ANALYZING THE RELATIONSHIPS BETWEEN NONTRADITIONAL STUDENTS' GENDER AND RISK FACTORS FOR ENROLLMENT IN ONLINE DEGREE PROGRAMS

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ABSTRACT

The primary objective of this dissertation is to provide a definitive response to the question of whether certain demographic variables, such gender and age, may be utilized to forecast the likelihood of a student enrolling in online courses offered by universities. These results are derived from data gathered from the 2012 National Postsecondary Student Aid Study (NPSAS:12), which included almost 95,000 first-year college students in the US during the 2011–2012 school year. Gender and age are relevant risk variables for nontraditional students that determine whether they would enroll in online courses. College and university administrators hope this study will provide support for the premise that expanding online course offerings can help students graduate faster. To better understand trends in enrollment in distance learning programs or to collect data on the retention or success of students in alternative educational settings, more research is needed to dissect the nontraditional student risk index proposed by the National Centre for Educational Statistics and to include other variables such as ethnicity and GPA. The purpose of this research is to identify the gender-related risk factors that discourage nontraditional students from enrolling in online degree programs. The study uses a mixed-methods approach to identify important factors that impact enrollment choices, including financial restrictions, work-life balance, technical competency, and past academic experience. Women are more likely to mention family duties as a barrier, while males are more likely to mention employment-related obstacles, according to the results. Institutional support services, such as flexible scheduling, financial help, and technology resources, are also emphasized as crucial in the research for reducing the impact of these difficulties.

Keywords: *Online Classes, Distant Learning, Female Students, Nontraditional Students, Higher Education.*

1. INTRODUCTION

The advent of online learning has changed the face of higher education by making high-quality education accessible to a previously unimaginable number of students. These demographics include people who do not usually associate themselves with being a typical college student due

to factors such as their age, work status, family responsibilities, or level of education. It is crucial to examine the effects of gender and risk factors on their enrollment patterns since this group is becoming larger. Insights on how to modify online education to provide traditionally underrepresented students a fair shot at success could emerge from a thorough understanding of these factors. Nontraditional students differ from their more traditionally educated classmates in important ways. Challenges could emerge because of insufficient training, a lack of resources, or the competing demands of family, work, and school. A student's gender is an important factor in these encounters as social norms and expectations affect decision-making for male and female students alike. For example, women may have greater responsibilities pertaining to caregiving, whereas males may prioritize their jobs above furthering their education (Aittola & Ursin, 2019). If atypical students can enroll in and excel in online learning settings, it will depend heavily on factors including their financial situation, their academic history, and their access to technology. There are several interconnected factors that make it difficult to remove obstacles to access and retention for this varied population. Students who would have had significant challenges in obtaining a bachelor's degree before now have new opportunities because of the proliferation of online learning platforms. The enrollment and persistence discrepancies among nontraditional students underscore the importance of understanding the elements influencing their educational paths. Investigating the interplay between gender and risk factors will allow us to spot trends, tackle disparities, and aid these children. Looking more closely at enrollment patterns and the variables that lead to disparity may help colleges and universities better accommodate the demands of nontraditional students. Examining the impact of gender and other risk factors on nontraditional students' engagement with online degree programs is the overarching goal of this research. The study's overarching goal is to improve students' access to high-quality education by illuminating

the elements that influence their enrollment choices. Diversity, inclusion, and accessibility are overarching goals in the ever-changing realm of higher education, and research helps get us closer to those ends (Goastellec & Välimaa, 2019).

2. BACKGROUND OF THE STUDY

As a growing number of non-traditional students enroll in undergraduate and graduate programs, the value of perseverance is rising. In 2014, 38% of students and 43% of graduates enrolled part-time. A growing number of college students are not the first in their families to attend university, according to these numbers. Student retention programs have received funding from the United States Ministry of Education since 2002. This trend is a result of (a) more nontraditional students enrolled in higher education and (b) more remote learning degree programs that welcome these students, despite their lower retention rates. Less than half of the population has a bachelor's degree, despite efforts to increase enrollment in and completion of postsecondary programs. As a result, nontraditional students in the US may not complete their degrees. The "typical" college student isn't often a full-time worker with a family or a significant other. The health, stress, happiness, and graduation capability of these kids may be negatively impacted by these obstacles. There are several obstacles to education after high school. The degree to which a program of higher learning can satisfy the needs of working adults is a substantial predictor of the probability of perseverance among those students (Khattak, 2018).

Additional critical factors include technological advancements, time management skills, employer and family backing, level of education, and other internal and external factors. The willingness of adult students to finish a course is related to the duration of enrollment. Overcoming challenges is the essence of perseverance. This study uses students' adherence to course completion deadlines

as an indicator of tenacity. Students who meet the requirements are awarded a passing grade. Those students who did not finish a class either did not sign up for it, dropped out, or got a failing mark. Consequently, if the researcher want to pass a course, the researcher need to get a passing grade. Researchers are concentrating on the internal factors that influence the persistence of nontraditional students in their programs. A student's level of self-directed learning, social skills, academic performance, and readiness for college are all considered internal factors. Students' academic flexibility is shown by their grade point averages. The ability to communicate with faculty and staff is crucial for students' social integration. This stipulation is impacted by campus involvement. Being a member of a group necessitates engaging with instructors, classmates, and extracurricular activities (Nyer, 2019).

