The Influence of Traditional and Modern Learning Spaces on Pedagogical Affect, Classroom Community, and Learning Outcomes for Marketing Students

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Purpose of the Study: This exploratory study seeks to gain a deeper understanding of how traditional and modern learning spaces may be shaping the marketing educational experience. Specifically, this research explores whether there are differences in pedagogical affect, classroom community, and learning outcomes based on the type of learning space used for marketing education.

Method/Design and Sample: Experiential learning is the underlying theory supporting this research. To investigate outcomes associated with synergistic transactions between marketing students and the environment, the study employed a quasi-experimental design to compare two unique classroom environments: traditional learning spaces and modern learning spaces.

Results: A survey of 289 marketing students indicate that perceptions of pedagogical effectiveness, classroom community, and perceived learning outcomes were higher in the traditional learning space. Marketing students also achieved higher scores on exams and projects in the traditional classroom. Conversely, they performed better on in-class assignments in the modern learning space.

Value to Marketing Educators: Fellow educators should recognize that the type of classroom can yield different educational experiences for marketing students. These results beg the question of whether an investment in modern classroom spaces is yielding desired educational outcomes.

Keywords: learning spaces, pedagogical affect, classroom community, learning outcomes, classroom design

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INTRODUCTION

A key mission for higher education faculty is to arm students with knowledge and competencies for the extremely competitive and highly dynamic business workplace. Communication, teamwork, problem-solving, and the ability to take initiative are commonly mentioned among the top skills in demand because they are integral for corporate success (Finch et al., 2018; Fink & Fink, 2019; Kutlubay & Uslay, 2019; Osmani et al., 2019). In Yeoh's (2019) Delphi study of marketing managers and human resource managers, 51 skills were assessed and four emerged as most critical for entry-level marketing jobs: problem-solving, communication, critical thinking, and marketing domain knowledge. To provide opportunities for students to develop these skills and their employability marketing instructors have adapted curriculum by incorporating team-based projects, active learning approaches, and collaborative activities (Ashraf, 2004; Batra et al., 1997; Chad, 2012; Hansen, 2016; Kutlubay & Uslay, 2019). These efforts have been fruitful for students. A recent analysis of over 11,000 marketing majors from 600+ U.S. colleges found that the overall marketing program of study had a positive impact on their perceptions of skill development, especially in areas deemed important for success (Hartley, Routon, & Torres, 2019).

To accommodate new pedagogical approaches, business schools have been transforming traditional classrooms by building entirely new learning spaces or redesigning existing spaces. Therefore, institutions of higher education are charged with creating learning spaces that enhance the student experience while also being fiscally responsible to their stakeholders. New construction and facility improvements can cost millions of dollars (Hill & Epps, 2010) and the year 2015 marked an all-time high with $11.5 billion spent on construction at universities (Marcus, 2016). Are these renovations worth the cost and producing desired results, especially at a time when higher education is facing tough enrollment challenges and financial concerns? While

we cannot provide a definitive answer, this study provides useful insights that may inform decisions about making investments to modernize traditional learning spaces, especially spaces intended for activities common in marketing classes.

Historically, learning spaces represent the physical place and environment where learning is taking place. Instructor-led class sessions remain a central focus or nexus of learning so this study focuses on the physical teaching spaces of classrooms. The extant literature indicates a strong interest in studying relationships between different types of classroom learning spaces and student experiences. Although there are no exact standards, *traditional learning spaces* tend to have fixed furniture in rows and a single focal point such as a central screen or instructor, to facilitate a one-way, linear flow of communication where students primarily learn alone (Cotner et al., 2019; Johnson & Johnson, 2002; Medini & Peter, 2019). *Modern learning spaces* go by many names such as flexible learning spaces (Neill & Etheridge, 2008), technology-enhanced active learning classrooms (Brooks, 2012), smart classrooms (Mendini & Peter, 2019), TILE - Transform Interact, Learn, Engage classrooms (Van Horne et al., 2012), NGLS - new generation learning spaces' (Byers et al., 2014), and active learning classrooms (Rands & Gansemer-Topf, 2017). Despite inconsistent terminology, common features of these spaces often include, moveable furniture, round desks for learning with peers, tableside whiteboards, writable walls with dry erase paint, collaborative learning zones, high-tech, and a lack of one fixed focal point for the instructor (Cotner et al., 2019; Mendini & Peter, 2019). Learning spaces are thought to influence student attitudes and experiences such as active learning (Barkley, 2010), engagement (Mendini & Peter, 2019), instructor and student behavior (Brooks, 2012; Monahan, 2002), and student satisfaction (Hill & Epps, 2010). The purpose of this research is to gain a deeper understanding of how traditional and modern learning spaces may be shaping the educational experience for marketing students.

