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The Rules of Engagement: A Test of Instructor Inputs and Student Learning Outcomes in Active versus Passive Learning Environments

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Abstract

As a guide or advocate in the classroom, professors more actively engage students in the learning process and capture their interest. Students' performance expectations of themselves are also impacted based on the learning environment created by instructors and the classification of the student. Instructors will learn the best way to complement the learning experiences of traditional vs. non-traditional students and graduate vs. undergraduate students. The importance of the study centers on how the current tech-savvy student learns best and what teaching methods instructors should consider in order to be optimally effective.

Key words: *active learning; passive learning; traditional students; non-traditional students; business students.*

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Introduction

Among the plethora of challenges facing higher education, student engagement and performance remain a primary concern. Whether based on problematic retention and graduation rates or for the quality of their educational brand, colleges and universities continually seek to enhance their pedagogical content and impact. By incorporating more effective strategies and methods, educational institutions better prepare today's technologically advanced students with marketable, employable skills while engaging in efforts to improve their retention and graduation rates.

In support of the same, this study details the classroom engagement and performance of 139 undergraduate and graduate students from two universities, namely Florida A&M University (FAMU) and University of Houston Downtown (UHD). The participating 72 male and 67 female students were completing coursework in the business schools within these respective universities. The goal of the study was to analyze student performance and engagement, specifically the total, physical, and emotional engagement, in three main categories: 1. active versus passive learning environments; 2. traditional versus non-traditional students; and 3. undergraduate versus graduate students based on a 34-question, Likert scale survey instrument. A total of twelve hypotheses were set forth in the three categories. The results of the study demonstrated that fifteen of the sixteen hypotheses were rejected, signifying higher engagement and performance explicitly in both physical and emotional measures, in active rather than passive class environments, by non-traditional, undergraduate students. The importance of this study centers on providing professors with additional studies that will encourage innovative, pedagogical techniques to promote greater engagement and performance in academia and beyond. This poses great significance to educational stakeholders like colleges and universities, professors, and students, as well as, employers and new graduates.

Active versus Passive Classroom Learning Environments

With tech-savvy, Generation-NeXt students, professors must consider when an active versus passive learning environment is demonstrated best in the classroom. The active learning environment incorporates activities and requires the student to critically think and problem solve, thus complementing student learning experiences through increased content knowledge (Kilgo, Sheets, and Pascarella, 2015; Kitchens, Means, and Tan, 2018; Braxton, Milem, and Sullivan, 2000; Hawtrey, 2007; Kember, 2009). Interactive small group exercises, applying business theories in case study analyses, hands-on community learning activities, and student-led course discussions in addition to employing varying question-and-answer methods and devising content scenarios with accompanying answers all demonstrate effective examples of active learning approaches (Zepke and Leach, 2010; Pedersen, 2010; Wright, 2000).

Incorporating more engaged, experiential learning practices reinforces the pedagogical concept that students better recall information through active rather than passive learning methods (Zepke and Leach, 2010; Douglas, 2012; Wingfield and Black, 2005; Hawtrey, 2007; Teixeira-Poit, Cameron, and Schulman, 2011). As a by-product of classroom engagement activities, a disengaged student may transform into a highly engrossed participant by shifting the focus from the professor as a lecturer to the professor as one who advocates or supports students within the educational realm.

As a student supporter, professors more actively engage students in the learning process and capture their interest in alignment with attaining the educational and professional goals of long-term content knowledge, recall, and application (Schussler, 2009; Pollard, 2014; Kitchens, Means, and Tan, 2018; Topcu and Abrahams, 2018). These methods may yield numerous benefits to students and higher education institutions. Students who are actively engaged in classrooms have more impactful course encounters and learning processes, tend to achieve more overall course objectives, and exert the "psychological energy" to involve themselves in university-

related collaborations and thus, demonstrate movement toward critical educational and professional associations (Newswander and Borrego, 2009; Arjomandi, Seufert, O'Brien, and Anwar, 2018; Braxton, Milem, and Sullivan, 2000). Furthermore, colleges and universities may achieve their objectives for retention and graduation, as enhanced student engagement could result in better recruitment efforts for future students.

