EXAMINING THE ASSOCIATIONS BETWEEN NONTRADITIONAL STUDENTS' GENDER AND RISK FACTORS FOR ENROLLING IN ONLINE DEGREE PROGRAMMES

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ABSTRACT

This dissertation's goal is to answer the question of whether or not demographic characteristics, such as age, gender, and the presence of such features, may be used to predict whether or not a student would register in university online courses. These findings are based on information collected from more than 95,000 first-year college students in the United States in the 2011-2012 academic year as part of the 2012 National Postsecondary Student Aid Study (NPSAS:12). Risk factors for nontraditional students, such as gender and age, have been demonstrated as useful predictors of online course enrollment. It is envisaged that this study will give evidence for the idea that leaders of colleges and universities may accomplish their purpose of decreasing the time necessary to get a degree by providing more courses online. More study is required to deconstruct the nontraditional student risk index outlined by the National Centre for Educational Statistics in addition to looking at other factors like ethnicity and GPA in order to offer a more in-depth analysis of trends in enrollment in distance learning programmes or better data collection over separation schooling the retention or success.

Keywords: Distance education, Online courses, Nontraditional students, Female students, Higher education, Colleges, Universities, Community college, Degree completion.

INTRODUCTION

According to Moloney or Oakley (2010), the demand for online courses exceeds the supply, so there is enough proof to suggest which online education is going to keep expanding rapidly in the US higher education industry. Online education has grown and become a crucial part of many educational institutions' long-term strategic strategies, according to Sloan Consortium study (Allen & Seaman, 2010). According to Cochran, Campbell, Baker, & Leeds (2014), college students are taking more online courses each year. "In the face of the slowdown in overall enrollments," Allen and Seaman (2013) reported on page 15, "the number of pupils taking a minimum of

a single online class continues to increase at a robust rate." Another poll (Allen & Seaman, 2014) found that in the fall of 2012, more than 33% of college students took at least one online course, reaching a record high of 7.1 million. A minimum of one online course enrolled 411,000 more students. According to Allen and Seaman (2010), one of the biggest changes in higher education over the last decade has been the rise of online course work. Those who advocate online education expect it will boost college enrollment. On page 6 of Wickersham and McElhany (2010) said that "the rise, fall, as well as birth again in the cost of gasoline combined with the promise of a quick and cheap associate's, bachelor's, master's or even a doctoral degree offered via the internet without settling organisational fees or the ability to finish the coursework in the comfort of their own residence, offers great incentive for learners to look for alternative routes for higher education." Asynchronous online courses allow students to attend classes at their convenience because they can be accessed at any time and have no time limit (Jaggars, 2011). Internet education is growing due to students' desire for flexible class schedules, according to Paul & Cochran (2013). Distance learners have additional schedule flexibility, according to Pontes & Pontes (2012).

Online courses also save students time and money. Fishman (2015) stated that just 12% of college students lived on campus in 2012. Parsad and Lewis (2008) found that online course offerings have made postsecondary distant education courses more accessible. Distance education offers flexibility and allows interaction with distant individuals and organisations (Schrum, Burbank, Engle, Chambers, & Glassett, 2005). This may benefit disabled pupils who cannot attend a normal school. One reason an institution of higher learning should embrace online education is to expand its geographic reach, according to the authors Allen and Seaman (2008).