This paper makes several important contributions to advance our understanding of the relationships between physical space where marketing instruction is taking place and student experiences. We extend scholarly works by investigating students' attitudes toward instructional methods, sense of classroom community, and perceived learning using reliable, established scales. The study addresses the weaknesses of other studies that lack empirical evidence to substantiate discussions and recommendations about learning spaces. Also, while studies have explored learning spaces, research findings present inconsistent results, especially as it pertains to learning outcomes. There is a dominant use of perceived learning measures rather than instructor-assessed measures; each of which captures two unique constructs (Bacon, 2011). By including actual student performance, this study overcomes the limitations of others that only included student perceptions of learning.

THEORETICAL OVERVIEW

Learning Spaces

Learning spaces represent the physical environment where learning occurs (Cook, 2010; Walker & Todhunter, 2015) and may also include the interface between a student's learning style and the environment (Kolb & Kolb, 2005). Learning spaces are important because they are a critical component for effectively carrying out higher education's academic mission. A growing body of evidence suggests that the quality of students' deep learning experience is a function of the learning space (Mahat & Dollinger, 2019). With the shift from teacher-centered to student-centered learning approaches, research has been accumulating about methods for developing interactive teaching, (Matthews et al., 2009) which includes altering perspectives about learning spaces (c.f., Oblinger & Lippincott, 2006). For instance, some learning spaces are specifically designed to support constructivist pedagogy (Ng, 2015; Radcliffe, 2009) to help the instructor shift from being a "sage on the stage" to becoming a "guide on the side" (King, 1993; Misra & Misra, 2020) or even a "peer at the rear" where the teacher takes on a learning role in a classroom community (Biesta, 2019).

Monahan (2002) proposed a spectrum of learning spaces that range from disciplinary to autonomous designs. Disciplinary designs are often traditional, unidirectional, and inflexible with furniture attached to the ground and often configured in a tiered, fixed row format. Autonomous designs are more modern, versatile, and malleable with mobile furniture that can be configured in several ways. Modern learning spaces present more opportunities for student discussion with one another and their professor for more integrated learning. Researchers have found that students learn more when they feel close relationships with their professors (Sadera et al., 2009). Rands and Gansemer-Topf (2017) argued, based on focus group data, that kinesthetic experiences in a modern classroom, such as debates and activities where students move about the room, may result in greater learning. However, their study did not assess attitudes, feelings, and beliefs against a traditional classroom.

Experiential learning theory as developed by Kolb (1984), describes learning as a process of knowledge acquisition gained through experiences (Kolb & Kolb, 2006). Of the six premises from this holistic and established theory, the most applicable to our study is the fifth premise stating that "learning results from synergistic transactions between the person and the environment" (Kolb & Kolb, 2005, p. 194). This theoretical premise ties well with the assumption from the classroom space literature that the space structure facilitates desirable student-to-student and student-to-instructor interaction. It further implies that learning experiences may vary based on the interchange between the student and the classroom. If so, the overarching question becomes, does the type of classroom learning space create different marketing student experiences? Utilizing experiential learning theory, we consider learning spaces and their effect on

different course experiences. The first is pedagogical affect – how do students feel about the course and methods of instruction? The second is classroom community – do students experience a sense of connectedness and belonging in class? The final experiences center on learning outcomes, both how students perceive their learning experience and how the instructor assesses their performance.

Pedagogical Affect

Pedagogical affect taps into student attitudes toward the methods of instruction and course content (Avtgis, 2001; Turman & Schrodt, 2005). Because of high tuition costs and the time it takes to earn a degree, quality instruction is an expectation for the higher education experience. From the faculty perspective, student attitudes toward teaching methods are important because of its potential impact on self-satisfaction, evaluations of teaching, annual performance reports, merit raises, academic awards, and promotion/tenure decisions (Clarke & Nelson, 2012; Lei, 2010).