In contrast, passive learning may render less desirable results for both students and their institutions. Passive learning promotes the professor as the singular individual in the classroom who may share and provide instruction (Huggins and Stamatel, 2015; Topcu and Abrahams, 2018). Herein, in traditional classroom settings, the professor actively teaches students who may passively absorb the lesson and seldomly pose questions. Traditional lecture-style class structures may allow students to profit from a more convenient, direct content distribution method (Huggins and Stamatel, 2015). Nevertheless, overuse of this teaching style can severely minimize student engagement and lead to unwanted consequences (See H_{01}).

Low participation may negatively impact regular class attendance, resulting in students missing valuable course content (Huggins and Stamatel, 2015). When students are present, it may impede engrossment, which reduces learning outcomes and could possibly lead to failure of courses (Huggins and Stamatel, 2015). As passive learners, they fail to utilize the multiple levels of thinking, critical analysis, and ingenuity that are sought after by employers (Oliver, 2008; Huggins and Stamatel, 2015). Unlike students in active learning environments, passive learners also find it more difficult to connect interpersonally and socially on college campuses (Felten, Bagg and Bumbry et al 2013; Braxton, Milem, and Sullivan, 2000). Therefore, passive learning may also lead to the lack of development in the skills needed to understand concepts, to successfully pass courses, to socially engage or network, and to obtain certain preferred soft skills, possibly affecting college retention, graduation, and post-college employment rates. Consequently, the classroom performance expectations of active learners are likely better than the classroom performance expectations of passive learners (See H_{02}).

Regarding active versus passive classroom learning environments, it is hypothesized that:

> Null Hypothesis 1 (H_{01}): Students in active learning classroom environments will not have higher levels of (a) total, (b) physical, and (c) emotional engagement than students in passive classroom learning environments.

> Null Hypothesis 2 (H_{02}): Students in active learning classroom environments will not have higher performance expectations than students in passive classroom learning environments.

Traditional versus Non-traditional Students

In 2015, 40.5% of the millions of undergraduate students attending college were categorized as traditional students (National, 2018). Traditional students, attending college within one year of completing their secondary education, consist of those who have middle or upper class backgrounds and are in the age range of 17 to 24 (Gilardi and Guglielmetti, 2011; Donaldson and Townsend, 2007; Howard, James and Taylor, 2002). According to studies conducted by Fritschner (2000), the age of a student relates to their in-depth course activity; in fact, the studies demonstrated that "traditional students" were about "twice" as likely to not engage in class participation as "non-traditional students" were (Howard, James and Taylor, 2002). (See H_{03}). Various factors, such as the implementation of learning strategies, may aid in explaining the differences in student engagement among traditional students (Howard, James, and Taylor, 2002).

Furthermore, traditional students have additional interests that may compete with the time and attention that is given to class preparation. "Social integration" centers, in part, on the fellowship with peers that a student has based on well-defined

and less orderly connections; students integrate by joining associations and participating in school-sponsored events, as well as, formulating study groups and gathering for leisurely activities (Gilardi and Guglielmetti, 2011; Arjomandi, Seufert, O'Brien, and Anwar, 2018; Braxton, Milem and Sullivan, 2000). "Academic integration" maintains a profound significance as well, as it may impede the ability of traditional students to actively engage in class settings (Braxton, Milem and Sullivan, 2000). "Academic integration typically has been operationally defined and measured as a student's estimation of their academic and intellectual development, grade point average and student's perception of faculty concern for teaching and student development" (Braxton, Milem and Sullivan, 2000). As a result, the lower the social and academic integration, then the more likely that a traditional student is not actively engaged in a course and therefore may not be retained by the college or university (Braxton, Milem and Sullivan, 2000; Felten, Bagg, Bumbry, et al, 2013).

