

Factors Determining Hospitality Instructors' Intentions to Teach Online

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ABSTRACT

Using the Technology Acceptance Model 2 (TAM2) as the theoretical framework, this research project was designed to examine hospitality instructors' intentions to teach an online course with a specific focus on deconstructed subjective norms. Three separate studies were conducted simultaneously, each with distinct objectives, literature review, methodologies, results, and conclusions. The studies were triangulated at the conclusion of the project to reveal a more comprehensive understanding regarding how to promote online learning to hospitality faculty and students.

The first study utilized a qualitative analysis of hospitality faculty built around the constructs of TAM2. Ten participants were interviewed in an effort to understand instructors' intentions to teach a full online course, but findings revealed a strong preference in favor of a blended model. Based upon the overwhelming discussion of blended instruction, the survey instrument for the subsequent quantitative studies investigating hospitality faculty and students' intentions to teach or enroll in an online course was modified.

The second study used structural equation modeling to examine hospitality faculty intentions to teach blended and full online courses. Hospitality student, colleague, and chair influences replaced a collective subjective norm construct within TAM2. The results of this study produced two identical models with statistically significant pathways of chair influences on intention to use, signifying a mandatory effect. Also, statistically significant pathways of student and colleague intentions on

perceived usefulness demonstrated the influence of less-important referent groups on an instructor's intention to teach online.

The third study was a quantitative investigation of hospitality students' intention to enroll in an online course using structural equation modeling. Based on the survey instrument and methodology from the faculty quantitative survey, the student study was performed to generate a more comprehensive understanding of the potential for online course offerings in the hospitality discipline. Subjective norm in the hypothesized model was measured based on peer, instructor, parental, and academic advisor influences. Findings revealed the mandatory effects of parents and academic advisors on a hospitality student's intention to enroll in an online course. Lesser influences, while statistically non-significant, were still critical to model fit, indicating the potential for peer and instructor influences on hospitality students' online course enrollment.

Few studies have been conducted surrounding the topic of online learning in the hospitality discipline in higher education. There are currently no studies investigating normative influences on hospitality faculty to teach and students to enroll in an online course. Findings from this research project will benefit hospitality management program chairs and administrators to better assist faculty to adapt to online learning using blended models as a bridge. This research will also prove useful to other disciplines facing similar institutional mandates to increase program-wide enrollments with limited funding and reach untapped student populations such as nontraditional students.

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CHAPTER I - INTRODUCTION

Hospitality management as an academic discipline has been in existence for nearly 120 years (Baum, 2012). Evolving from a European apprenticeship model of instruction to a rigorous multi-disciplinary field for training future managers and scholars, hospitality programs represent a vast array of specializations including trade schools, culinary programs, community colleges, and four-year institutions of higher learning (Morrison & O'Mahony, 2003). Beginning with the inaugural Hotel School established by Cornell University in 1922, hospitality programs have matured in both scope and pedagogy due to the considerable demands required by the industry.

In recent years, the hospitality industry has been transformed by advancements in information and communication technologies, a trend which has also impacted the hospitality discipline in higher education. Online learning is one such development which has been leveraged across countless academic disciplines over the last several years, having a significant impact on higher education. In 2009, the eighth annual Sloan Survey of Online Learning reported online enrollments increased by one million over the previous year (Allen & Seaman, 2010). In the same Sloan study, 63% of participating institutions credited online learning as being a vital component to their long-term strategic plans (Allen & Seaman, 2010). However, despite research which demonstrates a clear upward trend in online course delivery, faculty remain hesitant to adopt the technology (Allen & Seaman, 2010). Hospitality management programs are not immune to this challenge. Although 80% of hospitality faculty acknowledge within the next 5 years the majority of students in higher education will take at least

one online course during their studies, only 44% of respondents believe online learning is vital to long-term strategic planning within their departments (Sciarini, Beck, & Seaman, 2012). This is an indication of a transitional period in hospitality education, where faculty are aware of the impending changes associated with online instruction, but are less than enthusiastic when it comes to actually embracing this technology.

The transition to online learning began in the mid-1970s, when this nascent form of instruction was first conducted over emails and conferencing networks (Harasim, 1996). Since that time, the evolution of online teaching pedagogy has been referred to as a paradigm shift, resulting in an entirely new teaching model (Harasim, 1996). Other than the early adopters of online learning, the remaining faculty have encountered multiple challenges with this form of instruction, dissuading them from participating. Aside from the obstacles of working with new forms of technology, the most prevalent hurdle for faculty is the paradigm shift necessitating teaching according to a whole new set of expectations in an unknown learning environment (Harasim, 1996).

The present utilization of online learning technologies in higher education has resulted in an uprooting of faculty rather than a smooth transition into a virtual classroom (Oomen-Early & Murphy, 2009). Quantitative studies employing various theoretical models have shed light on these effects and subsequent faculty intentions to use eLearning technologies (Ajjan & Hartshorne, 2008; Al-alak & Alnawas, 2011; Liaw et al., 2007; Lin & Anol, 2008; Liu et al., 2010).

Recent phenomenological studies on the topic of online learning have adopted a constructivist theoretical framework (Bailey & Card, 2009; Oomen-Early & Murphy, 2009). Predicated upon knowledge built by the learner, constructivism is an existing pedagogy adopted by eLearning instructional designers to support the design and management of online teaching technologies (O'Connor, 2010). Bailey and Card (2009) suggested the role of an effective online instructor has transitioned from that of teacher to facilitator, thus causing pedagogical practices to adjust accordingly. Further, Knowlton (2000) expressed that an instructor who wishes to become a facilitator must develop a new and different set of skills from a pedagogical standpoint. From their virtual platform, online instructors are considered facilitators of learning (Collison, Elbaum, Haavind, & Tinker, 2000).

A recent development in online learning, the massive open online course, or MOOC, has received considerable attention, magnifying the increased demand for this mode of course delivery. The impetus for the MOOC movement stemmed from the vision of professors employed at Stanford, MIT, Harvard, Princeton, University of Michigan, and University of Pennsylvania, who all believed too few people had access to high quality learning opportunities (Hyman, 2012). Committed to his vision of accessible learning for all, Sebastian Thrun left his tenured position at Stanford to launch Udacity, a free online education start-up company (Anders, 2012). Several other platforms such as edX and the for-profit Coursera model soon followed and have joined in the effort to deliver high-quality MOOC learning opportunities (Hyman, 2012).

In response to worldwide demand for online learning, liberal arts colleges have taken preemptive measures in anticipation of decreased student enrollments due to MOOCs. For example, Coursera recently secured partnerships with Wesleyan University, Berklee College of Music, Brown, Columbia, Emory and Vanderbilt Universities (Kolowich, 2012). These institutions identified early on the trend of open online learning and invested substantial resources to ensure long-term viability for their programs. While these prestigious and well-known universities have demonstrated a commitment to the next generation of online learning models, their competitors which have not yet engaged in basic training and support for online teaching may fall behind in student enrollment. As online learning continues to grow as predicted, instructors and programs which have not adopted online course delivery may soon find themselves irrelevant.

Since the most recent recession, institutions have faced the problem of increased enrollments combined with reduced state and federal funding. This scenario compounds the pressure on institutions which already have growth strategies in place. Online learning represents a viable solution to this dilemma as well as offering the potential to generate revenue (Blumenstyk, 2012). In addition to satisfying the needs of the institution, online learning offers many other benefits to students and instructors.

Increased flexibility for working and nontraditional students is a tremendous advantage for this mode of instruction in that these students are able to work toward the completion of a degree without the time constraints of a face-to-face course

(Kolowich, 2010). A common requirement in hospitality management programs is an internship which provides valuable industry experience for students. For students desiring to continue coursework while participating in an internship, online learning is a very attractive option. Teaching online is also beneficial to hospitality instructors because it gives them greater flexibility to work free from geographical or time constraints. Particularly useful for those instructors involved in research or service activities, online teaching aids faculty in building a more personalized work schedule so they may accomplish their required teaching, research, and service goals.

1.1 Statement of the Problem

Despite the rapid growth of eLearning technologies, this has not translated into higher education adoption, as many universities have not fully harnessed the potential for online learning (Schneckenberg, 2010). Previous research has shown a low level of competence in eLearning knowledge among faculty to be one of the major roadblocks in adoption (Allen & Seaman, 2007; Bates, 2000; Johnson, 2003). According to Schneckenberg (2010), two conditions must exist for faculty to embrace online learning technologies: (1) faculty must become more aware of the change in educational technology and its potential in higher education, and (2) faculty must develop “eCompetence” to make use of these technologies in both their work routines and teaching (Euler & Seufert, 2004; Johnson, 2003).

Multiple studies have focused on student and faculty satisfaction with online programs, both prior to (Liaw, Huang, & Chen, 2007; Ajjan & Hartshorne, 2008; Lee & Zailai, 2010) and during enrollment (Liaw et al., 2007; Samarawichrema & Stacey,

2007; Song, 2010; Liu, Chen, Sun, Wible, & Kuo, 2010). While student and faculty commitment impact favorable outcomes of online courses, it is primarily faculty acceptance and attitudes that remain the critical components to the overall success of an online program (Wilson & Stacey, 2004; Green, Alejandro, & Brown, 2009; Sloan Consortium Survey Report, 2009).

As more hospitality management programs implement eLearning, it is imperative administrators examine faculty intentions in order to meet the needs of service providers (faculty) and consumers (students). Currently, there are no studies specifically targeting faculty intentions to teach an online course in the hospitality context. In addition, no research exists which examines hospitality students' intentions to take an online course. This research was designed to fill that gap.

1.2 Purpose of the Research

The extant literature regarding faculty attitudes toward online learning has primarily surveyed only those faculty members with significant online teaching experience. Previous studies in online instruction revealed motivations toward eLearning from the perspective of faculty unfamiliar with online learning along with those who have readily adopted this technology (Howell, Saba, Lindsay, & Williams, 2004; McKenzie, Mims, Bennet, & Waugh, 2000). The purpose of this research was to understand the perceptions of hospitality faculty from all levels of online experience along with their collective attitudes toward full online course delivery. In addition, the Technology Acceptance Model 2 (TAM2) was the theoretical foundation for the

research and as such, a secondary purpose of the project was to test TAM2 for faculty members' intention to teach an online course via deconstructed subjective norms.

1.3 Research Objectives

This research follows a non-traditional dissertation format in which a series of articles were produced around the topic of online course delivery. Each step was formulated to produce a distinct research article accompanied by its own literature review, methodology, results, and conclusion sections. The objectives for each step were as follows:

Step 1 – Qualitative Hospitality Faculty Interviews

1. Investigate hospitality faculty perceptions of online teaching based on the constructs of TAM2, isolating influences within subjective norm.
2. Target hospitality faculty with a variety of levels of online teaching experience to gain a more comprehensive understanding of intention to teach online.

Step 2 – Quantitative Investigation of Hospitality Faculty Intentions to Teach Online

1. Using the findings from the qualitative study conducted in step 1 and in an extensive literature review, develop a survey instrument based on TAM2, inclusive of deconstructed subject norms.
2. Test TAM2 with isolated subjective norm independent variables to predict hospitality faculty intentions to teach an online course.
3. Deploy the survey to hospitality faculty respondents worldwide.

Step 3 – Quantitative Investigation of Hospitality Students’ Intentions to Take an Online Course

1. Develop a student survey based upon the quantitative faculty survey instrument to examine TAM2 and the effects of deconstructed subjective norms.
2. Test TAM2 with the isolated subjective norm independent variables to predict hospitality students’ intentions to take an online course.
3. Deploy the survey to hospitality undergraduate students in a large Southwestern University in the United States.

1.4 Rationale for the Studies

Utilizing a multi-method design (Morse, 2003), qualitative interviews were first conducted to investigate the perceptions of hospitality faculty toward online course delivery and the levels of experience these individuals possess with this form of instruction. Following this exploratory stage, a quantitative questionnaire was designed around the Technology Acceptance Model 2 (TAM2) to measure the intention of hospitality faculty to teach online. To bring balance and perspective to the relationships between hospitality instructors and students, an additional quantitative survey mirroring the faculty study was designed to measure hospitality undergraduates’ intentions to enroll in an online course.

Specifically, the framework for this multi-method research project was based on that of convergent parallel design (Creswell & Plano Clark, 2011). Also referred to as convergent design, this process implemented qualitative and quantitative methods

in the same phase throughout the project. Equal prioritization was given to both methods within the three studies and the analyses were carried out independently. The findings from the three articles were then merged to triangulate the data and synthesize the results, uncovering a more complete understanding of hospitality faculty intentions to teach online (Creswell & Plano Clark, 2011).

1.5 Significance of the Research

The Technology Acceptance Model was originally designed to determine technology-user training interventions in business applications. Although the model was employed in this research to predict user intentions of an online course, the practical implications from the results of this study will aid in suggesting training interventions for hospitality faculty. The effects of subjective norm referent groups were investigated and the influences of these groups (i.e. colleagues, students, or superiors) on faculty revealed valuable information for how to encourage hospitality faculty to teach online courses. Additionally, as faculty acceptance and attitudes are the primary determinants to a successful online program (Wilson & Stacey, 2004; Green, Alejandro, & Brown, 2009; Sloan Consortium Survey Report, 2009), the most influential referent groups could be utilized to increase faculty commitment to online program success.