Classroom design can affect student evaluations of the professor (Safer et al., 2005). For instance, Hill and Epps' (2010) study of traditional and modern classrooms found that students preferred modern classrooms and rated course enjoyment and course organization higher. However, Mendini and Peter (2019) evaluated engagement toward the instructor more positively and reported the instructor was more enthusiastic in a traditional classroom. Clearly, findings are still mixed concerning evaluations of instructional methods and course content in different learning spaces.

Classroom Community

According to Rovai (2002b), classroom community is when students experience a sense of connectedness, belonging, commitment, and shared expectations regarding learning goals. When students feel a strong awareness of the classroom community, they are more likely to experience high levels of satisfaction, exam performance, perceptions of learning, positive attitudes toward the class, higher motivation, and successful completion of academic programs (Harris, 2001; McKinney et al., 2006; Summers & Svinick, 2007; Tebben, 1995). Elliott et al. (2016) reported that shared spaces are an important way for students to experience classroom community. This may be one reason why modern learning spaces are purposefully designed for students to be in close proximity and facing each other to facilitate communication, trust, and active engagement.

A community does support student academic success (Robbins, 1994). The rationale is that the community is an intrinsic reward when students are part of a team. This is consistent with Matthews' (1994) finding that business students prefer social-based pedagogies and learning with others rather than learning alone. Johnson and Johnson's (2002) meta-analysis partially corroborated this and notes the potential for learning is greater when learning with others, yet they also report interpersonal interaction does not necessarily result in higher achievement and productivity. Others contend there are no differences in completing learning tasks (Storch, 2007).

Students have been found to experience different levels of classroom community based on the type of teaching techniques employed by the instructor (Summers & Svinick, 2007), yet very little is known about how the physical space impacts marketing students' sense of community. For classroom configurations, Mendini and Peter (2019) suggest that traditional learning spaces are more favorable for fostering group dynamics. Conversely, other scholarship reports that modern classrooms are superior for inducing higher levels of engagement for in-class assignments and collaborative opportunities (Cotner et al., 2013; Neill & Etheridge, 2008; Van Horne et al., 2012). Young et al's (2017) comparison of traditional classrooms and large auditorium-style rooms found that students preferred the former for collaboration and also had better attendance. They inferred that a student's sense of classroom community may be a function of the type of room and physical space. There seems to be considerable debate about relationships between a student's sense of classroom community and the type of learning space so additional research is needed.

Learning Outcomes

There are two distinct aspects of learning commonly used in marketing education (Bacon, 2011). The first is p*erceived learning* – how much do students feel they have learned? Perceived learning is important in modern higher education classroom environments (Haug, Wright, & Huckabee, 2019) because of the role of student partnerships in the learning process (Taylor et al., 2011) and its impact on *actual learning* (Krishen, 2013). Actual learning is a non-self-referenced measure of learning and involves instructor-based assessments, such as an exam. Students may indicate they learned a lot on self-assessment evaluations, representing perceived learning, but score poorly on assignments, an indicator of actual learning.

Regarding behaviors often associated with actual learning, students in traditional classrooms have been found to be better for increasing focus (Budge, 2000; Hofkins, 1994), staying on-task with behaviors such as facing the instructor, participating in class discussions, and taking notes, while also avoiding off-task behaviors like using technology or having side conversations (Brooks, 2012) and facilitating student teamwork and engagement (Mendini & Peter, 2019). This suggests a strong endorsement of the traditional classroom environment for learning.

Neill and Etheridge (2008), in contrast, reported increased levels of student engagement and collaboration in modern classrooms. Further, students rated perceived learning higher in the modern classrooms (Hill & Epps, 2010), preferred them for small group interactions, and had better attendance (Young et al., 2017). However, Young et al. (2017) found no differences in failure rates and average final grades

when comparing learning spaces. Although students may be highly satisfied with the physical aspects of a classroom, that finding does not necessarily suggest that the space is conducive for learning (Hill & Epps, 2010; Perks, Orr, & Al-Omari, 2016).

The extant empirical work about pedagogical affect, classroom community, and learning with regard to learning spaces remains an open question. Experiential learning theory signifies that learning takes place when symbiotic conditions are present, such as relationships between students and professors, and students with other students. Modern learning spaces are designed to facilitate meaningful social interactions, so stemming from this line of reasoning, we expect to find differences in how students feel about the course, how they experience a sense of community, and how much they learn based on the type of learning space they experience. To this end, this research explores four hypotheses based on whether marketing students were enrolled in a traditional or modern learning space.

H1: There is a difference in marketing students' levels of *pedagogical affect* based on the type of learning space.