Conversely, non-traditional students often have different academic and personal responsibilities that impact their collegiate endeavors (Chung, Turnbull and Chur-Hansen, 2017). Non-traditional students may be categorized by these primary criteria: 1. "age"; 2. "socio-economic status"; and 3. retention (Gilardi and Guglielmetti, 2011). In the "age" category, they are described as students who did not enroll and attend college within a specific time frame after completing their secondary education (Gilardi and Guglielmetti, 2011; Howard, James and Taylor, 2002). The make-up of non-traditional students widely vary. They may or may not work, may register for various course credit hours, may seek a degree to obtain more stability, and represent diverse groups (Gilardi and Guglielmetti, 2011).

Unlike traditional students who are usually entering college and exploring "social integra-tion" in various forms, non-traditional students are more likely to have sustainable non-academic, both well-defined and less orderly, connections that may provide support for them (Gilardi and Guglielmetti, 2011). Therefore, they are presented with the unique task of assessing how to properly manage the competing academic interests with existing personal and professional responsibilities (Gilardi and Guglielmetti, 2011). (See H04). An international study involving "228 non-traditional students", of which roughly 61.8% were 23 years or older, demonstrated that their academic engagement centered on putting forth effort and time in class, nurturing professorial congruence, and networking, thereby validating the premise that relationship cultivation may significantly increase the performance and retention of non-traditional students (Gilardi and Guglielmetti, 2011). Another study revealed that this category of students are doubly inclined to engage in active discourse while also being even more likely to take ownership for navigating and responding to questions posed by the professor; all in all, "[n]early 45 percent of non-traditional students" versus "17 percent of traditional students" engaged in active discourse (Howard, James and Taylor, 2002). As a result, performance expectations for non-traditional students are likely to be higher than for traditional students (Chung, Turnbull and Thur-Hansen, 2017).

Regarding traditional versus non-traditional students, the following is hypothesized:

> Null Hypothesis 3 (H_{03}): Non-traditional students will not have higher levels of (a) total, (b) physical, and (c) emotional engagement than traditional students.

> Null Hypothesis 4 (H_{04}): Non-traditional students will not have higher performance expectations than traditional students.

Undergraduate versus Graduate Students

Undergraduate students encompass a combination of traditional and non-traditional students. Depending on their level of preparation and experiences in

academic matriculation through high school, undergraduate students may have varying performance expectations for themselves. Previous studies have shown that insufficient educational foundations plague one in three students (Attewell, Heil and Reisel, 2011). Accordingly, a notable conclusion has been that one's educational foundation is a component of reaching academic benchmarks but does not account the same for every person (Attewell, Heil and Reisel, 2011; Severiens, Meeuwisse and Born, 2015). Other factors like socio-economic status and work-academic balance play critical roles in student performance and thus expectations (Attewell, Heil and Reisel, 2011). Challenges with securing funding to pay for college educations also plague low-income students while others may have more time to focus on academics and "social integration" rather than balancing class responsibilities and work (Attewell, Heil and Resisel, 2011; Hu and St. John, 2001; Gilardi and Guglielmetti, 2011). Although not absolute, higher integration levels may mean better grades and advanced levels of performance expectations from the percentage of undergraduate students in certain socio-economic backgrounds (See H_{05}). Nonetheless, motivation, regardless of socio-economic status, may be a critical factor that accounts for excellent student performance (Domene, Socholotiuk, and Woitowicz, 2011). For instance, a 2009 analysis showcased increased motivation among students who psychologically connected or associated their college academics to their future goals (Domene, Socholotiuk, and Woitowicz, 2011).

In addition, those undergraduate students who performed well academically in their secondary education pursuits may have higher performance expectations in college (See H_{06}). This premise is supported by a study of high school students who tied their individual goals in secondary studies to those in college academics; it revealed a positive correlation between the relevance of current academics and their future goals and gains (Domina, Conley and Farkas, 2011). Therefore, regardless of background, undergraduate students may have high performance expectations when academic pursuits are aligned with the relevance of future professional goals; undergraduate academic achievements may also provide insight as to who will pursue graduate and professional education (Mullen, Goyette and Soares, 2003).