The number of hospitality management programs in the United States has grown fivefold in the last 25 years (Stoller, 2008). The rapid expansion and popularity of this discipline has challenged program administrators in many ways. Increased enrollments with limited funding, as well as serving nontraditional and working

students, place unwieldy pressure for administrators. The continued growth of hospitality management programs will further impose strain on both the availability of instructors as well as the physical space to teach these subjects. Online learning represents a logical solution to this problem as the traditional constraints are absent, allowing greater access to courses. In addition, this move would not only reach untapped student populations but also simultaneously generate new revenue streams (Sigala & Baum, 2003).

1.6 Limitations of the Study

The data collection for the three studies introduced several limitations to this research project. One limitation was non-response bias, which occurs when respondents fail to participate for a variety of reasons including simple refusal to respond, ineligibility, or inability to be contacted (Saunders, Lewis, & Thornhill, 2009). All three studies in this project were limited by non-response bias, which resulted in underrepresentation of the population studied. Although Internet access is assumed commonplace in society today, there may have been instances of faculty who did not have Internet access and therefore could not participate in the online survey resulting in non-response bias.

In the qualitative faculty study, the sample may have not truly been representative of the population in that over 20 faculty members were contacted initially for the interviews, but only 10 responded to the invitation. In the quantitative faculty survey, those instructors who received the invitation, but declined to participate may have introduced a serious bias to the findings (Zikmund, 2003).

Additionally, for the student quantitative survey, data from those students who refused to participate was not collected and therefore introduced bias to the results (Zikmund, 2003).

For the faculty and student self-administered quantitative surveys, a major limitation was self-selection bias. Respondents who are most concerned with an issue are more likely to respond to a survey thereby introducing bias to the sample (Zikmund, 2003). The study most impacted by self-selection bias in this research was the faculty survey distributed online because faculty received an invitation with information about the subject matter of the survey. Those instructors who chose to participate in the survey were more than likely interested in the subject matter. The student survey may have been less affected due to the surveys being administered in person in hard copy to large groups. This strategy permitted better control over self-selection bias because students were allotted time to complete the survey, therefore more students may have been likely to complete the survey because they had no other commitments competing for their attention during that period of time.

Response bias, when respondents consciously or unconsciously misrepresent the truth (Zikmund, 2003), may have occurred in the student survey if respondents were unclear about the differences between blended and full online course delivery. Although this was explained by the administrator as well as detailed in the survey instructions, response bias was illustrated in the descriptive response fields of the student survey. For example, when asked if they had ever participated in a blended course, some student respondents wrote in that all classes are blended, which was not

true for this particular program. Clearly, these students did not understand nor read the definition of a blended course in the instructions, specifically stating, “a blended course DOES NOT mean using a course management system (CMS) to augment a face-to-face course only to post grades and instructional materials.” What was likely is that students thought grades and content posted to the Blackboard CMS represented a blended course.

To a certain degree, interviewer bias was a limitation to the qualitative faculty interviews. Due to the unintended interplay between the interviewer and the respondents resulting in facial expressions, voice, and tone (Zikmund, 2003), the respondents may have modified their answers. For example, if the interviewer and respondent had similar thoughts about online learning, at times, it may have been difficult to separate a discussion from the interview format.

The online dissemination of the faculty survey presented several limitations to the study as well as potentially compromising generalizability (Saunders et al., 2009). Due to low response rates typically generated by online surveys, a representative sample of the population may not have been captured, therefore threatening the ability to generalize the findings. In addition, the length of the faculty survey resulted in a 14% drop-off in completion rate of those faculty members who began the survey compared to those who finished.

1.6.1 TAM-based research limitations. The most common limitation in TAM-based research is self-reported usage versus measuring actual usage (Lee et al., 2003). Self-reported usage is criticized because it distorts the relationship between

independent and dependent variables in a hypothesized model (Agarwal & Karahanna, 2000; Podsakof & Organ, 1986). Additionally, generalizability is problematic in studies when researching one technology with a homogeneous group at a specific point in time (Lee et al., 2003).

The limitation of student sampling in TAM studies is problematic due to the fact students have a stronger propensity to comply with authority (Sears, 1986; Schepers & Wetzels, 2007). In addition, students tend to be early adopters of new technologies and as such, are an uncertain population when estimating effect size (Rogers, 1983; Schepers & Wetzels, 2007).

1.7 Assumptions

This research was based on several assumptions, particularly in the instances in which data were collected via surveys. It was assumed that:

1. The respondents answered all questions honestly and to the best of their ability.
2. The respondents answered all questions independently of other respondents.
3. The respondents understood the difference between blended and full online course delivery.
4. The survey instruments provided the pertinent items necessary to determine faculty and students' intentions to use the technology.

1.8 Definition of Terms

Online learning: also known as eLearning and refers to a full web-based course which requires students and faculty to interact with each other via bulletin boards, discussion boards, email, and synchronous or asynchronous chat environments (Picciano, 2002; Wentling et al., 2000).

Blended learning: combines traditional face-to-face learning with online learning experiences incorporating different types of content delivery including asynchronous learning networks, web-enhanced teaching platforms, and online learning tools (Olapiriyakul and Scher, 2006).

Subjective norm: According to Fishbein and Ajzen (1975), subjective norm is defined as a person's belief that most people who are important to him think he should or should not perform a behavior in question.

Perceived ease of use: Perceived ease of use (PEU) defined by Davis (1989) is the degree to which a person believes using a particular technology system would be free from effort.

Perceived usefulness: Perceived usefulness (PU) is the degree to which a person subjectively believes the use of a technology will enhance performance (Davis, 1989).

CHAPTER II - LITERATURE REVIEW

The hospitality industry is characterized as a multi-faceted service industry encompassing the areas of food, lodging, recreation and tourism (Barrows, 1999). The academic discipline of hospitality management education is approaching 120 years of age (Baum, 2012) and is credited with advancing professionalism within the industry as well as graduating proficient managers (Barrows, 1999). Originating from a European vocational model of training, hospitality management programs in higher education have evolved into a multi-disciplinary field of study trending toward theoretical developments and managerial leadership (Morrison & O'Mahony, 2003). Hospitality programs encompass a variety of trade schools, culinary schools, community colleges and two-year programs (Barrows, 1999), however for the purpose of this research, hospitality management education was framed within the perspective of a four-year program.

2.1 History of Hospitality Education

The World Travel & Tourism Council (2012) reported in 2011 the United States total travel and tourism contribution to GDP was \$1,315.6 billion with projections of \$1,791.0 billion in 2022. In addition, the World Travel & Tourism Council (2012) estimated 14.3 million jobs in the United States were supported by travel and tourism, projecting 17.2 million jobs by 2022. Corresponding to this industry growth is the increase in hospitality management programs which have grown 500% in the last 25 years (Stoller, 2008). In 2006, Riegel and Dallas estimated approximately one thousand hospitality and tourism post secondary programs operated

in the United States. Beginning with the first hospitality baccalaureate program offered at Cornell University in 1922, four-year hospitality management programs have grown to encompass a wide range of curricula and pedagogies.

2.1.1 The significance of land grant universities. In 1862, President Abraham Lincoln signed the Morrill Land-Grant Colleges Act, which provided land for the establishment of public colleges and universities (Loss, 2012). The intent of this law was to provide land for educational purposes to meet the needs of a growing industrialized country for the benefit of agriculture and mechanic arts (Loss, 2012).

The president of Pennsylvania State University, George W. Atherton, collaborated with other land-grant university presidents and together with Congress passed the Hatch Act in 1887 (Williams, 1991). This legislation put into effect federal support of \$15,000 annually toward agricultural research. The passing of the Second Morrill Act of 1890 ensured an additional \$15,000 annually to land-grant universities, as well as adding legislation against discrimination (Williams, 1991) and funding for black land-grant colleges (Association of Public and Land-grant Universities, 2012).

Further federal funding was extended to land-grant institutions through the Smith-Lever Act of 1914 which provided support for research in agriculture, home economics and rural energy (Association of Public and Land-grant Universities, 2012). In addition, the Smith-Lever Act brought home economics extension programs and vocational studies to high schools associated with land-grant institutions (Cohen, 1998). This Act is particularly important to hospitality education as many programs grew out of established home economics departments.

2.1.2 Cornell. The Cornell School of Hotel Administration was founded in 1922 and was the first four-year institution devoted to hospitality education. Housed in the College of Home Economics at Cornell, Howard B. Meek was the sole instructor in the department teaching four hospitality courses to 21 students at its inception (Lattin, Sayles, & Beck, 1969). Meek's influence in the advancement of hospitality management education was unsurpassed, as he is revered as one of the leaders in the development of hospitality education. In 1927, Meek invited Ellsworth M. Statler, a hotelier, to a conference at Cornell organized by the undergraduate students (<http://www.hotelschool.cornell.edu/about/history.html>). After receiving a tour of the facilities, Statler was so impressed he pledged his assistance to Meek to provide the necessary support to advance the mission of the school. After his death, Statler's wife became the program's largest benefactor and throughout the history of Cornell's Hotel program, the Statler Foundation has supported hospitality management teaching, research, scholarships, and facilities (<http://www.hotelschool.cornell.edu/about/history.html>).

2.1.3 Expansion of hospitality management programs. Throughout the 1920s and the 1930s, several land-grant institutions developed hospitality management programs including Purdue University, Michigan State University, and the University of Massachusetts (Barrows, 1999). Later, in the 1940s and 1950s, Pennsylvania State University and the University of Houston followed suit (Barrows, 1999).

The rapid expansion of hospitality management programs paralleled the growth of the industry throughout the 1960s, 1970s, and the 1980s (Barrows, 1999).

The shortage of trained managers available to meet industry needs produced an unprecedented increase in the amount of hospitality programs. The growth and increased diversity of the hospitality industry naturally created a need for more specialized instruction (Barrows, 1999). As the industry became more sophisticated, demand for managers with expertise in the fields of finance and operations management were increasingly supported by private industry (Barrows, 1999).

2.1.4 Economic recession. The recessionary periods in the 1990s (Barrows, 1999) and again in 2008, produced notable declines in student enrollments in hospitality higher education. Many programs disbanded, while others downsized. In 1996, an annual meeting at the International Council on Hotel, Restaurant, and Institutional Education (ICHRIE) held a workshop for hospitality program survival (Barrows, 1999). Faced with recession and budgetary cuts at the local and state levels, some hospitality management programs were forced to undergo massive changes in an effort to keep their programs alive. For example, in 2011, the William F. Harrah College of Hotel Administration at UNLV eliminated faculty positions, 8 majors, and many classes to save the program due to a \$30 million budget cut (Benston, 2011). As hospitality management programs are forced to become more self-reliant, they have looked to external funding to support their programs, including subsidies from private industry (Barrows, 1999).

2.1.5 Experiential learning. Due to the strong recommendations of recruiters, experiential learning, or active learning, has become a critical component in hospitality curricula (Dickerson, 2009). Built upon the belief that an effective

manager needs practical experience (Baum, 1988), hospitality programs have incorporated work experience (Leslie, 1994), and in many cases an experiential learning element, into the course of study (Girard, 1999). Previous research on the benefits of experiential learning revealed students who engage in these types of educational opportunities are better equipped for employment in the industry (Van Hoof, 2000). Courses employing experiential learning provide students the chance for moral development, leadership skills, and a respect for diversity (Eyler & Giles, 1999).

The vocational nature of hospitality education (Barron & Anastasiadou, 2009) supports experiential learning, both in and out of the classroom. In-class experiential exercises include computer-based simulations, student-run restaurants, critical incidents, action research, small group problem solving and case studies (Harrington, Ogbeide, & Ottenbacher, 2010). Research into active learning in the hospitality management curriculum concluded these tasks contribute to critical thinking and problem solving, as well as preparing students for their future jobs (Sivan, Leung, Woon, & Kember, 2000).

Active learning has been found to be more suitable for achieving the higher levels of complex learning (Lovell-Troy, 1989). In hospitality education, the use of memorization has been discouraged as a teaching practice, replaced instead with methods that encourage the development of personal and intellectual skills (Sivan, Leung, Gow, & Kember, 1991). Many educators subscribe to the belief that hospitality students should be supported in finding their own conclusions through

investigations into the industry. This encourages hospitality students to become active participants, taking more personal responsibility for their learning (Sivan et al., 1991).

Experiential learning outside the classroom most often refers to internship programs. Hospitality internships may be referred to as student work experience, placements, cooperative education, experiential education, or work-integration education (Tse, 2010). These types of practical, applied experiences are valuable as they afford students the opportunity to put into practice what they have learned in the classroom (Tse, 2010). Internships are critical to a hospitality curriculum because they provide students access to new technology applications, operational readiness and customer service skills (Petrillose & Montgomery, 1998). In addition, students gain critical insight into customer-employee interactions and management functions (Petrillose & Montgomery, 1998).

2.1.6 Working students. In recent years, higher education has witnessed an increase in the number of undergraduate students who part or full-time. Seeking to augment student loans to pay tuition, students often hold some form of part-time employment to pay for rent, books, food, gas, transportation, and generate spending money for social activities (Barron & Anastasiadou, 2009). In 2010, 40% of full-time and 73% of part-time undergraduate students worked while in college (Institute of Education Sciences, 2012).