BACKGROUND OF THE STUDY

Perseverance is becoming increasingly important as more non-traditional students join in graduate & undergraduate degrees. Part-time enrollment was 38% for undergraduates and 43% for graduates in 2014. This data indicates a rise in non-first-generation college students. Since 2002, the US Ministry of Education has funded student retention programmes. This tendency is due to (a) the rising number of unconventional students with poorer retention rates & (b) the popularity of distance learning degree programmes that accept them. Despite attempts to boost postsecondary student retention and completion, less than half the population has a degree (Kim, 2002). Thus, unconventional students may not finish postsecondary degrees in the US. Students that don't match the "typical" college student image generally work full-time and have families or significant others. These students may face challenges that affect their health, stress, happiness, and capacity to graduate. Post-high school education faces several challenges. Postsecondary persistence rates are strongly correlated with educational programmes' capacity to meet adult demands (Giancola et al., 2009). Higher education, personal and external variables, technology, time management, or employer and family support are other important

(Rovai, 2003). Duration of enrollment is linked to adult student desire to complete a course. Perseverance means overcoming obstacles (Rovai, 2002, p.1). Students' course completion deadline adherence is used to assess perseverance in this research. A passing grade is given to successful pupils. Students who did not complete a course either did not enroll, quit it, or received a poor grade. Thus, a passing grade means course completion, while a failing grade means failure.

Researchers focus on internal variables affecting nontraditional students' programme perseverance. Internal aspects include college preparedness, socialising, programme quality, GPA, and self-directed learning. Grade point averages indicate students' academic adaptability. Students need teacher and staff interactions to integrate into society. Campus engagement affects this requirement. Social integration requires peers, teachers, and extracurricular participation. "A process where people discover their learning requirements, develop objectives, identify resources, choose and implement learning strategies, or evaluate learning outcomes" is self-directed learning. A 24-item survey based on Pfordresher (2016) and Stockdale (2003) measures students' independent study.

PROBLEM STATEMENT

Despite the fact that the number of students enrolled in online courses is growing at an unprecedented rate, there seems to be a disconnect between the administration of these programmes and the students who are most dependent on the flexibility that such programmes may afford. There is room for improvement in how researchers help students in this environment by looking at non-traditional risk indicators like gender or the consequences of enrolling in distant education. It may also persuade policymakers to embrace online degree courses as a means to speed up the completion of university studies.

LITERATURE REVIEW

The literature review for this assignment won't all be thrown into one pile. Before empirical implementation and evaluation, the relevant chapters will explore the relevant research for respective themes. To build a theoretical framework for information systems development (ISD) for this thesis, this chapter examines three possible techniques. This thesis uses conceptual model. Education management information system (EMIS) development will incorporate this, which will be empirically analysed in the following chapter. Valuable information is created by information systems (Allen & Seaman, 2010). It's crucial to every organization's formation and administration. "Information technologies have the ability to offer the organisation with an especially cost-effective asset when they are created, managed, & utilised in an appropriate manner." Information systems are "a set of people, processes, and assets that collects, transforms, & disseminates information within an organisation". Such an “information system" is a framework that "can

include several integrated technologies for storing data in addition to organisational installation & upkeep practices that together constitute a socio-technical phenomena (Allen & Seaman, 2010).

A system that holds data in this research includes technology, people, procedures, and information. Information development for systems (ISD) presents reality logically and properly. It lets they explain reality beyond measurement, sight, and reason (Tinto, 2012). From this section, researchers will design a model for the development of information systems that provides a conceptual framework for the many acts and components which go into its construction. Studying system design strategies in the literature is vital to defining and presenting the conceptual framework's core components or processes. Information systems development strategies are researched in the subject literature. This research examines information system building methodologies (Tinto, 2012). The literature study on information system development will show how new technologies have helped create such systems throughout time. Following the literature study, a theoretical framework using spontaneity, bricolage, and sensemaking was created to examine how technological advances affect information system evolution. Technology's impact on information system development was the emphasis of this structure (Tinto, 2012).

RESEARCH OBJECTIVES

i. To identify the difference between the numbers of conventional and nontraditional students taking online classes.

ii. To find out the difference in the number of conventional and nontraditional female students taking online classes.

iii. To explore the difference in the ages of unconventional female students who engage in distant learning programmes.

iv. To determine the correlation between the presence of non-traditional risk factors and the likelihood of a student enrolling in online classes.

v. To examine the correlation between the presence of non-traditional risk factors and a female student's propensity to register in online courses.