Interestingly, the performance expectations of graduate students may differ from those in undergraduate studies (See H_{06}). This may be, in part, due to the multiple factors affecting the rigorous expectations of graduate school. One factor deals with adjusting the "social identity" of the graduate student to one who is "a scholar or a knowledge producer", which tremendously contrasts with past student requirements (Ostrove, Stewart and Curtin, 2011; Curtin, Stewart and Ostrove, 2013). This factor makes the "social integration" and "academic integration" of the graduate students even more imperative for the success of their subsequent achievements (Ostrove, Stewart and Curtin, 2011; Gilardi and Guglielmetti, 2011). Similar to non-traditional students, graduate students are challenged to cultivate personal and professional foundations, thus creating competing circumstances with work, family, and course responsibilities. Such competition may impact international graduate students differently, thus supporting a study setting forth that they held various academic interaction points as paramount for academic success and, for that reason, were more focused on establishing a "sense of belonging" and having "research and professional development experiences" (Curtin, Stewart and Ostrove, 2013; Ostrove, Stewart and Curtin, 2011). However, graduate students also may have added pressures that negatively impact their mental state due to varying factors associated with graduate school (Grady, Latouche et al, 2014). (See H_{05}).

Despite having higher class engagement in comparison to undergraduate students, graduate students may face increased pressures in balancing school, work, and family itineraries (Grady, Latouche et al, 2014; Orfield, 2014). For example, the following statements come from graduate students regarding the pressures faced in academia:

- "the best paper is a done paper";
- "it doesn't have to be good, it just has to be finished";

- "putting things in perspective … having reasonable standards for yourself"; and
- " … well this is really hard, like I can't be a good mother and be like the great graduate student."

(Grady, LaTouche et al, 2014).

As a result of these competing factors, it is hypothesized (in relation to undergraduate versus graduate students) that:

Null Hypothesis 5 (H_{05}): Graduate students will not have higher levels of (a) total, (b) physical, (c) emotional, engagement than undergraduate students.

Null Hypothesis 6 (H_{06}): Undergraduate students will not have higher performance expectations than graduate students.

There was one last set of hypotheses tests performed. This was comparing the average response rates of Face-to-Face versus Online versus Hybrid in relationship to (a) total, (b) physical, (c) emotional engagement. (See H_{07}).

Null Hypothesis 7 (H_{07}): The average response rates will not be equal with regard to (a) total, (b) physical, (c) emotional engagement regardless of method of delivery (Face-to-Face versus Online versus Hybrid).

Null Hypothesis 8 (H_{08}): The average Performance expectation response rates will not be equal regardless of method of delivery (Face-to-Face versus Online versus Hybrid).

Method

Sample and Data Collection

For this study, one hundred and thirty-nine (139) data points were collected to analyze the responses of learners in an active learning environment versus a passive learning environment. The data collected included 40 graduate and 99 undergraduate students. The three different types of learning environments included were face-to-face (F2F) delivery, online delivery, and hybrid delivery, which was a combination of face-to-face and online. The respondents were also classified into traditional and non-traditional students. Surveys were administered during class and were collected over a two-week period. Data was collected by faculty members who taught the course, and students received extra credit for their course work for completing the survey. This was a convenience sample of university students.

A passive classroom learning environment was examined in online and face-to-face classes that met twice per week for seventy-five minutes. An active classroom learning environment was examined in a hybrid course where students met once a week with the professor in class and then course work was completed outside of the classroom for the second period. Assignments were submitted before the beginning of class, thereby requiring students to study and learn the course material individually or in small groups. Students subsequently met with the professor to review and complete more interactive assignments.

For the purposes of this study, non-traditional students were those of an average age of 30 and who returned to college after graduating high school and starting

respective careers while traditional students were between 17-22 years old due to entering college within the same calendar year of graduating from high school. Graduate students were pursuing a Master of Business Administration (MBA) whereas undergraduate students were pursuing a Bachelor of Science as a general business degree. All students were enrolled in the business schools at FAMU and UHD.