This practice bodes well for the hospitality industry which requires flexible and inexpensive labor to sustain business operations (Curtis & Lucas, 2001). Hospitality students who work part-time in the industry gain valuable personal and career

development (Barron & Anastasiadou, 2009). Furthermore, consistent part-time work, as opposed to sporadic summer employment, has been found to support the student financially while enhancing career opportunities (Curtis & Lucas, 2001).

Unfortunately, there is a price students pay to work while gaining an undergraduate education. Studies have shown students who work often have less time to study than those who remain unemployed throughout their college career (Manthei & Gilmore, 2005). In addition, working part-time can have a negative effect on students' physical and mental health (Carney, McNeish, & McColl, 2005) and promotes absenteeism in the form of subpar class attendance (Curtis & Shani, 2002).

Studies have demonstrated students, industry, and institutions can benefit from supporting students who work part-time while enrolled in an undergraduate program. Work experience, internship, and recruitment offices within institutions often act as a broker or intermediary between the student and the employer (Barron & Anastasiadou, 2009) which is beneficial to students as it protects them from working excessively.

Research confirms institutions could be more supportive and understanding of those students working part-time while in school (Barron & Anastasiadou, 2009) by encouraging faculty to be more sympathetic toward these students and providing flexible educational alternatives (Barron & Anastasiadou, 2009). Flexible educational options include decreasing the number of subjects studied, offering various modes of course delivery (i.e. face-to-face, full online or blended learning), and assorted methods of assessment (Barron & Anastasiadou, 2009).

2.1.7 Nontraditional students. The total college enrollment in the United States is predicted to increase 13% from 2009 to 2020 (Institute of Education Sciences, 2011). A significant impetus behind this growth is the return of many nontraditional students, those individuals between 25 and 34 years of age, to higher education. Predictions expect the percentage of nontraditional students to increase 21% during the next decade (Institute of Education Sciences, 2011). Though nontraditional students are often characterized as those older than the typical college age, i.e. 18-24, individuals from multiethnic backgrounds, first generation college students, students from low socio-economic circumstances, and those with families and jobs are also included in this demographic (Miller & Lu, 2003). These students are increasing in number but often have difficulty graduating due to personal and professional commitments. Nontraditional students typically attend school on a part-time basis and perceive the college degree as a necessary career credential (Miller & Lu, 2003). Institutions of higher learning stand to lose revenues by failing to support nontraditional student enrollment (Miller & Lu, 2003). In addition, loss of nontraditional students equates to disrupted learning as well as decreased retention rates and satisfaction among students (Miller & Lu, 2003).

Recessionary times and the nature of a changing workforce are prompting nontraditional students to pursue terminal degrees in higher education (Supiano, 2010). Research has shown nontraditional students are easier to recruit than retain in higher education; however, Pennsylvania State University has formed a strategic plan to accomplish both goals (Hoover, 2010). Penn State predicates this action upon the

belief that the needs of nontraditional students vary and there is no “one size fits all” approach (Hoover, 2010). Based on the feedback of former nontraditional students, Penn State implemented accelerated programs, better access to financial aid, and increased blended and full online course offerings to serve the needs of these students (Hoover, 2010). The flexibility of distance education programs is a major proponent for encouraging Americans with family and work obligations to continue in post-secondary degrees (Kolowich, 2010).

2.1.8 Online hospitality education. A study by Sciarini, Beck, and Seaman (2012) which examined hospitality faculty’s perceptions of online education reported in January 2012 that 44.3% of respondents agreed online education was important to the long-term strategy of the academic unit. When compared to a larger study encompassing a variety of academic disciplines, 65.5% agreed online learning was important to the long-term strategy of the institution (Sciarini, Beck, & Seaman, 2012). These statistics demonstrate hospitality faculty place a less significant value on online learning as compared to faculty in other academic fields.

Blended courses are more widely embraced than full online course offerings within hospitality programs. Over sixty-one percent (61.8%) of hospitality programs offer blended courses as opposed to 52% who offer full online courses (Sciarini, Beck, & Seaman, 2012). Of the hospitality management programs already engaged with online education, 13.6% offer full online course delivery for their entire program (Sciarini, Beck, & Seaman, 2012).

One advantage of online learning over traditional instruction is the flexibility it provides to student. Slightly higher than 80% of hospitality management program respondents in the Sciarini, Beck, and Seaman study (2010) thought online education was preferable to face-to-face instruction in terms of scheduling flexibility for students and their ability to work at their own pace. Online learning was also believed to be superior to face-to-face learning in terms of supporting student-to-student interactions (Sciarini, Beck, & Seaman, 2012).

The trend toward a more positive outlook regarding online course delivery in hospitality management higher education is increasingly positive. Eighty percent (80.0%) of faculty believe within 5 years the majority of all higher education students will be taking at least one online course during the course of their undergraduate studies (Sciarini, Beck, & Seaman, 2012). Furthermore, hospitality faculty claim there will be increasing competition in the future for online students within their own programs (Sciarini, Beck, & Seaman, 2012). Regarding hospitality program administrators, there is no longer a question of *if* they will have online offerings, but rather *when* and *what type*. The preference for blended or hybrid learning over full online course delivery in hospitality management might already indicate the type of online offerings in the near future of hospitality higher education.

2.1.8.1 Institutional strategic planning. It has been reported the future of online learning directly corresponds to institutional long-term strategic planning goals. In 2011 Indiana University identified online learning as one of its primary initiatives in its overall strategic plan for the institution. Several reasons for providing quality

online education for undergraduates included timely progress toward earning degrees, convenient access to education for working adults, and retention. The most important factor in providing undergraduate online instruction was to offer additional sections of required and popular undergraduate courses

(<http://www.indiana.edu/~newacad/docs/IU-online-educ-strategic-plan-2011.pdf>).

Indiana University supplied a different focus for graduate online education maintaining the primary goal was to meet the needs of working professionals seeking degreed credentials. Additionally, Indiana University aimed to attract new markets in the graduate segment both nationally and internationally

(<http://www.indiana.edu/~newacad/docs/IU-online-educ-strategic-plan-2011.pdf>).

When revenue generation is part of a strategic plan, some universities depend on distance learning to create profit. Without physical space limitations, online classes present the opportunity for high course enrollments, thus serving as a significant profit generating mechanism for the institution (Blumenstyk, 2012). This is evident at the University of Massachusetts at Amherst where the online MBA program accounts for 25% of the enrollment, but 40% of the \$25 million annual budget in the Isenberg School of Management (Blumenstyk, 2012).

2.1.8.2 Increased enrollments. Enrollment management is a formal field within higher education that governs the size and composition of student bodies (Penn, 1999). Since the early 1970s (Dixon, 1995), as the number of colleges and universities increased while the number of high school graduates declined, institutions have encountered more competition for the same students (Healey & Schmidt, 1997).

Exacerbating this dilemma is the additional pressure to acquire funding at the state and federal levels (Breneman, 1997).

State financed institutions are experiencing decreased funding after the recent recession while concurrently enrollments are growing (Kelderman, 2010). Budgetary cuts can no longer support the enrollment in many state-funded institutions. From 2007 to 2009, national full-time enrollment grew 3.4% while state assistance for higher education only increased by 1% (Kelderman, 2010). Institutions have fewer resources to meet the needs of a growing body of students. Online education has alleviated this gap, and in some cases, produced a profit for state-run institutions. The University of Massachusetts at Lowell and the State University of New York Delhi campus implemented online learning programs to serve nontraditional students (Fain, 2010). Both universities claim online education helped alleviate the gaps in state appropriations. Lowell reported \$25 million in revenue in 2009, with a net profit of \$10 million as a result of these expanded online course offerings (Fain, 2010).

2.1.8.3 Greater flexibility. Nontraditional adult students occupy the largest proportion of distance learners (Gibson, Tesone, Hodgetts, & Blackwell, 2001). These students may be enrolled in either undergraduate or graduate programs and often must balance work and family responsibilities during their course of study in a part-time format (Gibson et al., 2001). Meeting the needs of this population of students is paramount to institutions who seek to increase enrollments. Online learning allows for greater flexibility of time for nontraditional students along with increased convenience

of learning, and exposure to a diverse student population (Tesone, Alexakis, & Wayne, 2003).

Professional adult learners in hospitality often work in remote locations and have schedules which prevent them from regular attendance in face-to-face courses (Tesone et al., 2003). International students also comprise this group of nontraditional students who seek an education in the United States while living abroad. Within this group of learners are out-of- state students who decide to continue course work during the summer months while at home (Tesone et al., 2003).

Students who are employed in internships away from their degree program also continue their coursework via online instructional methods (Tesone, 2000). Research in this area has shown the common thread linking nontraditional students to online learning is the flexibility of time and location in terms of pursuing an online degree (Gibson et al., 2001). Online learning creates alternatives to traditional learning formats for nontraditional students and provides greater access to higher education opportunities where none existed previously.

2.2 Evolution of Online Learning

It is difficult to pinpoint the exact evolutionary pathway of online learning because its development occurred simultaneously across several disciplines. Nicholson (2007) described the development of eLearning as a set of parallel events emanating from the business, academic, and military sectors. With respect to business and training and development initiatives, online learning has been associated more with increased productivity and cost reduction (Nicholson, 2007). Campbell (2004)

reported in business settings, online learning had more of a focus on just-in-time learning and collaboration, while in higher education the emphasis was on meta-cognition, reflective learning, and collaborative learning. Online learning from an historical context began in the 1960s with the creation of PLATO at the University of Illinois (Nicholson, 2007). Rapid technological advancements of online learning followed in the 1970s with the advancement of email, computer networks, and conferencing (Harasim, 1996),

2.2.1 Academic innovators. The contemporary application of online learning in higher education as it is practiced today can be traced back to the work of Suppes (1964) and Bitzer (1962). During the 1960s, Patrick Suppes of Stanford recognized the educational potential of computer-enhanced learning technologies and established the Computer Curriculum Corporation using one mainframe computer. Drawing upon his extensive research on the benefits and effectiveness of computer enhanced learning, Suppes created a Computer Managed Instruction System to teach his own undergraduate students. Later, he developed a similar system to teach mathematics to elementary school children. While his research with computers and learning was inconclusive, Suppes' own critique of his work led to his belief that if harnessed correctly with sound pedagogical methods, computer assisted learning would greatly enhance the future of education (Nicholson, 2007).

Another academic online learning pioneer of note during this time was Don Bitzer, the creator of PLATO (Programmed Logic Automated Teaching Operator) at the University of Illinois. PLATO was both an internal communications system as

well as a computer-based educational delivery system used specifically for literacy programs. Deemed the first online community, PLATO was an internal computer system developed more than 20 years before the Internet (Woolley, 1994) and was the precursor to today's course management systems including Blackboard and WebCT (Nicholson, 2007).

These types of technological developments were crucial to the evolution of online learning and without these advances, larger scale online programs, such as the first executive program delivered fully online by the Western Behavioral Sciences Institute in 1982, would not have been feasible (Harasim, 2006). In this online program high-ranking executives participated in a two-year course of study designed for those who required access to the latest innovations but who could not leave their jobs to enroll in a traditional face-to-face course. Although many challenges were reported due to the limitations of computer networking hardware at that time, the program was successful as evidenced by the increasing number of students each year (Harasim, 2006).

Academic conferencing and networking systems developed worldwide throughout the 1980s, but the telecommunications revolution of the 1990s propelled online learning into public schools, businesses, adult and higher education. The transformation in education was widespread and produced a global paradigm shift in the nature of learning, thus impacting pedagogy, instructional theory, course delivery, instructional design, learning processes and outcomes (Harasim, 2006). The emergence of online learning as a field "moved from obscurity in the 1980's to

skeptical recognition in the 1990's, to rapid acceptance in the 2000's" (Harasim, 2006, p. 78). Despite the more than twenty years of development of online learning, research on this form of course delivery was largely nonexistent until the 2000s, when exponential growth became the norm.

A current example of online support and research, which had its roots in the early 1990s, is the Sloan Consortium (<http://sloanconsortium.org/>), derived from the Alfred P. Sloan Foundation, which provides grants for higher education science and technology research. The Sloan Consortium conducts ongoing workshops and training for institutions, organizations, and members of academia with an interest in online education. In addition, the Sloan Consortium supports the publication *Journal of Asynchronous Learning Networks (JALN)*, a leading journal in its field, which is published four times a year and offers practitioners the latest developments and research in online education. From 2002 to 2010, the Alfred P. Sloan Foundation was the sole sponsor of online research by the Babson Survey Research Group, directed by Allen and Seaman (2010). Allen and Seaman remain pioneers in the field of higher education online learning, and most recently published a report titled, "Conflicted: Faculty and Online Education, 2012" together with Lederman and Jaschik of *Higher Ed* (Allen, Seaman, Lederman, & Jaschik, 2012). While the funding for this latest project came from companies typically supporting higher education, such as CourseSmart, Deltak, Pearson, and Sonic Foundry, the main partners in the project were Babson Survey Research Group and *Inside Higher Ed*, an online source for news in higher education since 2004 (<http://www.insidehighered.com/content/about-us>).

With over 10 years of research and a focus on demographics and attitudes pertaining to online learning, Allen and Seaman have provided basic statistical figures and followed the more recent contemporary emergence of online learning since the 1990s.