METHODS

Previous research has demonstrated that the convenience of distant learning attracts nontraditional students, especially women, who are interested in obtaining a university education. Using a nationally representative database that collects data on students' participation in remote education, this study aimed to address the

question, "Are there specific categories of pupils who are more likely to be taking advantage of this educational option?" This is significant because it indicates that the study's findings may be utilised to argue for tailored policy adjustments that improve the quality of life for remote education students. Using a large, existent database that contains a sufficient number of samples improves the reliability and validity of the research as a whole and expands the applicability of the results. As mentioned earlier, a large number of students (123,600 in total) were discovered to be qualified for the NPSAS:12 survey. A student's 2011-2012 academic performance, demographics, family life, work history, and online course enrollment were only some of the topics included in the survey.

SAMPLING

As was noted earlier, the samples used in this research were selected from a larger group of over 95,000 students who had previously completed the NPSAS:12. In a moment, we'll see how the various hypotheses need very different sample sizes. The sample sizes employed in this work are considered large since the smallest data set studied had 11,600 observations (N >= 100).

DATA AND MEASUREMENT

The questionnaire survey was the primary method of data collection for this study. The questionnaire was divided into two parts – (A) Demographic information (B) Factor responses in 5-point Likert Scale for both the online and non-online channels. Secondary data was collected from multiple sources, primarily internet resources.

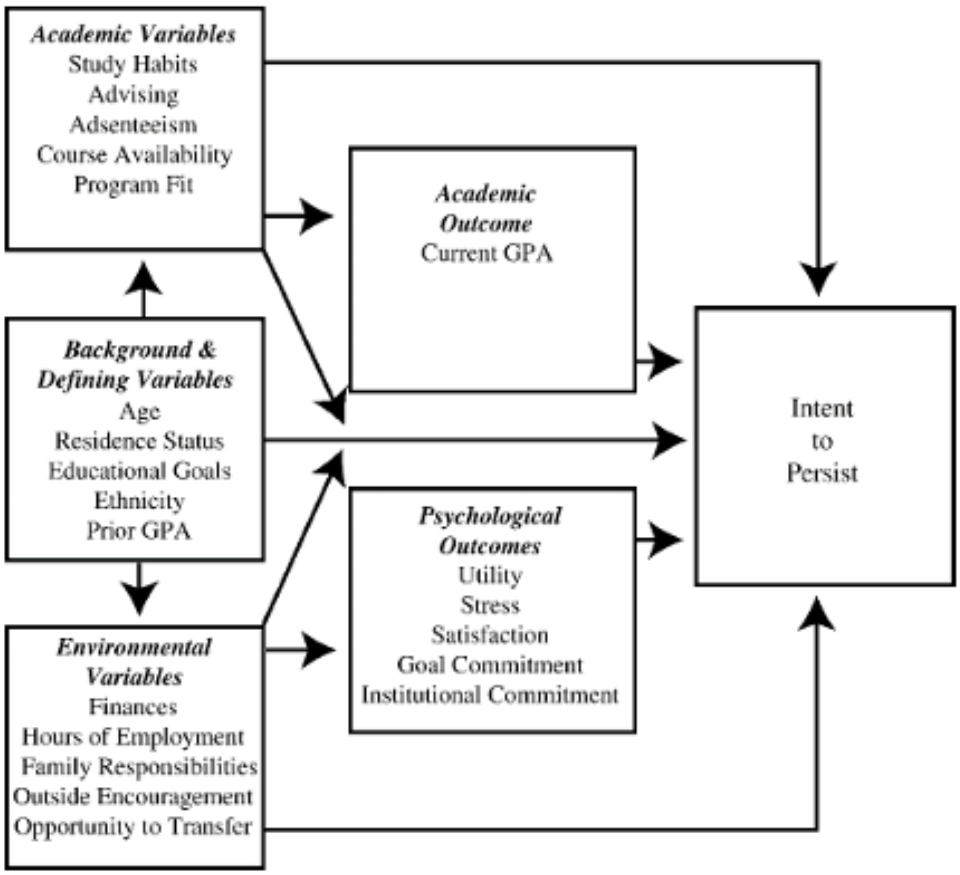
STATISTICAL SOFTWARE

MS-Excel and SPSS 25 were used for Statistical analysis.

