence for the technology acceptance model (TAM) for examining technology acceptance of online learning technologies. Furthermore, this research study provides evidence that there is no difference in technology acceptance of online learning technologies between traditional and non-traditional online students at a rural community college. The first research objective, research questions one through four was to investigate the relationship of TAM constructs. The second objective was to evaluate the TAM findings to determine if there was a difference in technology acceptance between traditional and non-traditional online students.

A total of 86 out of 980 invited participants responded to the online survey hosted by ZoHo survey with 100% completed. To even the groups, traditional and non-traditional students, six participants were removed to arrive at even groups of 40 participants per group. Demographic variables included age and experience with online learning technologies. The participants were 63.53% female and 36.47%, male. Prior experience with online learning technologies indicated experience. Of the respondents, 51% had prior experience with online learning technologies while 49% had no prior experience with online learning technologies.

The survey instrument was designed on the four TAM scales; the perceived usefulness scale, perceived ease of use scale, attitude towards using scale, and the intention to use scale developed by Davis (1989) and validated in prior studies (Butler-Lamar, et al., 2016; Fathema, et al., 2015; Wingo, et al., 2017). Butler-Lamar et al., (2013), Fathema, et al. (2015), and Wingo et al. (2017) found that perceived ease of use (PEOI) had a positive effect on perceived usefulness (PU) on technology acceptance. Fathema et al. (2015) found that PEOU had a positive effect on attitude towards using technology and that attitude (A) had a positive effect on the intention to use (IU). In this study, PEOU was investigated to determine if there was a positive effect on PU and (A) if PU had a positive effect on (A), and if (A) had a positive effect on IU. Findings showed that PEOU has a positive effect on PU but does not have a positive effect on (A). Findings also showed that PU has a positive effect on (A) and that (A) has a positive effect on IU. Thus, for this study, the construct relationships were significant, with the exception of the PEOU on (A), as the technology acceptance model (TAM) suggested.

Results from the path analysis showed that PEOU had a positive effect on PU (path = 0.84) but did not have a positive effect on (A) (path = .16). Path analysis also showed the PU had a positive effect on (A) (path = 0.66).

Similarly, path analysis showed that (A) had a positive effect on IU (path = 1.1). Results indicated that attitude (A) is a strong predictor of intention to use (IU), as TAM suggested.

Research question five for this study was, as measured by TAM, is there a difference in technology acceptance of non-traditional students when compared to traditional students when using online learning technologies at MECC. Findings showed that for online students at Mountain Empire Community College, there was a difference in technology acceptance between non-traditional and traditional students using online learning technologies. Davis (1989) claimed that perceived usefulness (PU) and perceived ease of use (PEOU) are key determinants for the use of technology. TAM suggests that PEOU influences PU. Fathema et al. (2015) found that PEOU had a significant effect on PU ($path = 0.184, p < .05$). In this study, PEOU had a more significant effect on PU ($path = 0.84, p < .001$). Moreover, Fathema et al. (2015) found that PEOU had a more significant effect on attitude (A) ($path = .20, p < .001$). However, in this study, PEOU (path = 0.16) did not have a significant effect on attitude (A). This finding is inconsistent with previous studies of technology acceptance, where PEOU had a significant influence on (A) (Butler-Lamar, et al., 2016; Fathema et al., 2015; Wingo et al., 2017). Fathema et al. (2015) found that attitude (A) ($path = .72, p < .001$) had a significant effect on intention to use. In this study, (A) also had a significant effect on intention to use ($path = 1.1, p < .001$).

The dependent variables in this study were traditional online students and non-traditional online students. To determine the impact of TAM on each group, an analysis of the responses for each group was conducted. The findings indicated that PEOU had significant influence on PU for both traditional students ($path = .87, p < .001$) and non-traditional students ($path = .81, p < .001$). The path analysis showed that PEOU had a significant effect on the attitude (A) for non-traditional students ($path = .33, p < .05$). However, PEOU did not have a positive effect on (A) for traditional students ($path = .03$). The difference in the influence of PEOU on (A) indicates that traditional student's attitude towards using technology is not influenced by their perceived ease of use of the technology. However, both groups, non-traditional students ($path = 1.12, p < .001$) and traditional students ($path = 1.20, p < .001$) showed that attitude (A) has a significant effect on intention to use (IU).