2.3 Faculty Perspectives of Online Learning

Faculty opinions regarding course quality remain a point of contention in online learning today. In report examining faculty attitudes toward online education, 58% of faculty polled reported low levels of optimism. Faculty without any online teaching experience expressed more fear than excitement (Allen et al., 2012). However, enthusiasm grew as faculty gained more experience. For example, instructors who taught courses within online programs had the most favorable view toward online learning, followed by those instructors with only some experience outside an established program (Allen et al., 2012).

Allen et al. (2012) reported faculty at two-year institutions were more positive about the growth of online programs than their counterparts in four-year universities. This may be due in part to the prevalence of online learning in two-year colleges, as 91% offer online courses compared to 89% in public four-year universities and 60% in private four-year colleges (Taylor, Parker, Lenhart, & Patten, 2011). In the same study, faculty members with the most years in academia expressed less passion for online learning than faculty members just beginning their careers (Allen et al., 2012).

2.3.1 Quality. While the majority of chief academic and program officers hold few reservations about the quality of online learning within their own institutions, faculty still expressed negative attitudes toward this form of instruction (Allen et al.,

2012). Sixty-six percent (66%) of faculty expressed negative views toward online learning, saying they felt the quality was inferior to face-to-face education (Allen et al., 2012). This pessimistic outlook is attributed in large part to faculty members' previous experience, or lack of experience, with online courses (Allen et al., 2012).

Eighty-three percent (83%) of faculty working in institutions without online programs felt online learning was inferior to face-to-face learning. Even those faculty with some online teaching exposure expressed doubts as to the effectiveness of this teaching technology. Among faculty working at institutions offering online courses, 69% felt this delivery system was "inferior" or "somewhat inferior." Even in institutions with full online programs 55% of faculty still expressed their aversion to online course delivery (Allen et al., 2012).

Other studies have demonstrated an opposing view, reporting learning outcomes in online courses are similar to traditional face-to-face courses (Stewart, Bachman, & Johnson, 2010). The conflicting views of online learning could be explained by the fact faculty might consider their own online courses high quality, while harboring reservations about the online course quality of their peers or faculty members at other institutions (Allen et al., 2012).

Despite prevailing negative attitudes about the quality of online learning, 50% of faculty members with prior online teaching experiences were favorable towards online learning and its potential to help students learn (Allen, et al., 2012).

Additionally, faculty members who were currently teaching at the time of the study

compared to faculty who did not teach online reported nearly two to one that online learning was as effective as face-to-face course delivery.

In recent years higher education accountability has intensified, as more institutions are required to demonstrate transparency through student learning outcomes (Huffman, Adamopoulos, Murdock, Cole, & McDermid, 2011). Justification of tax dollars (Banta & Pike, 2007), improvement of student learning, reaching institutional goals, and responsibility to students and parents are cited as adding increased pressure on administrators to demonstrate transparency and support of student learning outcomes (Hamilton & Banta, 2008). High stakes assessments for institutions have been well documented for face-to-face instruction, but for online programming, less research has been conducted to date. Allen et al. (2012) reported fewer than 50% of all instructors believe their institutions had good quality assessment for face-to-face instruction, but only one-quarter expressed confidence the institution had adequate policies in place to assess online instruction.

2.3.1.1 Compensation and recognition. Previous studies regarding online learning reported a common grievance among hospitality instructors was the increased preparation time required to develop an online course, compared to teaching a face-to-face course (Allen et al., 2012). In addition to increased preparation time, other barriers to faculty members' intention to teach online included compensation for online course development and concerns over intellectual property rights (Berge & Muilenberg, 2001; Porter, 2003; Orr, Williams, & Pennington, 2009). The issue of compensation prompted faculty unions to generate new language in their contracts to

guarantee additional monetary support for the development of online courses (Carnevale, 2004); however, administrators view online learning as increasingly mainstream, and often claim development should be part of a faculty member's workload (Carnevale, 2004).

Although research demonstrated the importance of faculty being compensated monetarily for online course development and teaching, faculty reported this was not their primary motivation for teaching online (Orr et al., 2009). Instead, faculty rated time as a critical factor toward motivation to teach an online course (Orr et al., 2009). Thus, a course release in exchange for development has been one proposed solution for faculty opposed to online course creation. A recent study involving perceptions of fair compensation for online course instruction reported one-third of faculty believed their payment was fair, one-third were neutral on the issue, and the remaining third disagreed with how their institutions financially compensated those instructors teaching online (Allen et al., 2012).

Faculty development of digital pedagogy and subsequent recognition of online teaching contributions was reported as slightly less than fair among faculty teaching online (Allen et al., 2012). However, when attached to promotion and tenure initiatives, the majority of faculty who taught online reported their institutions had a fair tenure and promotion system with respect to teaching online courses (Allen et al., 2012).

2.3.1.2 Theory. Two learning paradigm shifts have taken place over the course of the rapid adoption of online learning by higher education institutions. The first is a

shift away from the traditional face-to-face learning pedagogy, characterized by instructor-led learning environments, toward an online model, with instructors occupying more of a supporting role (Sigala, 2002). The second, and more comprehensive paradigm shift, is within online learning itself, as evidenced by the variety of online learning environments including traditional online learning (courses taken completely online), blended learning (using online learning as a mixed mode with face-to-face), and virtual eLearning (supplemented face-to-face instruction with online learning) (Mishra, 2002; Patel, Gali, Patel, & Parmar, 2011).

In an effort to better understand the effects and impact of collaborative online learning environments, several learning theories highlight online learning pedagogy from the standpoint of both students and instructors. Among these are behaviorism, cognitivism, constructivism, and social constructivism (Hung, 2001; Mishra, 2002; Patel et al., 2011) with constructivism identified as the leading theory for online learning environments (Hung, 2001). Table 1 highlights the main characteristics of online learning theories (Hung, 2001).

Skinner's (1974) behaviorist theory is based on a stimulus and response modality where learning takes place through memorization and is achieved through response and reinforcement (Mishra, 2002). Online learning approaches to behaviorism include self-assessment, interactive activities, and learning materials deployed as small pieces of information (Villalba & Romiszoski, 2001; Mishra, 2002).

Cognitive theory explains the acquisition of knowledge based on contextual factors, where meanings and relationships are derived from interpersonal

environments (Clancey, 1992) (see Table 1). Cognitivism, like behaviorism, still is dependent on memorization but also includes the higher orders of learning, including application and elaboration. In an online learning environment, cognitive theory is demonstrated in annotated note taking, peer-assessment, and the seeking of research information for projects via Internet search engines, for example (Mishra, 2002).

Table 1. *Characterization of Online Learning Theories (Hung, 2001).*

Theory	Learning Process	Type of Learning	Instructional Strategy	Key Concepts
Behaviorism	Stimulus and response	Memorization and response	Practice and feedback	Reinforcement
Cognitivism	Transmission and knowledge processing	Memorization and application	Cognitive learning strategies	Reproduction and elaboration
Constructivism	Personal discovery	Problem solving and case study	Active and self-regulating learning methods	Personal discovery
Social Constructivism	Via different cultural perspectives	Collaborative learning and problem solving	Scaffolding in the learning process	Discovering different perspectives and shared meanings

2.3.1.3 Constructivist theory. Constructivist theory, based on cognitive learning strategies, was formulated by Piaget (1960) and proposed that individuals constructed knowledge through personal discovery. Learning modalities for constructivism include collaborative and problem solving strategies that encourage active and self-regulated learning (see Table 1). Online teaching approaches to support constructivism include the use of synchronous and asynchronous discussion

forums (Schellens & Valcke, 2006), group projects, and streaming media (Villalba & Romiszowski, 2001; Mishra, 2002).

Vygotsky (1978) further developed constructivism to include the cultural and social contexts of learning, renaming it ‘social constructivism.’ Emphasizing the importance of personal interaction, Vygotsky’s social constructivist theory focused on the view that human knowledge is of social origins and dependent on cultural contexts (Hung, 2001). More specifically, Hung (2001) analyzed the similarities between constructivist and social constructivist theories concluding:

1. Learning is an active process of constructing rather than acquiring knowledge;
2. Knowledge can be socially constructed where the social interactant may include just oneself;
3. The interpretation of knowledge is dependent on a) the prior knowledge and beliefs held in one’s own mind and b) the cultural and social context through which the knowledge was constructed. (p. 283)

Social constructivism calls upon collaborative and problem solving learning environments (see Table 1). Due to the varying levels of student understanding within a typical learning environment, in order to assist students in a collaborative atmosphere, scaffolding is applied as an instructional strategy (Hung, 2001).

2.3.1.4 Learning environment design. The technology boom of the 1990s helped propel online learning theory and practice in the 2000s. During this time, Pallof and Pratt (1999) advised against the transference of existing face-to-face course delivery strategies to online learning, as they indicated this would not advance the use of the medium. Furthermore, Collins (1996) warned it was not the sophistication of

the technology, but rather the utilization and implementation of that technology which would improve online learning. Sigala (2002) described the role of an online instructor as one of evolving from educator to facilitator, which in turn transformed students from passive to active, independent learners, immersed in a personalized online learning experience (see Figure 1).

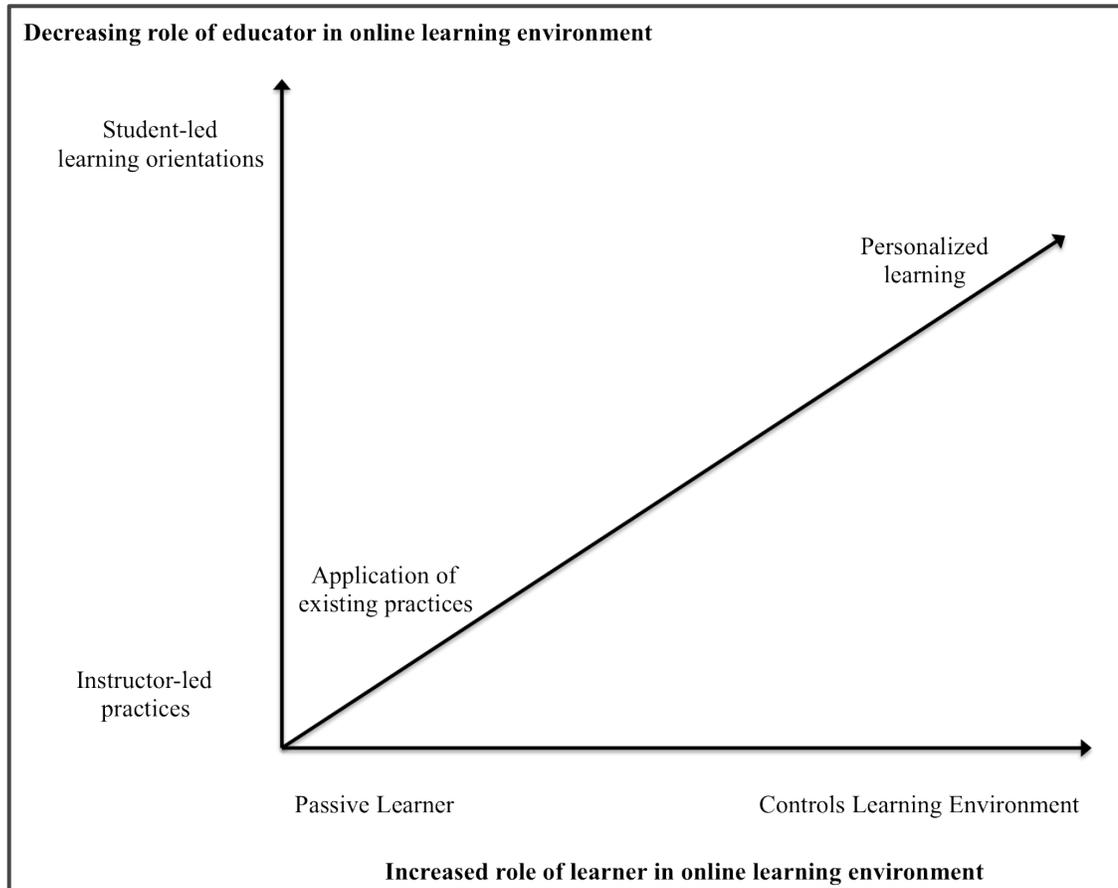


Figure 1. Role of the educator in the design of the learning environment (adapted from Sigala, 2002).

Innovative online instructional techniques, pertinent to student learning outcomes, require faculty training and development (Gautreau, 2011). Since 1999, institutions of higher learning have been concerned with the readiness and training of

instructors, preparing them for the inevitable growth of information and communications technology (Simpson, Payne, Munro, & Hughes, 1999). Teaching online courses requires a whole new set of skills, pedagogy, and knowledge; however many faculty development programs have overlooked the needs for learning new technologies (Gautreau, 2011). One of the most basic skills useful to faculty teaching either online or in blended learning environments is the use and application of a course management system (CMS), also known as a learning management system (LMS) (Gautreau, 2011). Blackboard, WebCT, and Moodle are among the most popular CMSs in higher learning. The primary function of a CMS or LMS is to deliver online instruction using various multimedia modes to improve the online instruction and learning process (Mullinix & McCurry, 2003). Understanding the potential for online or blended learning instruction using a CMS is critical for the adoption of a CMS by faculty (Gautreau, 2011).