STATISTICAL TOOLS

In order to get a handle on the fundamentals of the data, descriptive analysis was used. A coding scheme and regression analysis are used in the study.

CONCEPTUAL FRAMEWORK



RESULTS

H2 - NONTRADITIONAL FEMALE STUDENTS OUTNUMBERED NONTRADITIONAL MALE STUDENTS ENROLLED IN ONLINE COURSES

The results lend credibility to the theory. The binary logistic regression model uses a reduced sample size of 26,600 undergraduates. Results for just female students were generated from the sample of 46,000 replies to the online course question. The results indicated that the odds ratio for women taking online classes is 1.397. One possible reading of the data is that nontraditional female students are around 40% more likely to enroll in an online course than nontraditional male students.

Furthermore, the t-value was 7.731, which is greater than 1.96, and the p-value was 0.000, which is considerably less than 0.05, indicating that these results are statistically significant at the 95% confidence level.

Table 1. Coding schema

Variable	Abbreviation	Measurement	Coding Schema
Online course enrollment	ALTONL	Categorical	Online (0); No Online (1)
Nontraditional status	AGEGRP	Categorical	Traditional (0); Nontraditional (1)
Gender	GENDER	Categorical	Male (0); Female (1)
Ethnicity	Race/Ethnicity (with multiple)	Categorical	White (0); Nonwhite (1)

Table 2. Stage 1. Bivariate logistic regression results

Variable	Odds Ratio	95% Confidence Interval	t-statistic	p-value*
Nontraditional status	0.742	(0.691–0.796)	-8.337	0.000
Gender	0.772	(0.729–0.817)	-8.886	0.000
Ethnicity	1.214	(1.148–1.284)	6.832	0.000

* NOTE: *The p*-values of .000 in this regression do not imply a zero likelihood that the coefficients were due to sampling error, but instead represent very small positive values less than 0.0005 that are rounded to 0.000.

Table 3. Stage 2. Multivariate logistic regression results

Variable	Odds Ratio	95% Confidence Interval	t-statistic	p-value*
Nontraditional status	0.742	(0.691–0.797)	-8.263	0.000
Gender	0.772	(0.728–0.818)	-8.845	0.000
Ethnicity	1.240	(1.172–1.312)	7.501	0.000

* NOTE: *The p*-values of .000 in this regression do not imply a zero likelihood that the coefficients were due to sampling error, but instead represent very small positive values less than 0.0005 that are rounded to 0.000.

Table 4. Age as of 12/31/2011 by gender

	18 or younger (%)	19-23 (%)	24-29 (%)	30-39 (%)	40 or older (%)	Total
Male	8.9	50.4	19.0	12.6	9.1	100%
Female	9.0	44.8	18.0	15.1	13.0	100%
Total	9.0	47.2	18.4	14.0	11.4	100%

Table 5. Age group as of 12/31/2011 by gender

	Traditional (%)	Nontraditional (%)	Total
Male	59.3	40.7	100%
Female	53.8	46.2	100%
Total	56.2	43.8	100%

The odds ratio calculations show that this theory receives some partial support as the number of risk variables for nontraditional students increases from two to four. The data, however, disprove this notion, showing that the prevalence of atypical student risk factors actually decreases from one to two as well as from five to seven, rather than increases. Scientists have no grounds for asserting that the data backs up the notion.