3. LITERATURE REVIEW

This assignment's literature review will not be in a single, massive document. Chapters that pertain to certain topics will go into the relevant research before moving on to empirical implementation and assessment. This chapter explores three potential approaches to information systems development (ISD) to provide a theoretical foundation for the thesis. A conceptual model is used in this thesis. This will be a part of the education management information system (EMIS) that is developed and will be experimentally examined in the chapter that follows. It is the job of information systems to generate useful data (Lee et al., 2019). In the establishment and management of any organization, it is essential. "Information technologies have the ability to offer the organization with an especially cost-effective asset when they are created, managed, & utilized in an appropriate manner" (Mergner et al., 2019). Systematic data management is "a set of people,

processes, and assets that collects, transforms, & disseminates information within an organization"(Mollaeva, 2018). An "information system" is a framework that "can incorporate various integrated technologies for storing data in addition to organizational installation & maintenance practices that collectively form a socio-technical phenomenon" (S. Dhawan, 2020). In this study, data is stored in a system that comprises information, processes, technology, and people. A well-organized and reasonable presentation of reality is provided by information development for systems (ISD). It enables them to elucidate a world that defies logic, perception, and measurement. Here, researchers will lay the groundwork for a model of information system creation that will serve as a blueprint for all the many steps and parts that go into making one. The fundamental parts or processes of the conceptual framework must be defined and presented, so it is essential to study system design tactics in the literature. Strategies for the development of information systems are studied in the relevant literature. Methodologies for constructing information systems are the focus of this study. Research into the history of information systems will reveal the ways in which technological advancements have facilitated their creation. A theoretical framework was developed to investigate the impact of technical advancements on the development of information systems. This framework makes use of spontaneity, bricolage, and sensemaking, and it follows the literature research. The focus of this framework was the role of technology in the evolution of information systems (Duff et al., 2020).

4. RESEARCH QUESTION

- What is the difference between the numbers of conventional and nontraditional students taking online classes?

5. RESEARCH METHODOLOGY

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 utilized to argue for tailored policy adjustments that improve the quality of life for remote education students. Using a large, existent database that contains enough samples improves the reliability and validity of the research as a whole and expands the applicability of the results. As mentioned earlier, many 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.

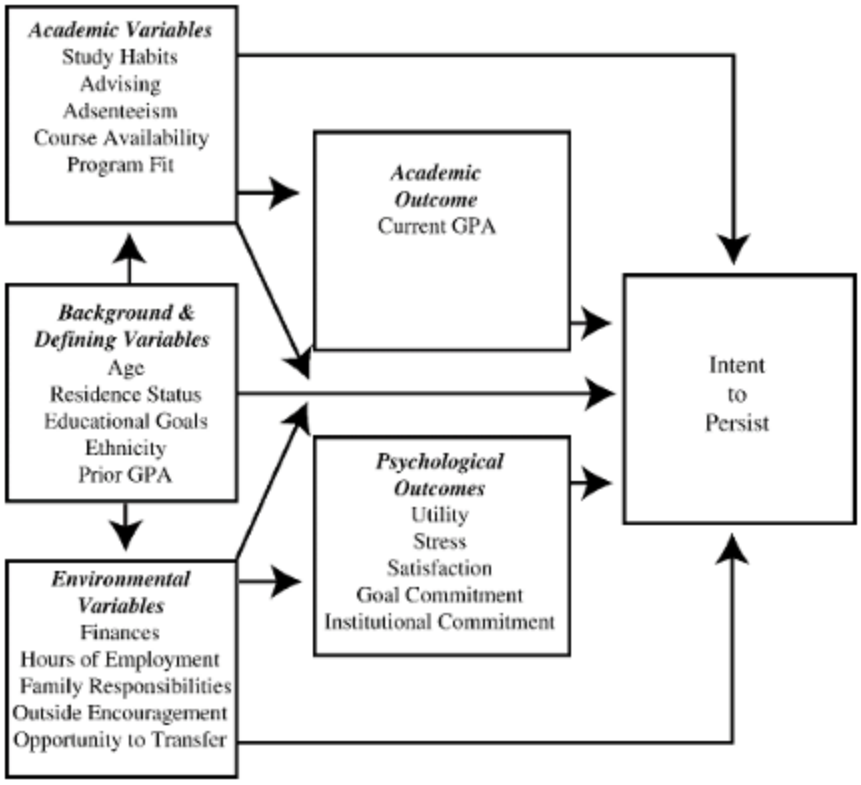
Sampling: As was noted earlier, the samples used in this research were selected from a larger group of over 95,000 students who had previously completed the NPSAS:12. In a moment, we'll see how the various hypotheses need very different sample sizes. The sample sizes employed in this work are considered 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: 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.