2.3.2 Instructional formats for online learning. As the most adopted theory for online learning, constructivism was a popular choice due to its support of online course design and management (Chu, Mamchur, Parker, & Rossner-Merrill, 1998). Online course design, or instructional design, is difficult to categorize by technology alone, and thus to become more objective, online technology was categorized according to communication formats: synchronous and asynchronous (O'Connor, 2010). Synchronous communication is defined as two or more persons communicating together simultaneously, while asynchronous communication occurs separately over a longer time frame (O'Connor, 2010).

The benefit of asynchronous communication is that it allows for greater flexibility for both the student and instructor. In contrast, the disadvantage of asynchronous communication is that there is no immediate interaction between learners or between students and the instructor (O'Connor, 2010). Synchronous communication however is not without its disadvantages, as statements are immediate and prevent students from spending any significant amount of time contemplating the material before responding.

2.4 Student Perspectives

In 2001, Marc Prensky coined the phrase “digital natives” to describe individuals born between 1980 and 1994, who were the first generation to grow up with the latest technologies, including the Internet (Prensky, 2001a). Researchers also labeled this age group the “millennial generation;” a cohort with distinct characteristics, particularly related to education, distinguishing them from preceding generations (Howe & Strauss, 2003). Millennials were unique due to their ability to be active experiential learners, good at multitasking, and highly dependent on communication technologies for social interaction (Oblinger & Oblinger, 2005). Critics of higher education, such as Prensky, generated controversy over whether contemporary institutions of higher education would be able to effectively meet the demands of this new generation (Bennet, Maton, & Kervin, 2008).

The significance in understanding and classifying contemporary college students concerns their pedagogical needs and how these changed as the digital age matured. To illustrate this point, Prensky (2001a) stated “today’s students think and

process information fundamentally differently from their predecessors” (p. 1).

Furthermore, “Today’s students are no longer the people our educational system was designed to teach” (Prensky, 2001a, p. 1). With concerns over the future of digital learning and as an instructor himself, Prensky (2001a) created simulation games in an effort to reach his students and recommended all disciplines develop similar strategies to connect with digital natives.

Prensky (2001a) went on to assign the term, “digital immigrants” to anyone born prior to 1980 and characterized these individuals as persons who had to adapt to the new technologies, similar to any other immigrant who would have to adapt to a new environment, but who always would have a foot in the past. Digital immigrants also included instructors in higher education, thereby illustrating the gap between the advanced technological skills and pedagogical demands of new, incoming Millennials and the alleged rudimentary IT skills of their professors (Prensky, 2005; Bennett et al., 2008).

2.4.1 Student perceptions of online learning. From a student’s perspective, the flexibility of learning anytime and anywhere via networking technologies is reported as one of the primary benefits to taking online courses (Liaw, 2008), as nearly 30% of current undergraduate students take at least one online course during their studies (Allen & Seaman, 2010). Some of the most common motivations for online learning include the ability of students to manage their own schedules, less dependence on instructor imposed time constraints, and the freedom to express themselves and ask questions (Bouhnik and Marcus, 2006). In addition to the

convenience of time and place factors supported in prior research (Capper, 2001), other findings included discussions were more likely to stay on track due to asynchronous discussion, increased group collaboration, and new tools for learning.

However, students in prior studies reported dissatisfaction with their online courses as evidenced by high dropout rates (Dutton and Perry, 2002). Common complaints cited by students were a lack of pedagogical structure for learning, low or non-existing levels of self-discipline required to complete online courses, deficiency of a learning environment, the lack of interpersonal interaction among students and teachers, and less efficient time utilization with online learning formats (Bouhnik & Marcus, 2006). In a study of adult distance learners' decisions to drop out of an online course, several factors were reported, including lack of family support, poor organizational assistance, low student satisfaction, and an absence in course relevance (Park and Choi, 2009).

2.4.2 Quality. Student perceptions of course quality relates directly to effective teaching in higher education (Marsh, 1987) and has long been held as a measure of student satisfaction (Ramsden, 1991). The notion that students are in the best position to evaluate effective teaching and comment on teaching quality is justified because students experience a great deal of teaching in their academic careers (Ramsden, 1991).

Research shows a link between perceived course quality and online interaction from the perspectives of both the student-student and student-teacher relationship (Trentin, 2000). The importance of instructor facilitation of interaction among

students was determined to be a pivotal indicator of high quality perceptions in distance education (Trentin, 2000). Research also indicates students have a tendency to judge an online course based on their perception of the instructor's interactivity (Flottemesch, 2000). These notions support multiple studies (Murphy, Smith & Stacey, 2002; Wilson & Stacey, 2004) regarding the importance of instructor training for online course delivery, with special consideration for instructor interaction and perceived course quality.

2.4.3 Learning environment. Compared to a face-to-face course, in online learning the use of time is dictated by the student which allows for increased time to participate in course discussions (Frazee, 2003). Additionally, non-threatening learning environments enable greater student participation and increased opportunities, both public and private, to ask questions (Frazee, 2003).

While the online learning environment is one of the primary aspects which appeal to students in online classrooms, it is still the responsibility of the student to participate and become actively involved. Studies have shown active participation by students has a direct effect on the level of success individuals recognize in these virtual classrooms (Edelstein & Edwards, 2002). When students expanded their interactions to include both fellow students and the instructor, it advanced their own knowledge building based on social constructions and understandings (Liaw, Huang, & Chen, 2007). Interactive environments were also found to be critical to the success of student online learning as well as learner self-efficacy and the implementation of multimedia formats (Liaw, 2008).

2.5 Theoretical Framework

The guiding theoretical basis for this research was the Technology Acceptance Model 2 (TAM2) (Venkatesh & Davis, 2000). The origins of TAM are based on the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975) and the Theory of Planned Behavior (TPB) (Ajzen, 1991). The Technology Acceptance Model predicts an individual's intention to use a technology based on the technology's usefulness and ease of use (Davis, 1989). Originally intended for business applications to identify points of possible training interventions, TAM has been widely tested across many disciplines and become known as a robust and parsimonious model for predicting user intention of technology (Taylor & Todd, 1995). Early TAM research spurred thousands of follow-up articles and subsequent confirmation of the theory, verified by *Decision Sciences*, making Venkatesh and Davis' (1996) article the eighth most cited article in the journal between 1970 and 2005 (Venkatesh, 2006). As of July 2012, Google Scholar reported 13,342 citations of Davis' (1989) seminal work (http://scholar.google.com/scholar?cites=4200476567898454088&as_sdt=5,44&sciodt=0,44&hl=en).

Widely applied to understand the user's self-reported acceptance of technology in a business environment, TAM has also successfully been applied to other disciplines, including smart phone applications (Park & Chen, 2007), cloud computing (Behrend, Wiebe, London, & Johnson, 2011), Internet banking (Wang, Wang, Lin, & Tang, 2003), health care (Hu, Chau, Sheng, & Tam, 1999), hospitality (Kim, Lee, & Law, 2008), consumer marketing (Koufaris, 2002), and online education (Saade &

Bahli, 2005). Regardless of discipline, the underlying foundation of all TAM research rests upon measuring IT usage to ensure optimal deployment and return on investment of new systems (Davis, 1989; Mathieson, 1991; Taylor & Todd, 1995).

The Technology Acceptance Model (TAM) is based on the Theory of Planned Behavior (TPB) (Ajzen, 1985), a model from social psychology where intention is predicted by attitudes and social influences (Davis et al., 1989). Both models are among the most widely used frameworks examining the determinants of IT usage and have roots in the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1975).

2.5.1 Theory of Reasoned Action. The Theory of Reasoned Action (TRA) is a model that predicts behavioral intentions based on determinants of attitude and subjective norm. Developed by Fishbein and Ajzen (1975), TRA (see Figure 2) has been implemented over the years to predict consumer behavior (Sheppard, Hartwick & Warshaw, 1988) and adoption of information technologies (IT) (Liker, J. K. & Sindi, A. A., 1997). According to the model, behavioral intention is the direct antecedent to an individual's behavior. Behavioral intention is predicted by the attitude toward the behavior as well as a person's perception of social pressure, namely subjective norm (Fishbein & Ajzen, 1975).

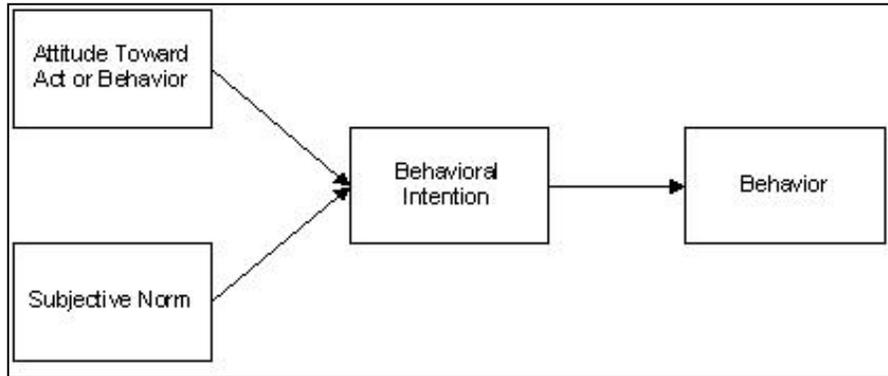


Figure 2. Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980).

Attitude toward a behavior is defined as a person’s positive or negative feelings about performing the behavior (Fishbein & Ajzen, 1975), while subjective norm is defined as a person’s perception of whether people important to him or her thinks the behavior should be performed (Ajzen & Madden 1986).

TRA is not without limitations, as oftentimes attitudes are confounded with norms (Ajzen, 1985). In addition, as a general model, TRA does not specify the beliefs relevant to a specific behavior (Davis et al., 1989). To overcome this, the investigator must first identify those beliefs salient to the behaviors researched (Yousafzai, Foxall, & Pallister, 2010). Often cited as a limitation of the model, are conditions where intention and behavior are highly correlated, thus compromising the predictive powers of behavioral intention (Yousafzai et al., 2010). Furthermore, measuring intention and behavior simultaneously corroborates the attitudinal basis of the behavior in question (Yousafzai et al., 2010). Finally, the model is constrained by a person’s willingness and is unsuitable for situations where participants have no other choice but to participate in the behavior (Ajzen, 1991). The Theory of Planned Behavior (TPB) was developed in response to these limitations.

2.5.2 Theory of Planned Behavior. The Theory of Planned Behavior (TPB) added behavioral control, a person’s perception of the ease with which a behavior can be performed (Ajzen, 1991), to TRA in an effort to improve the model (see Figure 3). In addition, TPB extended TRA to account for the instances when individuals do not have control over their behavior (Ajzen, 1991). Each determinant of intention (i.e. attitude, subjective norm, and perceived behavioral control) is specified by a set of belief structures referred to as attitudinal beliefs, normative beliefs, and control beliefs (Taylor & Todd, 1995). However, TPB is still problematic in cases where intention and behavior are measured simultaneously (Yousafzai, et al., 2010). TPB is widely used in healthcare, consumer satisfaction and behavior, IT, government, and marketing due to its ability to accurately predict persuasion (Crano & Prislin, 2006).

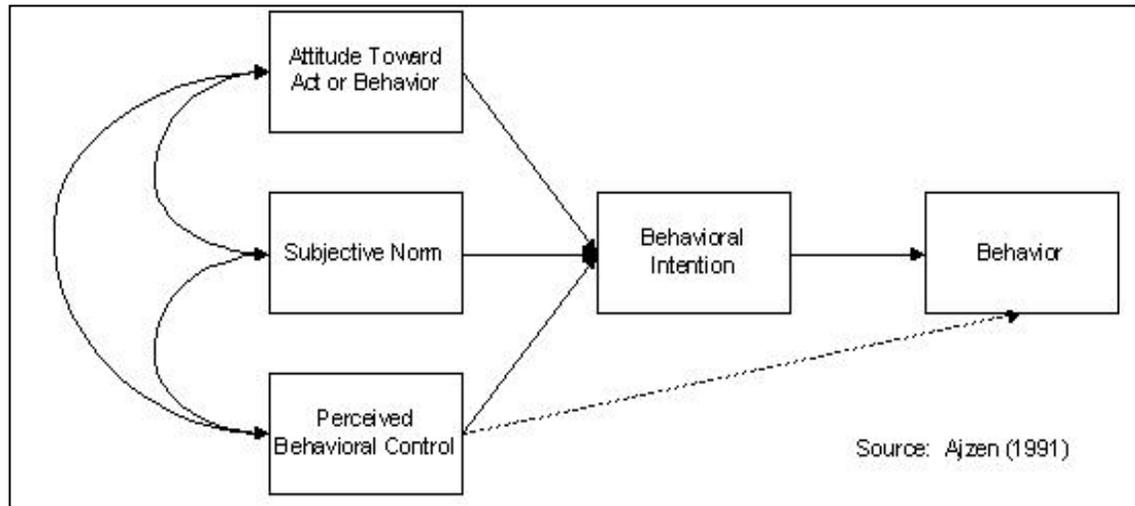


Figure 3. Theory of Planned Behavior (TPB) (Ajzen, 1985; Ajzen, 1991).