There is no statistical significance at the 95% level since the t-value for the seven risk variables related to atypical students is 0.773, which is less than 1.96, or the p-value for these factors is 0.452, which is greater than 0.05. Since all p-values are less than 0.0000 (p 0.05) and all t-values are more than the crucial value of 1.96, the odds ratios with the counts None to Six are statistically significant at the 95% confidence level.

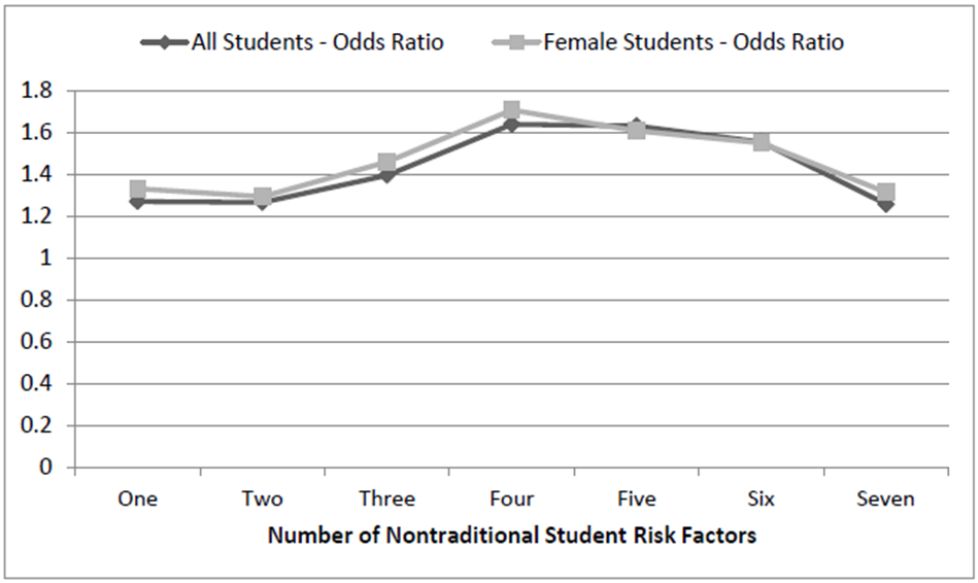


Figure 1. Odds ratio results for all students and female students

CONCLUSION

Policy and practice shifts that benefit nontraditional or female students may be triggered by indicators such as nontraditional student age, female gender, and risk factors for enrolling in distance education. It is crucial to support nontraditional and internet-based students as they mature and work towards a decent education. This study indicated that unusual student behaviours were important drivers of distant education enrollment, which might assist distance education faculty enhance online course material and professional development. This dissertation provided encouraging evidence that individual characteristics of students had a significant impact on their decision to participate in distance learning. Researchers' dissertation's focus is on improving access and equality for non-traditional students. Data analysis employing a large and reasonably representative national database was a major strength of this study. The large sample size and statistically significant findings in this dissertation make it applicable to all schools. The results of the quantitative analysis were unmistakable because of the use of logistic regression and odds ratios as the final measures. This is one of the few studies that examine the role of gender and non-traditional student risk traits in determining whether or not they would register in a distant learning programme. Finally, studying uncommon students confirms this view. In today's universities, nontraditional students are the norm. President Obama has set a target year of 2020 to double the number of Americans with college degrees. Distance learning provides an option for schools to accommodate students with unique needs.