Instrument

The survey instrument, presented in Appendix 1, included thirty-four questions. They were comprised of the following areas: a. student background (six items), b. student learning outcomes (four items), and c. academic motivation scale (twenty-four items). In each question, the respondent was provided a seven-point Likert scale to use in their responses. The Likert scales range of responses were: 1 (Strongly Disagree) to 7 (Strongly Agree), 1 (Worse) to 7 (Better), 1 (Does Not Correspond At All) to 7 (Corresponds Exactly), 1 (Nothing to Do With Me) to 7 (Totally Due to Me), and 1 (Never Present) to 7 (Always Present).

Results

SPSS and Microsoft Excel (Excel) were both used to conduct the statistical analysis. Excel helped to create contingency tables and to isolate certain subgroups of data with select characteristics. Once each subgroup within the study was isolated, the means and standard deviations were calculated for the participants' responses. In some instances, multiple item responses were combined for these calculations. Subsequently, F-tests, t-tests, and ANOVAs were used to analyze the collected data. Of the 139 completed surveys, 51.8% of the respondents were male and 48.2% were female. Approximately, 20.9% were single and 79.1% were married. Concerning ethnicity, 51.8% of the respondents were Caucasian, 5.8% were Hispanic, 7.9% were African American, 25.2% were Asian, and 9.3% were Middle Eastern. The average age of the respondents was 25.76 years old.

With regards to collegiate education completed, 1.4% had completed one year, 38.2% had completed two years, 28.8% had completed three years, 22.3% had completed four years, 6.5% had completed five years, 1.4% had completed six years, and 1.4% had completed seven years. Furthermore, 71.2% were undergraduate students while 28.8% were graduate students. 31.7% of respondents were in an active classroom setting whereas 68.3% of respondents were in a passive classroom setting. 7.9% reported they had only completed high school, 57.5% had completed some college, 31.7% were college graduates, and 2.9% possessed a graduate degree, such as MBA, Juris Doctorate (JD), or Doctor of Philosophy (Ph.D.).

Table 1 shows the overall averages and standard deviations for the selected questions on the student learning outcome of Performance Expectation. In reference to the Performance Expectation questions, the average responses dropped to Slightly Disagree to Disagree range. For the category Self-Reported Performance, the response averages rose to the Slightly Agree to Agree range.

Table 1:
Averages and Standard Deviations of Student Learning Outcome (Performance Expectation)

Question	Average	Standard Deviation
Performance Expectation		
I often feel like I may not be able to meet my instructors' expectations.	3.22	1.86
I am often anxious that I won't be able to perform as well as others.	3.69	1.98
I often feel like the student requirements of my class and school are beyond my capability.	2.60	1.79
I often feel like I may not be able to keep my performance up with others in my class and school.	2.78	1.82

Table 2 shows the overall averages and standard deviations for the selected questions on Academic Motivation. These questions are further divided into four different categories: a. Emotional Engagement, b. Physical Engagement, c. Cognitive Engagement: In Class, and d. Cognitive Engagement: Out of Class. All of these questions used the seven-point Likert scale (1 - Strongly Disagree to 7 - Strongly Agree). These Emotional Engagement questions address the emotional state of the student, such as excited, enthusiastic, and/or energetic toward the class. The Physical Engagement statement determines the effort contributed during class. Cognitive Engagement: In Class addresses whether the student is focused and paying attention while in class. Whereas, the Cognitive Engagement: Out of Class addresses the student's focus and attention level on class material when not in the classroom setting.

The average response rate for all of the engagement satisfaction categories is above 5.0, which is in the Slightly Agree to Agree range. The only exception is in response to the statement: "When I am reading or studying material related to this class/course, I am absorbed by class discussion and activities." The average response rate is a 4.95, which is Neutral to Slightly Agree.