The determination of technology acceptance is based on the idea that a user will use the technology. TAM claims that intention to use shapes the actual use of technology. According to Fathema et al. (2015), if a user has the intention to use the technology, then they will use it. Intention to use can be defined as "the degree to which a person has formulated conscious plans to perform or not perform some specific future behavior (Davis, 1989). In this study, both non-traditional and traditional online students showed a significant intention to use. However, the findings showed a significant difference in the relationship between PEOU and (A), thus indicating that there was a difference in technology acceptance between traditional online students and non-traditional online students. Three of five null hypotheses were accepted, and one alternative hypothesis was accepted. Path analysis indicated that the TAM constructs had a significant influence on technology acceptance.

Limitations and Future Directions

The research study has some limitations. The VCCS consists of 23 community colleges of varying sizes, as well as locations in disparate socio-economic regions. Therefore, the results of this study are restricted. To have a better understanding of the impact of TAM and the comparison of technology acceptance between traditional and non-traditional students, replication of this study at more institutions would help to understand the impact of TAM on both study groups.

A problem with the design is in the fact of emailing hyperlink to the questionnaire to students instead of being part of their coursework. It is possible that participation is low and will not yield the data required to conduct the study. To mitigate the low yield risk, instructors for each participant are engaged to find a way to incorporate the survey into the course material for the students selected for the study. Integrating the questionnaire into coursework will allow the instructor to engage the student to complete the questionnaire.

The honesty and integrity of the participants is also a limitation of this study. An assumption is that all participants are honest concerning the acceptance and use of technology in online courses. The location of the study is also a limitation. Conducting the research effort at a small, rural community college could make the data

collected challenging to generalize to a broader population (Trochim & Donnelly, 2008). Regardless of the limitations, the objective of the study was to offer justifications and understanding of other higher education institutions.

Conclusions

As online learning has grown, community colleges have been at the forefront of the development and delivery of online learning (Travers, 2016). The growth of online learning has also provided a way for working adults to earn an education. Community colleges are often the schools of choice for non-traditional students (Travers, 2016). In many cases, online learning may be the only option for non-traditional students. According to Travers (2016), distance education may be the only hope for continuing education for non-traditional students. Providing online learning technologies that help these non-traditional students be successful should be a priority for higher education institutions (Gregory & Lampley, 2016).

Technology acceptance as defined by Davis (1989) explains the one's intention to use technology, which shapes the actual use of the technology. When technology acceptance is high, technology use is high. The technology acceptance model, when applied to community colleges, measure the technology acceptance of students currently enrolled in online courses. Community colleges have a diverse student enrollment with non-traditional students being a significant portion of that enrollment (Travers, 2016). Thus, examining the difference in technology acceptance between traditional and non-traditional students allows community colleges to deploy technology that increases technology acceptance of all students. The results of this research study effort support the findings of previous studies that TAM is a valid theoretical framework to examine technology acceptance (Butler-Lamar et al., 2016; Fathema et al., 2015; Wingo et al., 2017; Mallya & Lakshminarayanan, 2017). Results showed that there is a difference in technology acceptance between traditional and non-traditional students. MECC is like other community colleges where non-traditional enrollment is a large part of their enrollment. Low retention rates for non-traditional students is a primary challenge for MECC that must be explored and resolved. Recommendations for future research were: (a) expanding the study to other colleges in the Virginia Community College System, (b) conducting more research on technology acceptance for non-traditional students, (c) expanding the study to different online learning technologies. Strategies should be implemented to improve technology acceptance and eliminate the retention problem. The results of this study imply that further research will need to be conducted and expanded to understand technology acceptance and resolve the low retention issue with non-traditional online students.

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