H2: There is a difference in marketing students' sense of *classroom community* based on the type of learning space.

H3: There is a difference in marketing students' *perceived learning outcomes* based on the type of learning space.

H4: There is a difference in marketing students' *instructor-assessed learning outcomes* based on the type of learning space.

METHOD

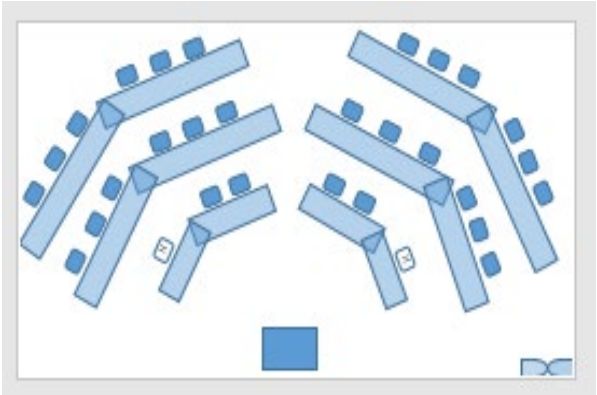
Setting and Participants

The setting was an Association to Advance Collegiate Schools of Business (AACSB)–accredited College of Business at a mid-Atlantic university. Participants were marketing majors, mostly juniors and some seniors, in an upper-division required marketing class taught face-to-face by the same female instructor. The institution, course, and instructor were held constant to control for factors that may create variation in the results. Additionally, it can be assumed that there was a common baseline level of student interest in and a minimum level of aptitude for marketing due to the student's choice of major and GPA requirement for admittance into the College of Business.

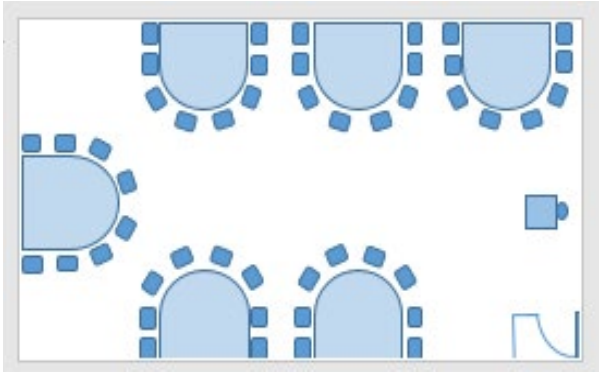
For this study, there were 170 (58%) students enrolled in traditional- and 119 (40.6%) in modern learning spaces. Classes were always taught in the assigned room for the entire academic term. Each space was approximately the same with respect to square footage, ceiling height, carpeting, and temperature, but there were some unique differences. Figure 1 illustrates the two learning spaces used in this study. The *traditional learning space* used a stadium-style layout, with rows of long desks bolted to the floor, and all seats facing the front of the room. The instructor was always in direct sight by operating primarily from a fixed desk/station/podium with a computer that enabled one centralized projection of presentations, videos, etc. The room had no windows other than a small window on the entrance door.

The *modern learning space* was specially designed for collaborative teamwork and inquiry-based pedagogies where the instructor can easily join small groups to work on learning tasks. The room was configured with six clusters of pods, each with a large table, flexible seating, plug-in points for electronic devices, and a small LCD screen fixed to the wall at the end of each pod. Students sat in clusters of 5-6 each and faced each other.

Figure 1. Traditional and modern learning spaces.



Traditional Learning Space



Modern Learning Space

Presentations and videos could be viewed from multiple vantage points in the room. However, there was not one focal point in the room where all students could simultaneously and comfortably see the instructor. To help students feel included, the instructor walked around the room, using a mobile desk and laptop, to make eye contact with all students. Additionally, the instructor required students to select a different seat within their cluster every 3-4 weeks to get a different view of the room. There were four windows with natural lighting along the north wall of the room. The windows overlooked a rooftop so there were no distractions (e.g., passersby) when looking outside of the room.

Data Collection Procedure

The average class size was around 30 students and nine sections were taught over a six-semester time period. Instructional methods were student-centered and most classes involved several short segments of 15-18 minute lectures that were interspersed with class discussions, videos, small group experiential activities, mini-cases, think-pair-share reflections, student report outs of problem-based group work, and metacognitive goal-setting exercises that were centered around a comprehensive group project and presentation. Practical learning experiences were a key component of the course because they can serve as a crucial differentiator when evaluating students for marketing employment (Yeoh, 2019).