Table 2:
Averages and Standard Deviations of Academic Motivation (Engagement)

Question	Average	Standard Deviation
Emotional Engagement		
I am enthusiastic about this class/course.	5.40	1.46
I feel energetic when I am in this class/course.	5.16	1.57
I am interested in material I learn in this class/course.	5.76	1.34
I am proud of assignments I complete in this class/course.	5.60	1.37
I feel positive about the assignments I complete in this class/course.	5.79	1.23
I am excited about coming to this class/course.	5.35	1.56

Physical Engagement		
I work with intensity on assignments for this class/course.	5.43	1.36
I exert my full efforts toward this class/course.	5.45	1.45
I devote a lot of energy toward this class/course.	5.17	1.61
I try my hardest to perform well for this class/course.	5.73	1.35
I strive as hard as I can to complete assignments for this class/course.	5.88	1.30
I exert a lot of energy for this class/course.	5.16	1.60
Cognitive Engagement: In Class		
When I am in the classroom for this class/course, my mind is focused on class discussion and activities.	5.55	1.36
When I am in the classroom for this class/course, I pay a lot of attention to class discussion and activities.	5.60	1.36
When I am in the classroom for this class/course, I focus a great deal of attention on class discussion and activities.	5.59	1.37
When I am in the classroom for this class/course, I am absorbed by class discussion and activities.	5.32	1.31
When I am in the classroom for this class/course, I concentrate on class discussion and activities.	5.55	1.22
When I am in the classroom for this class/course, I devote a lot of attention to class discussion and activities.	5.55	1.25
Cognitive Engagement: Out of Class		
When I am reading or studying material related to this class/course, my mind is focused on class discussion and activities.	5.25	1.38
When I am reading or studying material related to this class/course, I pay a lot of attention to class discussion and activities.	5.27	1.40
When I am reading or studying material related to this class/course, I focus a great deal of attention on class discussion and activities.	5.21	1.43
When I am reading or studying material related to this class/course, I am absorbed by class discussion and activities.	4.95	1.53
When I am reading or studying material related to this class/course, I concentrate on class discussion and activities.	5.12	1.51
When I am reading or studying material related to this class/course, I devote a lot of attention to class discussion and activities.	5.14	1.50

Tests were conducted to see if there were any differences in responses between active learners in hybrid classes and passive learners in face-to-face and online courses with regards to performance and engagement. The engagement category was separated into emotional and physical areas.

A statistical difference existed in all four of the active versus passive learning environment hypotheses tested. With regard to Engagement, the active learners had a higher score than the passive learners (p-value = .00). Also, breaking the engagement category into emotional and physical, there was a significant difference in physical engagement (p-value = .00) and emotional engagement (p-value =.09). The results of the study revealed that the performance expectations were greater from respondents in

an active learning classroom (p=.06). Table 3 presents the tested hypotheses and their corresponding p-values.

Table 3:
Active Classroom versus Passive Hypotheses Results (Included undergraduate and graduate students in both groups)

	Active Learning means are reported below the Passive Learning means.	Mean (Variance)	t	P
H_{01A}	In an active classroom learning environment, Total Engagement is not greater than in a passive classroom learning environment. (This is with all Engagement questions combined.)	5.37 (2.03) 5.49 (2.01)	-5.15	*.00
H_{01B}	In an active classroom learning environment, Physical Engagement is not greater than in a passive classroom learning environment.	5.27 (2.11) 5.91 (1.99)	-5.94	*.00
H_{01C}	In an active classroom learning environment, Emotional Engagement is not greater than in a passive classroom learning environment.	5.46 (1.94) 5.61 (2.38)	-1.32	*.09
H_{02}	In an active classroom learning environment, Performance Expectation is not greater than in a passive classroom learning environment.	2.98 (3.34) 3.27 (4.24)	-1.57	*.06

Table 4 depicts the next set of hypotheses in which the researchers compared traditional student responses and non-traditional student responses using the same underlying hypotheses. Similar to the last set of hypotheses, all four hypotheses rejected at a p-value less than two percent. Non-traditional student responses were higher for Total Engagement, Physical Engagement, Emotional Engagement, and Performance (p-value = .00, .00, .00, and .01, respectively). Table 4 presents the tested hypotheses and their corresponding p-values.