2.5.3 Technology Acceptance Model. Davis (1989) originally proposed the Technology Acceptance Model (TAM) to explain the attitudes and beliefs about how

individuals use IT in a business setting. A mature and widely studied model, TAM has emerged as a robust and parsimonious way to identify the antecedents of system usage through beliefs about the perceived ease of use and the perceived usefulness of an information system (Taylor & Todd, 1995). TAM was developed for understanding on-the-job information technologies, and the predictive power of the model was increased due to the inclusion of the intention to use the specific IT (Fishbein & Ajzen, 1975; Taylor & Todd, 1995). Based on the Theory of Reasoned Action (TRA) presented by Fishbein and Ajzen (1975), TAM linked perceived usefulness (PU) and perceived ease of use (PEU) to the behavioral intention to use a new technology (see Figure 4). An improvement over TPB and a better predictor of IT usage behavior, TAM explained a larger proportion of the variance in intention and behavior than TPB (Davis, 1989). The main premise of TAM was that it could predict an individual's acceptance of a technology by the determinant of voluntary intention to use the technology, which was determined by an individual's attitude toward the technology (Yousafzai et al., 2010).

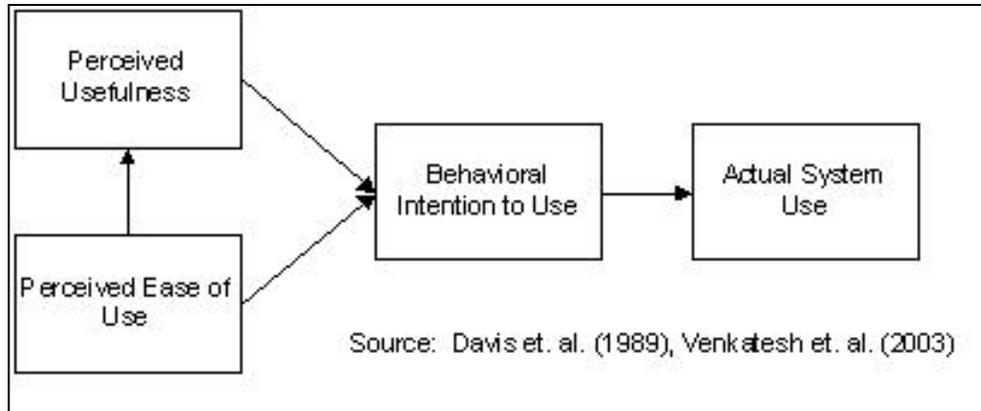


Figure 4. Technology Acceptance Model (TAM) (Davis, 1985; Davis, 1989).

2.5.4 Comparison of TRA, TPB, and TAM. The main difference between TAM and TRA is the inclusion of a direct path between perceived usefulness and intention to use in TAM, a relationship which is mediated by attitude in TRA (Taylor & Todd, 1995). However, Davis (1989) explained in work environments, intentions to use IT are based on performance considerations, regardless of the attitude of the individual. Therefore, an employee could dislike a system and even have an adverse reaction to using it, but is still required to use the system based on job performance standards (Davis, 1989; Taylor & Todd, 1995).

Perhaps the main advantage to using TAM is that it consistently accounts for a large percentage of intention variance when compared to other technology predicting models (Davis, 1989). When compared to TRA, 47% of the variance in intention was explained by using TAM as opposed to 32% variance in intention explained by TRA (Davis et al., 1989; Venkatesh et al., 2003). According to Mathieson (1991), TAM explained 70% of the variance in intention compared to 62% by TPB (Venkatesh et

al., 2003). As in the case of TRA and TPB, the strength of TAM is reliant on the specificity of the measurement attained (Ajzen & Fishbein, 1980). In addition, it is imperative to measure the *beliefs about the use* of the technology, rather than the beliefs about the technology itself (Yousafzai et al., 2010).

2.5.5 Technology Acceptance Model 2 (TAM2). Since it was initially proposed in 1989, TAM has undergone several iterations which have improved the model by adding determinants to user intention. The second iteration of TAM (TAM2) was the model preferred for the guiding framework of this research due to the inclusion of the subjective norm construct, which is the belief that a person's behavior will be influenced by the way they believe others will view them after having used the technology in question (Venkatesh, Morris, Davis, & Davis, 2003).

In 2000, Venkatesh and Davis extended TAM to include several other antecedents to perceived usefulness (PU) (see Figure 5), which provided more detailed explanations as to why consumers would find a system useful (Chuttur, 2009; Venkatesh & Davis, 2000; Venkatesh et al., 2003; Venkatesh & Bala, 2008). The Technology Acceptance Model 2 (TAM2) included new variables: subjective norm, image, job relevance, output quality, and result demonstrability. These variables were added to improve the original TAM via the PU construct and increase the variance explained (Venkatesh & Davis, 2000).

Seeking to assist organizations widely invested in information technologies, Venkatesh and Davis (2000) grew increasingly concerned with the inability of those organizations to recognize a return on investment, as evidenced by low system usage.

In an effort to pinpoint the exact mode of entry into TAM to employ training interventions, researchers set out to expand the original TAM to include several other determinants to PU. Considering the vast body of research confirming PEU and its mediating effect on PU, Venkatesh and Davis (2000) further explored conditions surrounding PU and proposed that all things being equal, the easier a system is to use, the more useful it would be (Venkatesh & Davis).

Although a vast array of empirical TAM studies ensured PU was a strong predictor of intention to use, Venkatesh and Davis (2000) still felt the determinants of PU were overlooked. Due to rapidly changing technologies and the increasing familiarity of systems and their use, Venkatesh and Davis (2000) worked to improve the model and developed TAM2 (see Figure 5).

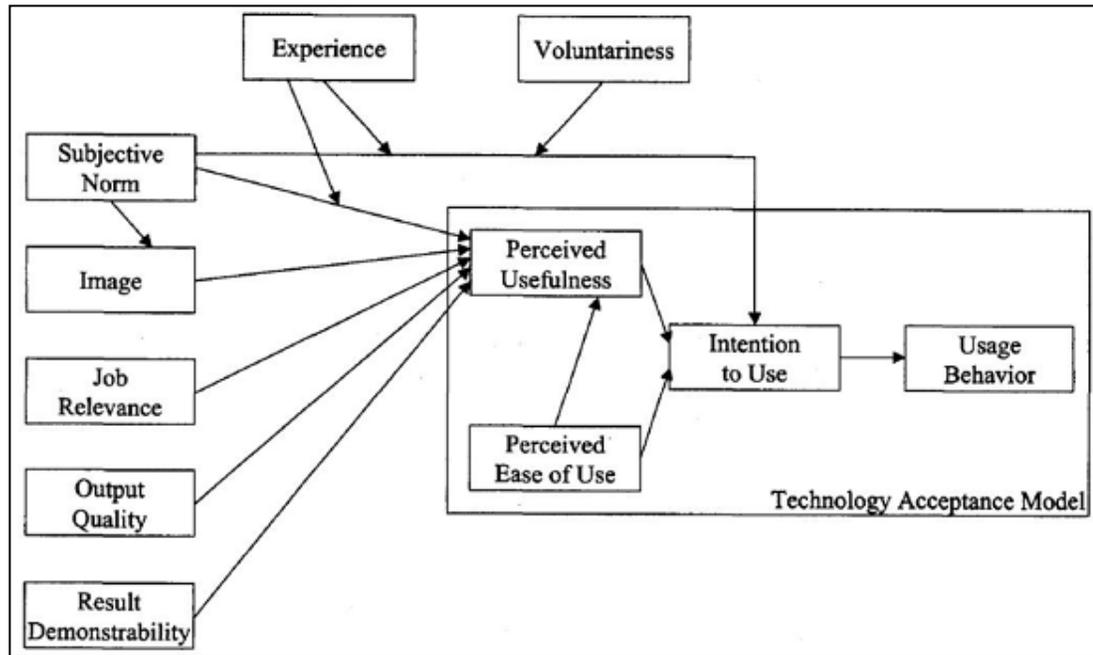


Figure 5. The Technology Acceptance Model 2 (TAM2) (Venkatesh & Davis, 2000).

2.5.5.1 Subjective norm. TAM2 introduced several new determinants: subjective norm, image, job relevance, output quality, result demonstrability, experience, and voluntariness. For the purposes of this dissertation, only the constructs of subjective norm, voluntariness and image were examined. According to Fishbein and Ajzen (1975), subjective norm is defined as a person's belief that most people who are important to him believe he should or should not perform a behavior in question. Subjective norm was a predictor of intention in the TRA model (Fishbein & Ajzen, 1975), the predecessor to TAM. However, Davis (1989) removed the construct from the model because subjective norm had no significant effect on predicting intention in TAM in mandatory settings. Mathieson (1991) concurred in his research and reported no significance of subjective norm, while Taylor and Todd (1995) later found a significant effect on intention.

The major point of contention in keeping or dropping subjective norm from the model, which is still ongoing today, was whether or not the users of the system were in voluntary or mandatory settings (Hartwick & Barki, 1994). Venkatesh and Davis (2000) affirmed the compliance effect of subjective norm on intention occurs whenever an individual perceives a social actor wants him or her to perform a certain behavior, and the social actor has the ability to reward the behavior or punish non-behavior (French & Raven, 1959; Kelman, 1958; Warshaw, 1980 in Venkatesh & Davis, 2000). The early hypothesis of TAM2 included the belief that subjective norm would only have a significant effect on PU in mandatory settings. However, even

within the confines of mandatory usage of the system, there exist varying degrees of user intentions (Hartwick & Barki, 1994).

To deepen the investigation of subject norm, Venkatesh and Davis (2000) included the theories of internalization and identification to differentiate subtleties within subjective norm. Internalization is defined as a cognitive process that occurs when an individual perceives a referent important person thinks he should use a system, causing that individual to incorporate the referent's belief into his or her own belief structure (Kelman, 1958 and Warshaw, 1980 in Venkatesh & Davis, 2000). Schepers and Wetzels (2007) defined internalization in the context of subjective norm more simply as the human tendency to interpret information from referent others as evidence about reality. Internalization was described by Venkatesh and Davis (2000) as a more loosely fitting social influence that had an indirect effect on intention through PU, as opposed to a direct compliance effect on intention. These two categories of social norm, internalization and mandatory compliance, were predicted to coexist, and therefore, testing within voluntary settings could be possible with TAM2, as it included the mediating effect of voluntariness.

TAM2 introduced the mediating effect of image, or identification, between subjective norm and PU. Image is defined as the degree to which use of an innovation is perceived to enhance a person's status in the system (Moore & Benbasat, 1991).

Image was hypothesized to occur in both voluntary and mandatory settings.

2.5.5.2 Empirical validation of subjective norm as a determinant to PU. The problem with underutilization of new and expensive IT systems continue to be an

increasing concern among business organizations and IT researchers. Considered a high-priority research topic, Venkatesh and Davis (2000) were committed to investigating training interventions more thoroughly for new computer systems in business environments. Working with TAM as the tested and validated model for determining user acceptance, Venkatesh and Davis (2000) developed TAM2 which incorporated social influences (subjective norm, voluntariness, and image) and cognitive processes (job relevance, output quality, result demonstrability, and PEU). As the purpose of this dissertation was to examine the impacts of subjective norm on intention to use, the following experiments will be discussed only in terms of the results of subjective norm, voluntariness, and image.

The extension of TAM2 was tested over four longitudinal studies of four different systems, across four separate organizations, each implementing a new system: two in voluntary settings and two mandatory settings. Subjects from each of the four studies received questionnaires at three different times during the research: after the initial informational training, one month after implementation, and three months after implementation.

The first study consisted of 48 participants in a manufacturing firm where a new system was launched in a voluntary setting. The second study, also utilizing a voluntary setting with a new system, contained 50 participants in a personal financial services firm. The third and fourth studies included users in a new systems launch, both in mandatory settings. Study three was comprised of 51 participants in an

accounting firm, and the fourth study consisted of 51 participants in an international investment banking firm.

The measurement scales for the four experiments were previously validated from prior TAM research. PU, PEU, and intention to use were adapted from the work of Davis (1989). Subjective norm measurement was borrowed from Taylor and Todd (1995), while measures of result demonstrability and image were adapted from Moore and Benbasat (1991).

Procedurally, the four groups each received specific training pertaining to their individual systems. While this training differed across groups, the process for questionnaire deployment was the same. After each group received the training, the participants filled out an online questionnaire regarding the new system. One month and again at three months after implementation, the participants received the questionnaires in hard copy and were asked about user reactions and self-reported usage of the system. At the five-month mark after system implementation, participants again filled out hard copy questionnaires about self-reported usage only (Venkatesh & Davis, 2000).

Cronbach's alpha for all four longitudinal studies yielded high reliability from .80 to .98 (Venkatesh & Davis, 2000). Construct validity was confirmed both in the factor analysis method and in the multitrait-multimethod matrix. In a stepwise regression analysis, the entire TAM2 (including subjective norm, image, job relevance, output quality, result demonstrability, and PEU) accounted for 60% of the variance in explaining usage intentions (Venkatesh & Davis, 2000). Subjective norm

significantly predicted a direct effect on PU in mandatory settings, particularly in the early stages of implementation, but not in voluntary settings. The indirect effects of internalization and image identification both mediated subjective norm and PU across all three points of measurement in both voluntary and mandatory settings.

