Examining Motivation in Online Learning Amongst Traditional and Nontraditional College Students

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EXAMINING MOTIVATION IN ONLINE LEARNING AMONGST
TRADITIONAL AND NONTRADITIONAL COLLEGE STUDENTS

by

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A thesis in partial fulfillment of the requirements
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ABSTRACT

Nontraditional students continue to grow as a population in universities across North America. These individuals are characterized as twenty-five years of age or older, have taken time off from school, and usually hold a job outside of their school duties. With our increased immersion in online environments, many individuals earning an educational degree through online participation, and previous studies calling upon further research, we decided to investigate this line of research. Specifically, the present study seeks to understand the motivational factors seen between traditional and nontraditional students, with an emphasis on intrinsic motivation. The results suggest that nontraditional students are primarily motivated by intrinsic motivators, while traditional students are driven by intrinsic and extrinsic motivators. These findings are further examined in the discussion.

Keywords: traditional students, nontraditional students, intrinsic motivation, online learning
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Introduction

According to the National Center for Education Statistics (2012), nontraditional students tend to delay their university enrollment due to life circumstances. The delay in registration is due to various issues, such as a lack of academic abilities necessary to enter college, employment, raising a family, military enrollment, or other circumstantial reasons. This shuffling of life stages has led to nontraditional students becoming the fastest-growing group of undergraduates in North America (Sales, Drolet, & Bonneau, 2001).

Throughout the literature on traditional and nontraditional students, distinguishing the differences between the two has been varied. Nontraditional students are traditionally defined as being 25 years of age or older (Scott & Lewis, 2012), students who have taken off time before coming back to school (Bye et al., 2007), and students who are married and hold a minimum of a part-time position, although usually full-time (Newbold et al., 2010).

On the other hand, traditional students are categorized as those who enter university immediately following high school (NCES, 2012). Research has found that younger undergraduates who are in the identity-forming stages in their lives are more likely to experience situational interests, temporary interests that are self-serving, and rely on external stimuli (Hidi, 2000), reporting higher levels of extrinsic motivation for learning (Bye, Pushkar & Conway, 2007). Older undergraduates are likely in a “mature” position, establishing enduring individual interests and, in exchange, experience higher levels of intrinsic motivation for learning. Past experiences permit older individuals to be sure of what they want, leaving behind their lives’ exploratory stage (Taylor & House, 2010).
Traditional students are primarily driven by extrinsic factors (Shillingford & Karlin, 2013). The present study intends to understand the motivational factors found in college students in an online environment. Given previous findings, it is believed nontraditional students will score higher on intrinsic motivation measures, whereas traditional students will score higher on extrinsic motivation measures.

**Student Types**

Walters (2000) indicated that most nontraditional students were motivated by a desire to change their self-concept and improve their self-esteem. They call this a “regeneration” and claim it carries over to other aspects of their lives, not just school. This study displayed that many nontraditional students experience an event during their lives known as “redundancy,” meaning their motivation was driven by life events such as divorce, retirement, and feelings of being “stuck.” These events lead up to mature students reevaluating their lives and making an effort to change where they are in life by enrolling in a university.

Prior research shows nontraditional students focus on mastery of content more than traditional students (Johnson et al., 2016). Traditional students are more likely to report facing academic difficulties during college (Newbold, 2010). The same study found nontraditional students to be less interested in social or campus-related events than their counterparts. Hoyert and O’Dell (2009) found traditional students to focus on performance such as high grades and nontraditional students to focus on mastery of content, valuing educational lifelong learning goals. Nontraditional students were also found to be more aware of the socio-economic benefits tied to higher learning. Nontraditional students perform better academically (Carney-Crompton & Tan 2002; Jenkins, 2012; Lundberg, 2003). Mature students have more time management
experience, giving them the ability to ‘juggle’ school, family, and work. Nontraditional students are more prone to fatigue and time constraint issues (Van Doorn, 2014). Results showed nontraditional students spend more hours studying and working off-campus than traditional students (Wood & Frogge, 2017).