Table 4:
Traditional versus Non-Traditional Hypotheses Results (Traditional students met face-to-face. Non-traditional students met online and in hybrid formats.)

	Non-Traditional means are reported below the traditional means.	Mean (Variance)	t	P
H_{03A}	Total Engagement is not greater in non-traditional students than in traditional students. (This is with all Engagement questions combined.)	5.18 (2.22) 5.74 (1.90)	-7.84	*.00
H_{03B}	Physical Engagement is greater in non-traditional students than in traditional students.	5.05 (2.36) 5.81 (1.75)	-7.52	*.00
H_{03C}	Emotional Engagement is greater in non-traditional students than in traditional students.	5.31 (2.06) 5.67 (2.04)	-3.58	*.00
H_{04}	Performance Expectation is greater in non-traditional students than in traditional students.	2.87 (3.18) 3.23 (3.95)	-2.26	*.01

Further tests were conducted on the undergraduate student responses versus graduate student responses. Per Table 5, this group had three hypotheses rejected at a p-value less than five percent. It was determined that the graduate student Total Engagement and Physical Engagement averages were greater than undergraduate student's averages (p-value .01, and .02, respectively). In contrast, undergraduate Student Performance averages were greater than the graduate student averages (p-value .00). There was one borderline rejection, with a p-value of ten percent reported, graduate student Emotional Engagement was greater than undergraduate student averages. The tested hypotheses and their corresponding p-values are presented below.

Table 5:
Undergraduate versus Graduate Hypotheses Results
(Graduate students met face-to-face. Undergraduate students met online, face-to-face, and in hybrid formats.)

	Graduate means are reported below the undergraduate means.	Mean (Variance)	t	P
H_{05A}	Total Engagement is not greater in graduate students than in undergraduate students. (This is with all Engagement questions combined.)	5.43 (2.14) 5.63 (2.05)	-2.42	*.01
H_{05B}	Physical Engagement is not greater in graduate students than in undergraduate students.	5.40 (2.13) 5.64 (2.21)	-2.15	*.02
H_{05C}	Emotional Engagement is not greater in graduate students than in undergraduate students.	5.46 (2.15) 5.61 (1.90)	-1.26	*.10
H_{06}	Performance Expectation is not greater in undergraduate students than in graduate students.	3.21 (3.77) 2.72 (3.13)	2.79	*.00

An ad-hoc test was conducted using ANOVAs to determine whether there were true differences between the student groups divided by instructional methods: face-to-face versus online versus hybrid instructional methods. The researchers tested to see if those three groups responded differently to the topics of Total Engagement, Physical Engagement, Emotional Engagement, and Performance. With regards to this, three of the four hypotheses were rejected at a p-value = .00. The results suggest that there was a difference in the three groups when testing for total engagement, emotional engagement, and physical engagement. It is interesting to note that the face-to-face method had the lowest response rate for the three groups when dealing with overall engagement, emotional engagement, and physical engagement. Table 6 presents their corresponding p-values.

Table 6:
Face-to-Face versus Online versus Hybrid Student Group Hypotheses Results

	Graduate means are reported below the undergraduate means.	Mean (Variance)	t	P
H_{07A}	Total Engagement responses are different in Face-to-Face versus Online versus Hybrid Instructional Methods. (This is with all Engagement questions combined.)	5.18 (2.22) 5.71 (1.49) 5.74 (2.05)	31.55	*.00
H_{07B}	Physical Engagement responses are different in Face-to-Face versus Online versus Hybrid Instructional Methods.	5.05 (2.36) 5.68 (1.40) 5.94 (1.89)	37.71	*.00
H_{07C}	Emotional Engagement responses are different in Face-to-Face versus Online versus Hybrid Instructional Methods.	5.31 (2.06) 5.74 (1.60) 5.64 (2.29)	7.64	*.00
H_{08}	Performance responses are different in Face-to-Face versus Online versus Hybrid Instructional Methods.	2.87 (3.18) 3.18 (3.59) 3.15 (4.09)	1.81	.16