For an additional measure of control and to avoid the introduction of confounding variables, the instructor made efforts to keep teaching methods, course content, visual aids, assignments, and assessments as consistent as possible across the sections. The high degree of consistency was an effort to better isolate the impact of learning space (the physical place and environment where instruction was taking place) in relation to the study's variables of interest. As one such example of consistency, students engaged in an ice-breaker activity to get to know one another during the first class. Subsequent activities were conducted similarly across all sections over time. When executing a think-pair-share reflection, for instance, the task was the same across all sections even though the physical environment was different. Compared to the traditional space where it may be awkward or uncomfortable to work on this task in pairs, in the modern space students were physically situated in a more conducive manner to engage with one another in a think-pair-share activity.

Toward the course end, all students were given consent forms, via the Canvas course management system, and invited to participate in a voluntary IRB-approved survey. The consent form communicated that the purpose of the study was to investigate attitudes and performance about various dimensions of a class to better understand the potential influence of class environment variables. Students who agreed to participate then clicked on a Qualtrics link to take an online survey. The survey was open for approximately three weeks and the instructor frequently encouraged student participation.

Instrumentation

To operationalize *pedagogical affect*, the study employed Mitchell and Olsen's (1981) four-item, seven-point semantic differential scale which measured student attitudes toward classroom instruction methods and had a Cronbach's alpha of 0.85. A sample question was "overall, in this class, the methods of instruction were effective."

Classroom community was measured by Rovai's (2002a) five-point Likert-type scale of 20 items. With a Cronbach's alpha of .84, this scale assessed attitudes toward classroom social interactions. An example question (reverse scored) was "I feel that other students do not help me learn." To preface questions about the classroom community, the survey stated: "We define community as a group of participants, relationships, interactions and their social presence within a given learning environment."

Learning outcomes were measured using two methods: student perceived learning and instructor-assessed learning. Using a six-item, semantic differential scale, with responses ranging from very low (coded as a 1) to extremely high (coded as a 7), *student perceived learning* came from the Young et al. (2009) adaption of Young's (2001) Learning Performance scale also used by Clarke and Nelson (2012) and Fife et al. (2014; 2018). Cronbach's alpha was .94 and an example question was "As compared to other classes evaluate this class on your ability to apply the material." *Instructor-assessed learning* was measured using numerical grades for exams, assignments, projects, and presentations. These specific assessments can demonstrate a student's marketing knowledge and skills learned (Kaufman, Cartwright, & Gore, 2019). While exams primarily measured understanding of domain knowledge, all other assessments were designed to be highly practical so students could develop important contemporary career readiness skills such as public speaking, teamwork, communication, critical thinking, etc. (Fink & Fink, 2019; Hartley et al., 2019; Kutlubay & Uslay, 2019; Osmani et al., 2019; Yeoh, 2019). The overall final grade was computed as a weighted average consisting of exams (60%), projects (30%), and presentations/assignments (5% each). Exams were individually based and other assessments were group-based.

RESULTS

The sample (n=289) was composed of 38.6% males and 61.4% females which is representative of the 40%-60% gender breakdown at this comprehensive, residential, and co-educational institution. The average age of the sample was 21.57 (*SD*=3.18) and the average self-reported GPA was 3.10 (*SD*=.29).

Collectively, the study investigated if marketing students have different outcomes when comparing the same experience in traditional and modern learning spaces. The first three hypotheses explored if differences exist in pedagogical affect (H1), classroom community (H2), and perceived learning (H3) based on learning space.

To initially test the hypotheses, two-tailed independent sample t-tests were conducted between the traditional and modern learning spaces for students' perceptions of learning and instructor-assessed outcomes. See Table 1. Students perceived the traditional learning space to be more efficacious for pedagogical affect, classroom community, and perceived learning. For the instructor-based assessments, the traditional learning space was more effective for high performance on exams, projects, and the overall course grade. Assignment grades were significantly higher in the modern learning space.

For all of the analyses, to control for potential effects of time, semesters of enrollment was used as a

covariate. There was a possibility that groups of students could have differed by semester due to external circumstances such as season (fall/spring). To determine if course experiences varied based on the condition of learning space type (traditional or modern), a one-way multivariate analysis of covariance (MANCOVA) was performed on pedagogical affect, classroom community, and perceived learning to account for correlation between these dependent variables.