Motivation

Motivation is a complex, multidimensional inner process (Chen & Jang, 2010). Ryan and Deci (2020) have shown that intrinsic motivation is more nutritive in terms of psychological well-being than extrinsic motivation. Focusing our interests on intrinsic goals has been shown to lead to greater psychological health. Intrinsic motivation allows for vitality and self-actualization (Kasser & Ryan, 1996).

Having an intrinsic goal orientation towards an academic task means that the student's participation in the task is an end-all to itself, rather than participation being a means to an end. Intrinsic motivation is likely the reason for human learning, engaging in activities for the sake of internal reward (Ryan & Deci, 2020). Prior research has linked nontraditional students to be more intrinsically motivated (Tilley, 2014; Scott & Lewis, 2012).

There are three different kinds of intrinsic motivation (Vallerand, 1992). Intrinsic motivation to know, performing an activity for the satisfaction of learning, exploring, or trying to understand something new. Intrinsic motivation towards accomplishment means engaging in an activity for the pleasure of trying to accomplish or create something. Lastly, intrinsic motivation to experience stimulation means a person engages in a task to feel an increased level of cognitive stimulation while performing the task. Also known as Csikszentmihalyi's (2014) flow,
experiencing cognitive pleasure when engaging in an activity while also experiencing a complete absorption in the task.

On the other hand, extrinsic motivation refers to behaviors done for reasons other than inherent satisfaction. Extrinsic motivation can negatively affect genuine interest in a learning task and discourage subjective well-being in a classroom instead of intrinsic motivation’s model, promoting well-being through self-esteem and personal accomplishment (Bye, Pushkar & Conway, 2007). One extrinsic stressor nontraditional students are affected by more is if the money they are spending is worth all the effort needed to earn an education (Newbold et al., 2010; Woods & Frogge, 2017).

There are four kinds of extrinsic motivation (Ryan & Deci, 2020). External regulation is controlled and non-autonomous, driven by external rewards and punishments. Introjected regulation is partially internalized; there is an involvement of the ego, avoidance of shame, guilt, and anxiety. In identified regulation, there is a level of personal importance, where the person is conscious of the importance of an activity and chooses to carry out the activity. Lastly, in integrated regulation, there is congruence, synthesis, and consistency of identifications. It is internal, and it precedes intrinsic motivation in the spectrum from amotivation to intrinsic motivation.

**Online Learning**

Based on previous studies, nontraditional students prefer a flexible learning approach (Hansman, 2009; Richards, 2008; Ross- Gordon, 2011). Flexibility relates to a student’s ability to control what classes to enroll in, scheduling, exam resources, and environment, whether online, mixed, or in-person (Varela, Cater, & Michel, 2012). Clayton and colleagues (2010)
reported that undergraduate students choose online courses due to how flexibility fits their lifestyle. Wladis, Conway, and Hachey (2015) found nontraditional students to outperform traditional students in online courses. Wang, Shannon & Ross (2013) reported that undergraduate students who have taken an online course maintain higher motivation and perform better in online courses than those with no online experience. Students’ self-efficacy beliefs were found to increase in online courses if their experience with online courses in the past was a success (Clayton et al., 2010).

Online learning requires vast autonomy and self-direction (Artino, 2008). Students are expected to have a higher sense of autonomy in an online environment to complete all required assignments.

Nontraditional students through their life experiences accumulate the maturity needed to dedicate themselves to studying once enrolled. In a Johnson (2016) study, nontraditional students displayed higher scores on identified and intrinsic regulation than traditional students. Results also indicated nontraditional students to have higher levels of interest and teacher influence, endorsing learning goals, known as “mastery” of content.
The Present Study

Tilley (2014) suggested further research be done on the motivational differences of traditional and nontraditional students. This study aims to understand what motivational factors affect traditional and nontraditional students in online environments.

Participants had to complete the following measures:

H1: Academic Motivation Scale (Vallerand et al., 1992). It is believed that traditional students will score higher on the external regulation measure and the amotivation scale. Nontraditional students will likely score higher on the intrinsic motivation to know measure. Lastly, amotivation scores will be higher amongst traditional college students.