Hypotheses Rejected and Not Rejected

Fifteen of the sixteen hypotheses were rejected: H_{01A}, H_{01B}, H_{01C}, H_{02}, H_{03A}, H_{03B}, H_{03C}, H_{04}, H_{05A}, H_{05B}, H_{05C}, H_{06}, H_{07A}, H_{07B}, H_{07C}, and H_{08}. When testing active learning environments versus passive learning environments (H_{01A}, H_{01B}, H_{01C}, and H_{02}), the hypotheses concerning Total, Physical, and Emotional Engagement were rejected (p-value = .10).

When testing traditional students versus non-traditional students, again all four of the hypotheses proved to be significant (H_{03A}, H_{03B}, H_{03C}, and H_{04}). Non-traditional student responses were higher than traditional student responses when concerned with Performance, Total Engagement, Physical Engagement, and Emotional Engagement (p-value = .00, .00, .01, and .00, respectively).

When testing undergraduate responses versus graduate responses, three of the four hypotheses were rejected at a p-value less than .05) (H_{05A}, H_{05B}, and H_{06}). There was one (H_{05C}) hypotheses that had a p-value = .10. The graduate responses were higher than undergraduate responses concerning overall Engagement, Physical Engagement, and Emotional Engagement (p-value = .01, 02, and .10 respectively). In contrast, per H_{06}, the undergraduate responses were higher than graduate responses concerning Performance (p-value = .00). As such, all four hypotheses were rejected.

Lastly, when conducting the ad-hoc ANOVA tests comparing the three subgroups (Face-to-Face, Online, and Hybrid): three of the four hypotheses were rejected. These hypotheses involved Total Engagement, Physical Engagement, and Emotional Engagement (p-value = .00, .00, and .00, respectively). It was previously noted that the lowest scoring of the three groups was the face-to-face group. One hypothesis concerning Performance was not rejected (p-value = .16), meaning the average Performance response rates were equal to each other regardless of delivery method.

Conclusion

As a student advocate in the classroom, professors more actively engage students in the learning process and capture their interest. Students' performance expectations of themselves are also impacted by the learning environment created by

instructors and based on the classification of the student. This study suggests that instructors develop methods and best practices to com-plement the learning experiences of traditional versus non-traditional students and graduate ver-sus undergraduate students.

Managerial and Research Implications

Educators are challenged with the need to balance engaging Generation NeXt learners in the classroom while meeting assessment requirements of accrediting organizations (i.e. student performance). This challenge may be addressed when educators create opportunities for Generation NeXters to learn in a new and remixed way. There is some research on active learning and student learning gains in the math and science disciplines. However, there is a lack of empirical evidence in the business education disciplines. The results of this study suggest that an instructors' active learning teaching style positively improves the classroom environment to increase student engagement as well as student learning in the business education arena. Further, it is reported that graduate and non-traditional learners are more engaged than undergraduate and traditional learners.

The interesting finding rests in the examination of the performance expectations of these groups. The findings suggest that while traditional learners have higher performance expectations than non-traditional learners, undergraduate students report having higher performance expectations than graduate learners. On this outcome, undergraduate students demonstrate giving greater attention to their performance when compared to graduate students.

Limitations and Future Areas of Research

In the future, it is recommended that data be collected using a 5-point Likert scale. Given the current survey format, respondents displayed a tendency to stay in the neutral zone when responding. This pattern of response behavior is likely due to the fact that there were too many answer options provided in a 7-point Likert scale.

In addition, predictor questions (yes/ no) should be included in order to expand the statistical analysis. The current survey is limited to Likert scale responses which does not allow for binary prediction using regression models.

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