LIMITATION

The primary goal of this sort of research is to quantify some aspects of a phenomenon. Large samples are typical in quantitative research. Unfortunately, there is not enough funding to conduct such a thorough inquiry at this time. This may be done in the future with a higher sample size & an extended length of time for this research. The use of a prepared questionnaire in quantitative research might lead to skewed findings that don't reflect reality. In addition, conducting a quantitative study is a costly, time-consuming, and laborious endeavour. Explanations for why these participants were not included in this analysis will be provided in subsequent research. Highlight any obstacles that might prevent your results from being replicated by other researchers. This will be useful in defining the parameters of a successful or pertinent research strategy, such as its intended outcomes and methodology. Despite the obvious and large growth of online programming, several difficulties persist in the creation of online products. Even though more and more colleges are offering online courses, issues like these still arise. Consequently, students may not be completing their online courses due to a lack of satisfaction. Educators and managers of online classrooms must create settings that encourage students to stay the course. As the number of students enrolled in online classes grows, this issue becomes increasingly critical for faculty members. Similarly, administrators at educational institutions should have some understanding of the traits typical among remote students. As a result, the quality of online education may be raised, along with the outcomes for students.

REFERENCES

1. Moloney JF, Oakley BI. Scaling online education: Increasing access to higher education. J Asynchronous Learn Netw. 2010;14(1):55–70.
2. Allen E, Seaman J. Class differences: Online education in the United States, 2010. Sloan Survey of Online Learning [Internet]. 2010 [cited 2010 Nov 24]. Available from: http://sloanconsortium.org/sites/default/files/class_differences.pdf
3. Allen IE, Seaman J. Ten years of tracking education in the United States. Newburyport, MA: Sloan Consortium; 2013.
4. Allen IE, Seaman J. Grade change: Tracking online education in the United States. Babson Survey Research Group and Quahog Research Group, LLC; 2014.
5. Wickersham LE, McElhany JA. Bridging the divide: Reconciling administrator and faculty concerns regarding online education. Q Rev Distance Educ. 2010;11(1):1–12.
6. Jaggars SS. Online learning: Does it help low-income and underprepared students? New York, NY: Columbia University, Teachers College, Community College Research Center; 2011.
7. Paul JA, Cochran JD. Key interactions for online programs between faculty, students, technologies, and educational institutions: A holistic framework. Q Rev Distance Educ. 2013;14(1):49.
8. Pontes MC, Pontes NM. Enrollment in distance education classes is associated with fewer enrollment gaps among nontraditional undergraduate students in the US. J Asynchronous Learn Netw. 2012;16(1):79-89.
9. Fishman R. Community College Online. New America Foundation; 2015.
10. Parsad B, Lewis L. Distance education at degree-granting postsecondary institutions: 2006–07. First look. (NCES 2009-044). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics; 2008.
11. Schrum L, Burbank MD, Engle J, Chambers JA, Glassett KF. Postsecondary educators' professional development: Investigation of an online approach to enhancing teaching and learning. Internet High Educ. 2005;8(4):279-89.
12. Allen IE, Seaman J. Staying the course: Online education in the United States, 2008. Newburyport, MA: Sloan Consortium; 2008.
13. Kim KA. ERIC review: Exploring the meaning of "Nontraditional" at the community college. Community Coll Rev. 2002;30(1):74–89.
14. Giancola J, Grawitch M, Borchert D. Dealing with the stress of college: A model for adult students. Adult Educ Q. 2009;59(3):246–63.
15. Rovai AP. In search of higher persistence rates in distance education online programs. Internet High Educ. 2003;1:1-13.
16. Rovai AP. Building a sense of community at a distance. Int Rev Res Open Distance Learn. 2002;3(1):1-16.

17. Pfordresher HM. Persistence factors for nontraditional undergraduate students at a Northeast Catholic College [master's thesis]. [North Andover, MA]: Merrimack College; 2016 [cited 2016]. Available from: http://scholarworks.merrimack.edu/cgi/viewcontent.cgi?article=1019&context=soe_studentpub
18. Stockdale SL. Development of an instrument to measure self-directedness [doctoral dissertation]. [Knoxville, TN]: University of Tennessee; 2003 [cited 2003]. Available from: http://trace.tennessee.edu/utk_graddiss/1619
19. Tinto V. Enhancing student success: Taking the classroom success seriously. Int J First Year High Educ. 2012;3(1). https://doi.org/10.5204/intjfyhe.v3i1.119