H2: Aspirations Index (Deci & Ryan, 1997). Traditional students will likely score higher on wealth importance. The nontraditional group will score higher on the importance of personal growth.

H3: General Causality Orientation Scale (Deci & Ryan, 2013) Nontraditional students will score higher in the measure’s Autonomy Orientation. In contrast, scores will be similar across controlled and impersonal orientations by both groups.

H4: Learning Climate Questionnaire (Williams, Deci & Ntoumanis, 2005). It is believed that nontraditional students will earn higher scores in this measure than traditional students.

H5: Motivated Strategies for Learning Questionnaire (Pintrich et al., 1991). It is believed that traditional students will show an extrinsic goal orientation. Nontraditional students will display intrinsic goal orientations.

It is hypothesized that nontraditional students will be more intrinsically motivated than traditional students, supporting previous research (Bye et al., 2007).
Methodology

Participants

A total of 208 participants were recruited from the University of Central Florida Psychology Research Participation System (SONA). The average age of participants was 18 years old; the age ranged from 18 to 47 years ($M=19.85$ years, $SD=3.95$ years).

Measures

The Academic Motivation Scale (AMS) is a measure of intrinsic, extrinsic, and amotivation in an educational environment. It is composed of 28-items divided into seven subscales (Vallerand et al., 1992). It uses the tenets of self-determination theory and measures three kinds of intrinsic motivation (intrinsic motivation to know, accomplish things, and experience stimulation). There are three kinds of extrinsic motivation (external, introjected, and identified regulation). The last subscale is amotivation.

The Aspirations Index is a set of surveys focusing on understanding individuals’ life goals (Kasser, 2019). It measures participants' goals from various domains (e.g., financial success, self-acceptance) along various rating dimensions (e.g., importance and likelihood of obtaining goals). The health factor was not used when surveying participants.

The General Causality Orientation Scale (GCOS) measures three different kinds of motivational orientation in a person. They focus on autonomy orientation, being oriented to a challenging task as a means of intrinsic motivation. Controlled Orientation goes on par with extrinsic motivation, meaning external rewards drive individuals. Lastly, Impersonal Orientation, the belief that completing a task is outside of our control. Individuals with this kind of...
orientation believe achievement comes from luck or fate; these individuals prefer to remain as they are (Deci & Ryan, 2013) and are mainly unmotivated.

The *Learning Climate Questionnaire (LCQ)* measures perceived autonomy support that students receive from their instructors (Williams, Deci & Ntoumanis, 2005). It is composed of 15 items calculated by averaging the total item scores. The score of item 13 must be reversed; higher average scores correlate with a higher level of perceived autonomy support.

The *Motivated Strategies for Learning Questionnaire (MSLQ)* is a self-report instrument designed to assess college students' motivational orientations and their use of different learning strategies for a college course (Pintrich et al., 1991). It is composed of a 31-item motivation section, that measures students’ goals and value beliefs for a course, beliefs about their skill to succeed, and test anxiety. The learning strategies section is also composed of 31 items measuring students’ cognitive strategies for learning. Lastly, there are 19 items measuring student management of different courses. Students rate themselves on a 7-point Likert scale from “not at all true of me” to “very true of me.” The first component of the motivational measure is “intrinsic motivation” goal orientation, student’s perception of why they are engaging in a task for reasons such as challenge, curiosity, or mastery. The student’s participation is an end-all to itself, rather than participating as a means to an end. Here the student is not concerned about grades or rewards but about the task itself. The second component is extrinsic goal orientation, based on whether the student is engaging in a task for a reward, a good grade, evaluation by others, or competition. Task value is the third component of the motivation scale; it refers to students’ evaluation of the task (how interesting they found it). The third and fourth components are expectancy components, control of learning beliefs, and self-efficacy for learning and performance. Meaning results will lead to positive outcomes and a self-appraisal of one’s ability.
to complete a task. Lastly, test anxiety is the final component measured by the motivation subscale.