When pooled across all four studies and time periods, TAM2 was consistent with the previous four individual studies. The basic TAM relationships of intention-usage, PU-intention, PEU-intention and PEU-PU were confirmed with full mediation of intention (Venkatesh & Davis, 2000). However, no moderation was found by voluntariness or experience. The subjective norm-intention relationship was moderated by both experience and voluntariness confirming subjective norm is a significant predictor of intention only when usage is mandatory and experience is in the early stages (Venkatesh & Davis, 2000).

The inconsistencies of prior research (Davis, 1989; Mathieson, 1991; Taylor & Todd, 1995) on the significance of subjective norm on PU could be explained in the nuances of Venkatesh and Davis' (2000) findings. It was posited when individuals gained direct experience with a system over time, they relied less on social information in forming PU and intention and continued to judge a system's PU based on potential benefits resulting from system usage (Venkatesh & Davis, 2000).

Concerned with training interventions and long-term support for new IT, Venkatesh and Davis (2000) proposed organizational mandatory technology implementation would not be long-lasting compared with targeting social influences and their effects on PU, especially in the early stages of execution. Included in the

suggestions for preventative measures were increased credibility of social sources and raising prestige associated with implementation to increase image identification (Venkatesh & Davis, 2000).

2.5.5.3 Refinement of the subjective norm construct. The Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) model combined several competing models concerning theories of IT behavior, including: Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), Technology Acceptance Model (TAM) (Davis, 1989), Motivational Model (MM) (Vallerand, 1997), Theory of Planned Behavior (TPB) (Ajzen, 1991), Combined TAM and TPB (C-TAM-TPB) (Taylor & Todd, 1995), Model of PC Utilization (MPCU) (Triandis, 1977; Thompson et al., 1991), Innovation Diffusion Theory (IDT) (Rogers, 1995), and Social Cognitive Theory (SCT) (Bandura, 1986).

Combining the eight models, UTAUT was formulated to utilize the constructs of performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh, 2003) (see Figure 6). Prior to this determination, based on the models under investigation, Venkatesh et al. (2003) observed only seven constructs within the eight separate models had a direct effect on intention or PU. Four of these constructs were selected for the UTAUT model because the remaining three (attitude toward using technology, self-efficacy, and anxiety) were not theorized to predict user acceptance or usage behavior (Venkatesh et al., 2003).

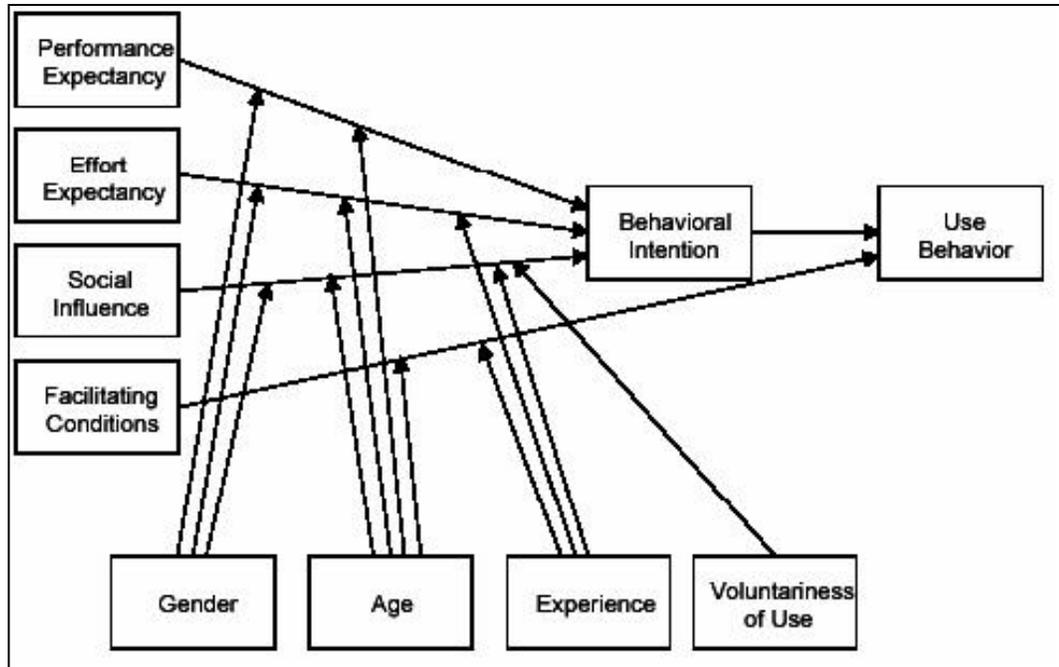


Figure 6. Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003).

In UTAUT none of the subjective norm constructs were significant in voluntary scenarios, but became significant in mandatory use situations (Venkatesh et al., 2003). In addition, subjective norm was found to be important only in the early stages of the individual’s experience with the technology, with its role lessening over time and eventually becoming insignificant with ongoing usage (Venkatesh et al., 2003). Due to the fact normative pressures decrease over time, increased experience with a system then became the basis for an individual’s intention to use the system (Venkatesh et al., 2003).

Based on the works of Miller (1976), Venkatesh et al. (2000), Venkatesh and Morris (2000), Lubinski et al. (1983) and Rhodes (1983), a hypothesis in UTAUT was formulated indicating women were more sensitive to others’ opinions, particularly

with respect to opinion formation of new technologies. Included in this complex hypothesis was that as workers aged, they looked toward social influence when formulating opinions on new technology use. Venkatesh et al. (2003) then hypothesized social influences would be a significant predictor of user intention especially for older women in mandatory settings in the early stages of the system implementation.

The validation of the UTAUT constructs found social influences were predictors of intention to use a technology, however these social norms were more salient for older female employees who were new to a system in a mandatory setting (Venkatesh et al., 2003). Venkatesh et al. (2003) also posited the contingent nature of social influences, especially as they changed over time. The caveats of gender and age on social influences in a particular setting within a specific timeframe suggest as technology use becomes more commonplace, the effect of social influences on intention to use will evolve. Venkatesh et al. (2003) pointed out the importance of understanding the implications of these results in a variety of contextual settings and as technologies expand and progress.

2.5.5.4 Maturation of the subjective norm construct. Eckhardt, Laumer, and Weitzel (2009) tested social influences on intention to use a technology implementing the UTAUT model. It was their belief that a single cumulative measure of subject norm was too naïve and future research would improve our understanding of IT adoption pertaining to the normative impact of various peer groups (Eckhardt et al., 2009).

The measurement of subjective norm in TRA and TPB was criticized by social psychology researchers (Warshaw, 1980; Miniard & Cohen, 1983; Liska, 1984) and believed to not be distinctive enough to examine social influence in a proper manner (Eckhardt et al., 2009). Workers in an organization generally do not exist in a vacuum. There are typically groups and levels within the social structure conducting work either simultaneously, or at some point, together. Social psychology researchers proposed people in a work environment are different and vary in terms of numbers working together (Eckhardt et al., 2009). Moreover, researchers claim it is not possible to combine all levels and types of referents into one category. For example, in an academic setting, an instructor might have several different groups of people influencing that instructor's behavior (i.e. other instructors, superiors, and students). These sets of individuals could simultaneously exist as a referent together and also impose social influences separately.

Eckhardt et al. (2009) applied the UTAUT model to a study of corporate recruiters and their adoption of resume database software. Fifty-four companies were selected for collecting the sample of 152 usable responses, separated into adopter and non-adopter categories. Findings revealed various levels of subjective norm categories such as operations, IT, customers, and superiors who all present a social influence on a recruiter to varying degrees. Consistent with previous TAM findings (Venkatesh & Davis, 1996; Venkatesh et al., 2003) the strongest predictor of user adoption was from superiors. However, Eckhardt et al. (2009) did report significant findings across other, less important groups. The implications of this research

indicated the possibility for future theoretical growth aimed toward improved understanding of the interaction effects between referent groups and social norm (Eckhardt et al., 2009).

2.5.6 Research on TAM and social networks. Since the inception of TAM, and later TAM2 and UTAUT, researchers have mostly examined subject norm as a single construct (Lee, et al., 2003). The intent of TAM and UTAUT was to examine an individual's intent to use a technology in a work setting. However, researchers suggest now that workers exist in a social setting, or a social network, and TAM is ill equipped to measure social networks surrounding an individual (Sykes et al., 2009). Social networks are defined as a set of affiliations among a specific set of persons, with the additional characteristic that these affiliations interpret the social behavior of all persons involved (Laumann et al., 1978). Social networks were found to influence an individual's intention to use, but at varying degrees, depending on the referent's influence on the individual (Eckhardt, 2009). As TAM was a model designed to measure an individual's intention to use, and social networks were at the group level, a mediating variable was proposed to exist through subjective norm (Kate, Haverkamp, Mahmood, & Feldberg, 2010). In their research, Kate et al. (2010) approached TAM differently, via the social network characteristics of tie strength, centrality, and density borrowed from the work of Cross and Parker (2004). Social networks have been found influential on subjective norm due to the exposure, exchange, and legitimization of information throughout referent groups (Haythorntwaite, 1996).

2.5.7 Justification for using TAM. The focus on subjective norm in the TAM2 model was dismissed early in its development because intention to use the technology was driven only in mandatory settings (Venkatesh & Davis, 2000). In recent years, due to the ubiquitous nature of Internet technologies and eLearning, the construct of subjective norm has resurfaced as a topic of interest to determine if normative pressures predict an intention to use a technology. The use of TAM2 to predict intentions to use an online learning system has shifted from simply predicting use behavior to identifying more refined constructs impacting the original TAM (Hartshorne & Ajjan, 2009; Liu et al., 2010; Liaw, 2008; Liaw, Huang, & Chen, 2007).

The Technology Acceptance Model was devised to determine the behavioral intentions of an *individual* user, yet the nature of subjective norm is considered by many social researchers as existing within a social context (Srite & Karahanna, 2006), which implies existing in a *group* environment. To account for the group or network characteristics on TAM, Kate et al. (2010) proposed a mediating role of subjective norm that tied together social network characteristics (tie strength, density, and centrality) with the original TAM. Regardless, information systems researchers still have confidence in TAM's ability to predict users' behavioral intentions in social work environments. In a study investigating the role of subjective norm in a workplace environment, superiors, colleagues, and an IT department were studied to determine the effect of subjective norm on intention to use from these various workplace referent groups (Eckhardt, Laumer, & Weitzel, 2009). The researchers

found a cumulative subjective norm construct was too simplistic a measure for understanding the impact of peers on technology adoption intentions (Eckhardt et al., 2009). This notion supported the investigation of extracting the various referent groups out of a collective subjective norm construct in TAM2.

Few empirical studies have been conducted deconstructing the factors of subjective norm. Using the Decomposed Theory of Planned Behavior (DTPB), the precursor to TAM, Hartshorne and Ajjan (2009) performed a study of students' decisions to adopt Web 2.0 technologies as a supplement to in-class activities. Subjective norm was separated into superior and peer influences. Both had a significant and positive influence on subjective norm, however superior influences had a very strong influence on subjective norm, and therefore behavioral intention (Hartshorne & Ajjan, 2009). In a study devised to determine faculty decisions to adopt Web 2.0 technologies, DTPB was used to predict behavioral intention. Subjective norm was separated into three constructs: student, peer, and superior influences (Ajjan & Hartshorne, 2008). Although all three influences measured had significant effects on subjective norm, in that study subjective norm failed to predict behavioral intention (Ajjan & Hartshorne, 2008).

Hartwick and Barki (1994) noted when an individual is not properly informed about a new technology and is in a mandatory setting, subjective norm constructs are significant. However, as the individual gains experience with the technology over time, the user will rely more heavily on his or her own experience, reducing dependence on social influences (Hartwick & Barki, 1994; Venkatesh et al., 2003).

Other studies confirmed subjective norm as an important determinant of intention and subsequent usage of the technology and suggested subjective norm was more important prior to, or in the initial stages of IT deployment when users had little or no direct experience from which to develop attitudes (Hartwick & Barki, 1994; Marcinkiewicz & Regstad, 1996; Sugar, Crawley, & Fine, 2004; Taylor & Todd, 1995). Taylor and Todd (1995) found when individuals had prior experience with the IT behavior; behavioral intention was more predictive of that behavior. Indeed, in the same study (Taylor & Todd, 1995), when behavioral intention was omitted as the mediating variable between behavior and attitude, the predictive power of the behavior decreased dramatically.

With respect to the results of the UTAUT study by Venkatesh et al. (2003), under subjective norm several key findings emerged which are of relevance to this dissertation using the TAM2 model. In mandatory settings, social influences (i.e. subjective norm) were significant for women, older workers, and those workers with limited experience with the technology who relied more heavily on the social components until they gained experience with the system (Venkatesh et al., 2003). In addition to confirming the basic TAM relationships, Schepers and Wetzels' (2007) meta-analysis of previous TAM research expanded the role of subjective norm in this model.

TAM2 was selected as the guiding theory for this study because it takes into account more directly and simply the normative pressures influencing faculty associated with online course delivery. Marcinkiewicz and Regstad (1996) examined

the influence of subjective norm on technology and found it was the most predictive variable of technology use. Later, Sugar, Crawley, and Fine (2004) confirmed these findings and reported subjective norm was the main antecedent to instructor’s intention to use technology. In that study, the subjective component was identified as superiors, parents, peers, and students of the instructors.