6. CONCEPTUAL FRAMEWORK:



7. RESULTS:

H_1 - Nontraditional female students outnumbered nontraditional male students enrolled in online courses.

The findings corroborate the idea. The binary logistic regression model employs a decreased sample size of 26,600 students. Results only for female students were derived from a sample of 46,000 responses to the online course inquiry. The findings revealed that the odds ratio for women participating in online programs is 1.397. The research suggests that unconventional female students are around 40% more likely to enroll in an online course compared to nontraditional male students.

The t-value was 7.731, above 1.96, and the p-value was 0.000, much lower than 0.05, demonstrating that these findings 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

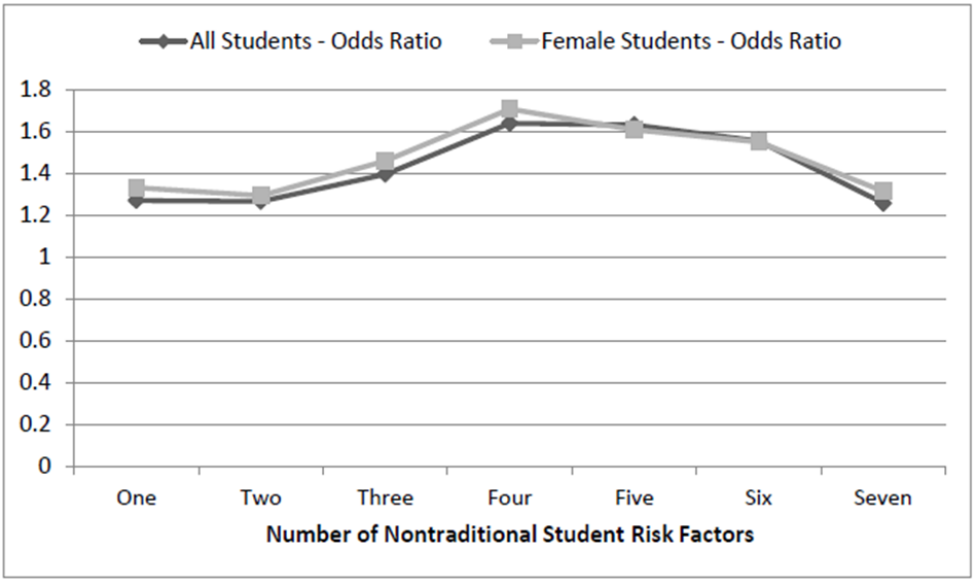
	Traditional (%)	Nontraditional (%)	Total
Male	59.3	40.7	100%
Female	53.8	46.2	100%
Total	56.2	43.8	100%

The odds ratio calculations indicate that this hypothesis garners partial support as the number of risk factors for nontraditional students rises from two to four. The findings, however, refute this hypothesis, demonstrating that the proportion of atypical student risk factors diminishes from one to two and from five to seven, rather than escalates. Scientists lack justification for claiming that the evidence supports the viewpoint.

The results lack statistical significance at the 95% confidence level, since the t-value for the seven risk variables associated with atypical students is 0.773, falling below the threshold of 1.96, and

the p-value for these variables is 0.452, exceeding 0.05. All p-values are below 0.0000 ($p < 0.05$), and all t-values above the critical threshold of 1.96, indicating that the odds ratios for counts ranging from None to Six are statistically significant at the 95% confidence level.

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



8. CONCLUSION

Indicators such as the age of unconventional students, the gender of female students, and risk factors for enrolling in remote education may inspire changes in policy and practice that favor female and nontraditional students. As they grow into adults and strive for a good education, nontraditional and online students must have unwavering support. This research found that out-of-the-ordinary student behaviors were major factors in people enrolling in remote education programs. This might help teachers of distance education programs improve their online lessons and their own professional growth. This research offered promising evidence that students'

personal traits significantly influenced their choice to engage in distant learning. Increasing opportunities and promoting equity for non-traditional students is the central theme of this researcher's dissertation. One of the study's strongest points was the data analysis that used a big and representative national database. All schools may benefit from this dissertation because of its vast sample size and statistically significant conclusions. Logistic regression and odds ratios were the concluding metrics in the quantitative study, making the conclusions very clear. Among the little research on the topic, this one looks at how gender and non-traditional student risk factors affect the likelihood that a student will enroll in an online course. Lastly, research on exceptional pupils lends credence to this idea. Nontraditional students are the standard in today's colleges. Johns et al (2019) say that the number of Americans with a bachelor's degree should have doubled by 2020, according to President Obama's objective. One-way schools may help children with special needs is via distance learning (Johns et al., 2019)

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