The first component of the learning strategies subscale is rehearsal, which influences attention and encoding processes. Elaboration strategies help store information into long-term memory by building internal connections between items to be learned. The third component is organization, the efficiency of storing information in long-term memory. The fourth component is critical thinking, a student’s ability to bring knowledge from one area and apply it to a new environment to solve problems or reach decisions. Planning, monitoring, and regulating consist of the self-regulation component in the learning strategies subscale. Time study environment, effort regulation, peer learning, and help-seeking are the measure’s final components.

**Procedure**

Informed consent was presented at the beginning of the study. With the study taking approximately 30 minutes to complete, manipulation checks are included to avoid “straight-lining.” All surveys were administered online through Qualtrics. All measures were randomized in order, with the constraint that manipulation checks were never sequential to one another.
Results

All measures were analyzed using independent samples t-tests comparing traditional and nontraditional students. Given the unequal sample sizes between the two groups ($N_{\text{traditional}} = 200$ $N_{\text{nontraditional}} = 8$), tests for homogeneity of variance were conducted for each measure to ensure equal variances between groups. The Aspirations Index subscale ‘Fame’ was statistically significant ($p = 0.02$), as well as the G-COS subscale ‘Impersonal’ ($p =0.03$), so these measures were interpreted with the unequal variance statistic in SPSS.

Academic Motivation Scale (Vallerand et al., 1992)

An independent samples t-test indicated a significant difference between traditional and nontraditional students, in that traditional students ($M= 5.94$, $SD = 1.09$) reported higher scores of external regulation than nontraditional students ($M = 4.69$, $SD = 1.06$; $t(200) = 3.18, p < .001$; Cohen’s $d = 1.15$).

In regard to intrinsic motivation to know, nontraditional students ($M = 5.81$, $SD = 1.04$) did not report any significantly higher scores than compared to traditional students ($M = 5.06$, $SD = 1.42$), $t(202) = -1.49, p < .05$; Cohen’s $d = -0.54$).

Lastly, nontraditional students ($M = 1.38$, $SD = 0.96$) reported lower scores on the amotivation measure when compared to traditional students, however it was not found to be statistically significant ($M = 2.09$, $SD = 1.53$; $t(202) = 1.31, p < .190$; Cohen’s $d = 0.48$).

Aspirations Index (Kasser, 2019)

Results from an independent samples t-test indicated that traditional students ($M= 4.67$, $SD = 1.35$) reported higher scores on the importance of wealth measure than nontraditional
students, not statistically significant \((M= 3.83, SD= 1.37; \ t(201) = 1.73, p < .085 ; \text{Cohen’s }d = 0.62)\).

Nontraditional students \((M= 6.64, SD= 0.49)\) showed no significant difference on the importance of personal growth when compared to the traditional group \((M= 6.33, SD= 0.70; \ t(197) = -1.17, p < .245; \text{Cohen’s }d = -0.42)\).

**General Causality Orientation Scale (Deci & Ryan, 2013)**

An independent samples \(t\) test indicated that nontraditional students’ \((M= 6.19, SD= 0.73)\) scores on the Autonomy measure were significantly higher than traditional students’ \((M= 5.66, SD= 0.80; \ t(201) = -1.85, p < .066; \text{Cohen’s }d = -0.67)\).

On the Control measure, nontraditional students’ \((M= 4.15, SD= 1.21)\) scores were not significantly different to traditional students’ scores \((M= 4.01, SD= 0.76; \ t(199) = -0.45, p < .654; \text{Cohen’s }d = -0.17)\).

Lastly, on the Impersonal measure, nontraditional students’ scores \((M= 3.36, SD= 1.55)\), were not significantly different to traditional students’ \((M= 3.65, SD= 0.80; \ t(200) = 0.961, p < .337; \text{Cohen’s }d = 0.35)\).