To control for potential time effects for student perceptions, an adjustment was made for the covariate based on which of the six semesters students enrolled. With the use of Wilks' Lambda and Hotelling's Trace, the combined dependent variables exhibited no significant relationships for the covariate of semester (p<.429) so semester did not have a significant main effect. There was a statistically significant difference between the traditional learning space and the modern learning space after controlling for semester *F(3, 284)*=5.69, p<.001, Wilks' Lambda Λ =.944, Hotelling's Trace=.059, partial η^2= .056, p<.001.

To investigate more specifically the power of the covariates to adjust for each dependent variable, and as part of the general linear model, multiple regressions were run in turn with the covariate (semester) acting as a predictor. Semester was not a significant predictor for any of the three dependent variables. However, learning space was a significant predictor for all three dependent variables: pedagogical affect *B*=.53, *t*=3.99, p<.0005, classroom community *B=.16, t*=2.99, p=.003, and perceived learning outcomes *B*=.33, *t=2.50*, p=.013.

As shown in Table 1, univariate results demonstrate significant differences for pedagogical affect (H1), classroom community (H2), and perceived learning (H3), with higher outcomes found in the *traditional* learning space. These differences were maintained in the multivariate analyses with those in the traditional condition having higher scores for these three dependent variables.

Table 1. Differences between traditional and modern learning spaces

		Univariate analysis					Multivariate analysis	
Variable	Condition	*t*	*M*	*SD*	*F*	*df*	*F*	*df*
Student perceptions								
Pedagogical affect	Traditional	3.89****	6.07	0.96	5.24**	3,283	15.96****	1,286
	Modern		5.54	1.28				
Classroom community	Traditional	3.07**	3.73	0.43	3.13*	3,283	8.91**	1,286
	Modern		3.57	0.44				
Perceived learning	Traditional	2.43*	5.68	0.86	8.83****	3,283	6.24*	1,286
	Modern		5.35	1.36				
Instructor-assessed learning outcomes								
Exams	Traditional	4.67****	84.36	7.91	1.40	3,291	20.14****	1,294
	Modern		80.01	7.82				
Projects	Traditional	3.01**	89.43	6.18	22.22****	3,291	8.63**	1,294
	Modern		86.76	9.13				
Presentations	Traditional	.58	88.91	7.85	18.35****	3,291	.12	1,294
	Modern		88.43	5.72				
Assignments	Traditional	-2.39*	91.11	6.51	22.52****	3,291	7.69**	1,294
	Modern		92.85	5.69				
Overall Course Grade	Traditional	2.10*	87.50	5.25	3.25*	3,291	2.97	1,294
	Modern		86.07	6.52				

*p<.05, **p<.01, ***p<.001, ****p<.0005

Regarding actual learning (H4), a one-way MANCOVA was again performed but this time for the five instructor-assessed learning outcome dependent variables of exams, projects, presentations, assignments, and overall grade. A similar adjustment was made to account for time by using the semester as a covariate.

The combined dependent variables exhibited significant relationships for the covariate of semester *F(5, 290)*=13.40, *p*<.0005, Wilks' Lambda Λ =.812, Hotelling's Trace=.231, partial η^2= .19, *p*<.0005. As instructors commonly find, student performance can sometimes vary from semester to semester with one group of students collectively doing better than another group of students. Accounting for semester and specific groups of students in one's analyses is important as this study discovered for instructor-based assessments. There was a statistically significant difference between the traditional learning space and the modern learning space after controlling for semester *F(5, 290)*=9.69, *p*<.0005, Wilks Lambda Λ =.857, Hotelling's Trace=.167, partial η^2= .143, *p*<.0005.

Multiple regressions were run for each dependent variable in turn, with semester (the covariate) acting as a predictor to adjust for the temporal impact. Semester was a significant positive predictor for exams *B*=.75, *t*=3.02, *p*=.003, presentations *B*=.69, *t*=3.11, *p*<.002, assignments *B*=.82, *t=4.24*, *p*<.0005, and overall grade *B*=1.14, *t=6.58*, *p*<.0005. Again, learning spaces served as the main predictor. Learning space (traditional/modern) was a significant positive predictor for exams *B*=4.13, *t=4.49*, *p*<.0005 and projects *B*=2.62, *t=2.94*, *p=.004*, but was a negative predictor for assignments *B*=-1.98, *t=-2.77*, *p=.006.*

The effect of learning space on the instructor-assessed dependent variables, after adjustment for the covariates, was investigated in univariate and multivariate analysis. Table 1 presents univariate tests showing that projects, presentations, assignments, and overall course grades were significantly different between the traditional and modern classrooms, but there were no differences on exams. However, in the multivariate analyses, significant main effects for learning space were found for exams, projects, and assignments. Marketing students in the traditional learning space performed significantly better on exams and projects, but assignment grades were significantly higher for students in the modern learning space. No differences were observed between the two groups on presentations and overall course grades. According to Field (2005, p. 602), "The reason for the anomaly in these data is simple: the multivariate test takes account of the correlation between dependent variables and so for these data it has more power to detect group differences." In this case, multivariate testing is a more powerful means of detecting differences based on dependent variable intercorrelations and accounting for the covariate of semester.

DISCUSSION

The results showed that there are differences in student experiences based on learning space type. Each result is discussed below.

Pedagogical Affect. Regarding pedagogical affect, results corroborate Safer et al. (2005) who found that student evaluations are affected by classroom design and Mendini and Peter's (2019) discovery that students rated instructors higher in traditional classrooms. Even though the methods of instruction and course content were held constant in this study, the marketing students had more favorable attitudes toward the instructional methods and course content in the traditional classroom condition. This could be because learners had a better view of the instructor and presentation materials, e.g. "no front of the classroom" can be a hindrance even if the instructor moves about during class. It could also be that the class still contained a lecture component and the traditional learning spaces are designed to maximize the effectiveness of this method of instruction. Finally, the traditional room was more structured than the modern room, clearly focusing attention on the instructor. Perhaps students have become used to traditional classroom configurations, thus they are "reluctant to change an inherited configuration" (JISC, 2006, p. 25).

Classroom Community. Similar to Young et al. (2017), our study showed that the sense of classroom community varied based on the type of learning space. In both the traditional and the modern learning spaces, students were required to sit in group clusters, although they could select any seat within their assigned cluster. Students did not have control over what part of the classroom they were sitting in which could have affected their learning experiences (Fernandes et al., 2011). Given the collaborative nature of modern learning space designs, one might expect students to feel a greater sense of community yet that was not the case in this study. Interestingly, marketing students indicated more feelings of classroom community in the traditional space. A plausible reason is that the entire class had a shared experience of facing the instructor and we angled toward each other and a central point in the room. The modern learning space always had some students whose back was facing the instructor at any given time unless the student decided to pivot away from their group by turning their body and/or chair. Seating arrangements and preferences in the modern classroom should be explored in the future.

Another explanation for these results is because in this study the students were asked about community at the class level rather than their most immediate community – their group. What may have been more salient was group community or the students from their team for the project, presentation, and assignments. Future studies could assess attitudes at different levels to discriminate between class community and team community dynamics. While modern learning spaces are meant to facilitate social interaction and collaboration, social activity may detract from learning

experiences more than its offsetting benefits. Like any social action, community in the classroom can be about things not class-related. For example, a room that creates greater opportunities for collaboration on course-based assignments also creates greater opportunities for collaboration about non-course items. With more latitude for socializing, the modern learning space appeared on balance to be a distraction for creating a sense of classroom community.

Learning Outcomes. Students had acceptable course achievement as evidenced by strong and similar overall grades, but for three of the learning outcomes (perceived learning, exams, and projects) traditional outperformed modern. Again, this could be a legacy of how the class itself was conducted, e.g. it contained a lecture element, and high scores on perceived learning, exams, and projects can be a testament to the power of lectures to inform students about important content. The superior performance of the traditional classroom for projects might be partially explained by the fact that projects were often worked on outside of class, but that would suggest no difference, not better traditional performance. While students often voice a preference for modern designs, the traditional learning space is inherently more structured than the modern learning space and this offers some real advantages.

The only finding where students in the modern classroom scored higher than students in the traditional classroom was on assignments. The assignments were completed in class with the intent of actively engaging students with content, so performance seems to be enhanced in modern learning spaces. As Van Horne et al. (2012) notes, being in an environment where students were facing each other increased their sense of responsibility to accomplish tasks, and thus, students were more interested in improving group assignments in the modern context over the traditional one. Likewise, in a traditional learning space, students may find activities to be physically awkward because they cannot mobilize effectively to face each other and collaborate (Young et al., 2017).