**Learning Climate Questionnaire (Williams, Deci & Ntoumanis, 2005)**

An independent samples \(t\) test indicated that nontraditional students’ \((M= 5.42, SD= 0.90)\) scores on the LCQ were significantly higher than traditional students’ \((M= 4.29, SD= 1.12; \ t(195) = -2.64, p < .05; \text{Cohen’s }d = -1.01)\).
Motivated Strategies for Learning Questionnaire (Pintrich et al., 1991)

An independent samples t-test indicated that nontraditional students’ ($M=5.81$, $SD=1.15$) scores on the Intrinsic Goal orientation were significantly higher than traditional students ($M=4.21$, $SD=1.38$; $t(206)=-3.24$, $p<.001$; Cohen’s $d=-1.17$).

Results indicated that nontraditional students’ ($M=5.28$, $SD=1.27$) scores on the Extrinsic Goal Orientation were not significantly different from traditional students ($M=5.34$, $SD=1.20$); $t(204)=0.14$, $p>.891$; Cohen’s $d=0.05$).
Discussion

The present study found that traditional students expressed higher levels of external regulation and amotivation, supporting hypothesis one. Additionally, nontraditional students reported higher levels of intrinsic motivation. These findings support the literature in that nontraditional students tend to be intrinsically motivated to complete their education (Bye et al., 2007). Furthermore, this suggests that traditional college students are driven by external factors like previous research suggests (Hoyert & O’Dell, 2009; Jenkins, 2012).

On the Aspirations Index (Deci & Ryan, 1997), traditional students, as expected, scored higher on the importance of wealth, the extrinsic motivation experienced by financial wealth. We predicted that the nontraditional group scored higher on the importance of personal growth. However, hypothesis two was not supported.

As predicted, nontraditional students scored higher than the traditional group on the General Causality Orientation Scale’s Autonomy Subscale (Deci & Ryan, 2013). Scores from this measure align with scores from the Learning Climate Questionnaire (Williams, Deci & Ntoumanis, 2005), meaning nontraditional students perceive greater autonomy than their counter group. Thus, supporting hypotheses three and four.

Nontraditional students scored higher on intrinsic measures, such as being more willing to allocate effort. Allocating effort can take multiple forms, but this measure suggests that effort tends to be in terms of time spent studying and the efficiency of each study session (Barron & Hulleman, 2014). Although traditional students did not show extrinsic motivators in every measure, their intrinsic motivation was not superior to nontraditional students. Previous research argues that extrinsic motivation predominates amongst traditional college students (Scott &
Lewis, 2012; Jenkins, 2012). Also, feelings of amotivation can cloud a student's mind, thus decreasing scores on motivation measures (Vallerand et al., 1992).
Limitations and Future Directions

As with most Psychology experiments conducted through Universities, the majority of participants were Psychology majors and, as a result, may not portray a representative picture of all traditional and nontraditional college students. Furthermore, participants come from a limited participation pool, limiting the scale of this work.

As shown throughout the results, a significant limitation to this work was the lack of nontraditional students in our sample. The University’s research participant pool (SONA) is primarily made up of new college students taking general psychology courses. These individuals tend to fall under the traditional student category, with a mean of 18 years of age. To address this concern, current data collection will go beyond the SONA pool and attempt to reach the nontraditional students at the University. Furthermore, this work is vital to the success of this research, as the equal variance between groups will strengthen the analyses and interpretation.
Practical Implications

Scores on the LCQ indicated a significant difference between perceived autonomy amongst students. With this in mind, educators should value and try to develop their student’s sense of autonomy. This thesis supports past research in that intrinsic motivation surpasses extrinsic motivation across various dimensions (Ryan & Deci, 2020). Intrinsic motivation promotes psychological wellbeing and facilitates learning. Educators should facilitate their students’ intrinsic goals for learning to increase performance and promote mental wellbeing. A high focus on grades and assignments promotes extrinsic motivation, thus taking value away from mastery of content. Providing traditional students with more autonomous assignments can help their low intrinsic motivation. Facilitating a student's sense of intrinsic motivation can lead to more learning and improved performance in courses, specifically in Online courses (Tilley, 2014). Intrinsic motivation in online environments is as important as in a face-to-face environment like previous literature suggests (Chen & Jang, 2010).
References