Despite the higher performance on many of the course learning assessments, no differences were observed between the two groups on presentations. This could be because most of the work to prepare for presentations was performed outside of class. It could also be that while modern design is better for collaboration and preparing presentations, the traditional classroom is better for actually presenting them.

Based on the collective results we speculate that most learning benefits from the modern classroom design either occurred at a level different than at the classroom level (e.g., at the group rather than the class for community) or were offset by a corresponding loss in structure. Traditional classrooms are well designed for helping teachers structure what they want to convey and relate to students by focusing attention on the instructor as a "sage on the stage". This greatly helps them initiate the structure students need to be successful. Modern designs intentionally avoid this to instead facilitate peer learning and group-centered activities with the marketing instructor as a "guide on the side". Results suggest that these benefits are not cost-free and, at least for this marketing class, were not tied directly to learning success as measured by overall grades. One limitation is that we were unable to connect grades to student perception data, for anonymity purposes.

This study advances our understanding of experiential learning theory by supporting the premise that learning appears to be a function of synergy between the person and the environment, or in this case, between the type of physical space where marketing instruction is taking place and marketing student experiences. Student perceptions and outcomes seem to vary based on traditional and modern learning spaces. Our results here are consistent with this theory and suggest that marketing students may have expectations of what a class experience should be like and so may also need to modify their approach to learning in modern spaces.

While we approached this study through experiential learning theory and a student lens, it is important to explore phenomena from an instructional lens as well. One avenue for doing so is by using the pedagogy, space, technology (PST) framework (Radcliffe, 2009) from the facilities literature. This framework highlights the interplay between each of the three elements in how professors may need to modify their approach to fully take advantage of the modern classroom. For example, is it possible that current forms of student assessments may be more tailored for success in traditional classrooms? Do exams accurately measure marketing learning that happens in modern environments? The PST framework highlights that these may need to co-evolve together. Moving classes from traditional to modern learning spaces may not impact learning as expected.

CONCLUSION

It is clear that we do not yet have a full understanding of learning spaces and that there is much that remains to be explored to reach a consensus. However, given the controls for the institution, instructor, teaching methods, course, course content, etc., this study makes a substantial contribution. Despite the attention surrounding the potential for modern designs to enhance learning outcomes, this study found that traditional outperformed the modern learning spaces on measures of pedagogical affect, classroom community, perceived learning, and two of five measures of actual learning. Modern classrooms outperformed the traditional classroom only on in-class assignments. The empirical evidence suggests that traditional learning spaces may be a more ideal environment than they are often given credit for, at least for marketing students, because they outperformed the modern spaces in several areas of educational impact.

We identify several areas for additional research. First, our work was limited to a single course in a single major. Results may be different for other marketing

courses that were composed of more heterogeneous students. Second, we examined the sense of community at the classroom-level but the relevant level of analysis for the marketing student may be the group-level since they tend to engage in many team-based projects as part of their curriculum. After all, it is the group-level where students are more directly connected by the modern classroom design not the class as a whole.

Third, Abrantes, Seabra, & Lages (2007) found student interest to be a key determinant of perceived learning, pedagogical affect, and learning performance. As such, future research may wish to consider student interest as well as how other factors, such as internships, prior experience in marketing, interest in the field itself, teamwork adeptness, and disabilities (learning, mobility, vision, etc.) may affect learning based on the physical environment. Fourth, although some students learn a great deal, instructor-based outcomes such as grades may not reflect their learning. Therefore, extensions of this research should continue to incorporate measures of perceived learning as well as instructor-based learning to assess course outcomes.

Fifth, all learning does not take place in the formal classroom and may include other spaces such as libraries and dorms (Cook, 2010; Walker & Todhunter, 2015) as well as experiences such as online classes, internships, student organizations, and interactions in non-class social settings. Consistent with the call from Laverie et al. (2008), we urge educators to continue exploring how to create the most ideal learning environments for marketing students. Finally, the professor in this class was an experienced and award-winning professor. Modern classroom designs may help novice instructors proportionally more than accomplished ones. Similarly, not all courses are the same or taught in the same manner. A course about a less technical subject, e.g. a creativity class, might benefit far more from a modern layout.

Mindful of all these limitations and based on what we uncovered, we urge caution to administrators and academic leaders who must make decisions about capital investments in classroom designs. It would appear to be a mistake to assume that modern classroom designs will automatically result in superior learning experiences about marketing. Rather, the use of modern designs should be more selectively employed keeping in mind the nature of the students, professors, and course content.

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