2.6 Diffusion of Innovations

Diffusion of Innovations theory (DOI) or innovation diffusion theory (IDT) is a model (see Figure 7) explaining the degrees of willingness to adopt an innovation over time (Rogers, 1962). The term innovation refers to “an idea, practice, or object that is perceived as new by an individual or other unit of adoption” (Rogers, 1995, p. 11). Straub (2009) stressed the importance that it is the *perception* of the innovation that comes into question, and not whether it is a new idea, practice, or object.

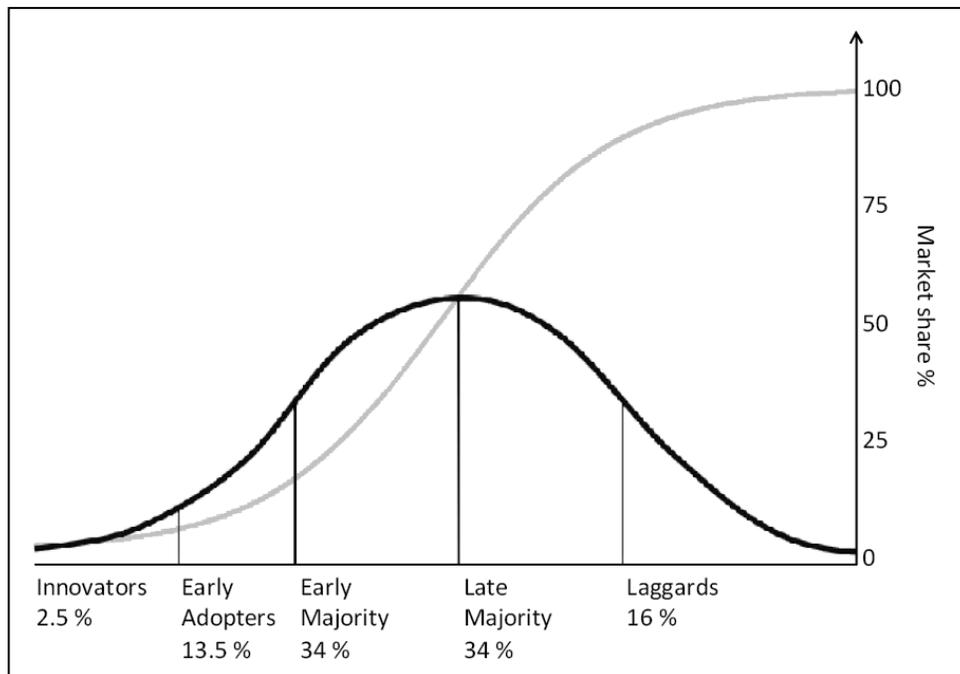


Figure 7. Diffusion of Innovations Theory (Rogers, 1962).

According to the theory, there are five categories of individuals: innovators, early adopters, early majority, late majority, and laggards. Innovators are considered educated individuals who are adventurous in terms of adopting a new technology. Early adopters are seen as popular, educated, and viewed as societal leaders. The early majority individuals are deliberate and gain their information through social contacts while the late majorities are more skeptical, traditional, and perhaps from a lower socio-economic status. Finally, laggards are the last to adopt a new technology and gain their information primarily through family and friends.

Based on five specific characteristics of innovation, DOI has been widely implemented in education, sociology, communication, and marketing (Rogers, 1995). These five characteristics include: relative advantage, compatibility, complexity, trial ability, and observability. Relative advantage is defined as the benefit new innovations create over traditional methods. Compatibility is explained as how the innovation is perceived by the user's existing values, experiences, and needs. Complexity is similar to TAM's PEU in that it conveys the level of difficulty needed to understand the innovation. Trial ability is defined as how the new innovations can be tested and observability explains how easily new users can monitor the benefits of the new innovation (Chang & Tung, 2008; Rogers, 1962).

Posited as a complex and socially developmental process (Straub, 2009), technology adoption is based on an individual's perceptions, which are potentially influenced by others. Diffusion of Innovations Theory (DOI) has been used in conjunction with TAM to predict the intention to use a technology, while keeping the

changing nature of technology adoption inclusive of the model. Notable research utilizing these models have examined user intentions (Morre & Benbasat, 1996), online learning in a university setting (Keller, 2005), and students' intentions to use online course websites (Chang & Tung, 2008). Diffusion of Innovations Theory is a critical component to this study in that it supports the social effect of technology adoption.

2.6.1 Limitations of TAM research. The most commonly cited limitation of any TAM-based research was self-reported usage versus measuring actual usage (Lee et al., 2003). Self-reported usage was criticized as distorting and exaggerating the relationship between independent and dependent variables in the model (Agarwal & Karahanna, 2000; Podsakof & Organ, 1986). Additionally, generalizability became problematic in studies researching one technology with a homogeneous group at a specific point in time (Lee et al., 2003). Venkatesh and Davis (1996; 2000) avoided this limitation by conducting longitudinal studies in most of their research. Since individuals' perceptions of use change over time, thus affecting intention to use, it is important to measure these variables longitudinally (Lee et al., 2003). In their meta-analysis of TAM research from 1986 to June 2003, Lee et al. (2003) found additional limitations including poor explanations of low variance where external variables were not included, non-descript mandatory or voluntary measurement, single measurement scales, participants' brief exposure to the technology in question, student participants, and self-selection bias of the subjects (see Table 2).

Table 2. *Limitations of prior TAM studies, 1986-2000 (Lee et al., 2003).*

Limitation	Explanation	Researcher(s)
Self-reported usage	Did not measure the actual usage	Venkatesh & Davis, 2000
Single information technology	Used only single IT system	Venkatesh, 1999
Student participants	Did not reflect a real working environment	Agarwal & Karahanna, 2000
Single participant	One department in one organization	Karahanna & Straub, 1999
One-time cross sectional study	Cross-sectional study	Karahanna et al., 1999
Measurement problems	Low validity of newly developed measure; Single item scale	Agarwal & Prasad, 1998
Single task	Did not partition the task	Mathieson, 1991
Low variance	Causation of the model not explained nor interpreted	Igbaria et al., 1997
Mandatory situations	Classification of setting (mandatory or voluntary)	Jackson et al., 1997
Others	Small sample; Short exposure to new IT; Cultural differences; Selection bias	Gefen & Straub, 1997

2.6.2 TAM and online learning. Originally intended to predict user intentions toward a new technology in a business setting, researchers have also employed TAM in an academic setting. TAM has been widely used to study online learning. To better predict student intentions to learn online, researchers adopted this model to advance various determinants and mediators (Park, 2009; Liaw, 2007; Liu et

al., 2010; Sun et al., 2008; Jung et al., 2008). TAM has also been widely used to predict instructor intentions to teach online (Al-alak & Alnawas, 2011; Liaw et al., 2007; Hsieh, 2011; Yuen, 2008; Park, Lee, & Cheong, 2007). Other relevant studies have investigated students' behavioral intentions to use online learning course websites (Chang and Tung, 2008) and university students' behavioral intention to use eLearning (Park, 2009). Gibson, Harris, and Colaric (2008) examined business faculty attitudes towards online learning employing TAM as the theoretical framework while Al-alak and Alnawas (2011) measured the acceptance and adoption of eLearning by academic staff. The validation of TAM as it pertains to online learning has been well documented, confirming the constructs of the original and extended models.

2.6.2.1 Hospitality context. In the study of hospitality management, TAM has most widely been utilized to understand consumer behaviors and employee technology applications. Wang and Qualis (2007) used TAM to investigate the adoption and acceptance of hospitality organizations' use of technology to improve performance and strategic competitiveness. Hotel guest empowerment (Schrier, Erdem, and Brewer, 2010), and tourist acceptance of mobile technology (Kim, Park and Morrison, 2008) are two of the more notable guest-focused examples of TAM in hospitality research. Other studies have considered the service provider perspective by examining employees' acceptance of front office systems (Kim, Lee and Law, 2008) and information systems in upscale hotels (Huh, Kim and Law, 2009).

The Technology Acceptance Model has been tested to predict the use of mobile applications in the hospitality industry (Kwon, Bae, & Blum, 2013). A meta-

analysis of previous empirical studies revealed the extensive application of TAM to the areas of human resources, training, security, reservations, revenue management, marketing, guest services, strategic management, and organizational management (Ip, Leung, & Law, 2011). Technology Acceptance Model research within the hospitality discipline has widely supported the validation of both the original and extended models.

The technology acceptance model has also been utilized in hospitality education research to determine the formal and informal uses of technology in the classroom (Jacques, Deale, & Garger, 2006). Determinants of intention to use a technology were examined to predict hospitality students' intentions to use mobile learning technologies in the classroom (Smith & Walters, 2012). In the following section, additional empirical research about the use of TAM in hospitality education will be presented along with the gaps in the literature.

2.7 Gaps in the Literature

The evolution of the Technology Acceptance Model has produced an extensive body of research regarding the capability to predict an individual's intention to use a technology in a variety of settings. Originally intended for business applications, TAM has been tested across several disciplines including education. While productive research exists examining TAM in the context of online education in general (Al-alak & Alnawas, 2011; Liaw et al., 2007; Hsieh, 2011; Yuen, 2008; Park, Lee, & Cheong, 2007), there are no published studies utilizing TAM in hospitality online education. There is currently only one researcher in preliminary investigations examining student

(Song, 2010) and faculty (Song, 2011) acceptance of online learning, both with a focus on user satisfaction.

Hospitality management programs have grown 500% in the last 25 years (Stoller, 2008). This, together with the rapid and inevitable expansion of online learning, dictates more serious inquiry into the expansion of online hospitality courses and programs. Hospitality management education is historically slow to adapt new learning technologies (Sigala & Baum, 2003) and the lack of online course adoption in this discipline threatens the long term relevance and viability of hospitality programs. To investigate this phenomenon more deeply for possible training interventions, the Technology Acceptance Model was utilized as the underlying theoretical framework for the project. In the quantitative faculty study, TAM2 via the subjective norm construct was used to identify points along the model where hospitality faculty might be supported more successfully to teach online. To deepen the understanding of faculty intentions to teach online and triangulate findings, qualitative faculty interviews and a mirrored quantitative hospitality student study were conducted. The implications from the findings of this research project could be used to develop a comprehensive hospitality faculty-training program designed to promote online learning for courses or entire hospitality programs.

2.8 Summary of the Literature Review

Based on the review of the literature and the gaps cited, the following research project was developed to investigate hospitality faculty intentions to teach a blended or full online course. Using the Technology Acceptance Model 2 (Venkatesh &

Davis, 2000) as the theoretical foundation, the following model is proposed for both the blended and full online studies (see Figure 8):

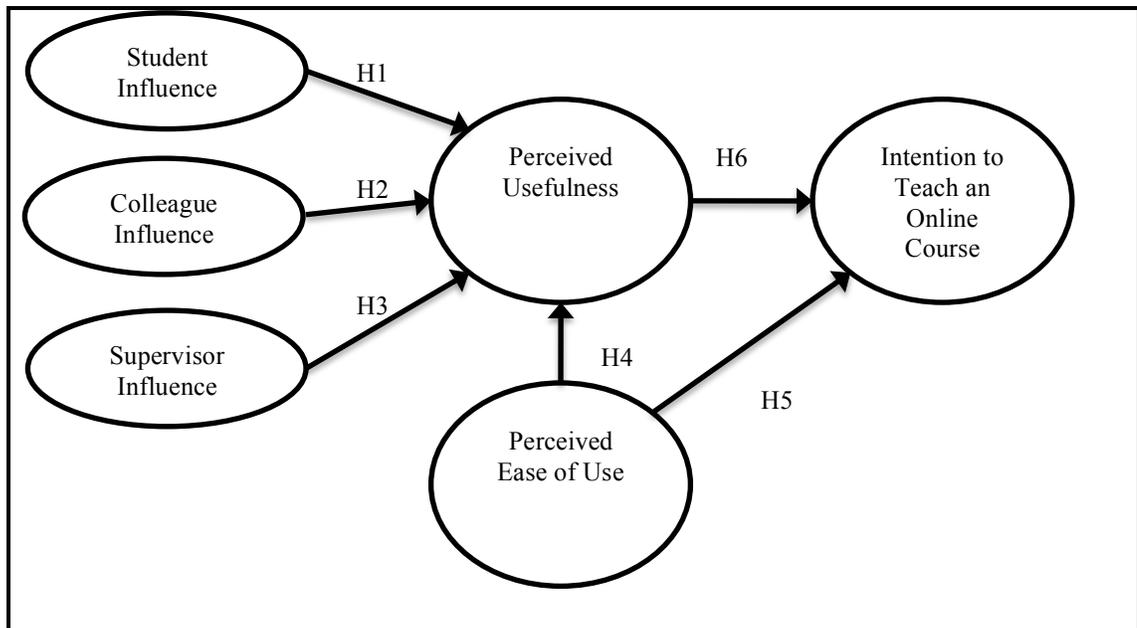


Figure 8. Proposed research model.

2.8.1 Subjective norm. According to Fishbein and Ajzen (1975), subjective norm is defined as a person’s belief that most people who are important to him think he should or should not perform a behavior in question. In previous TAM research, subjective norm was consolidated into one construct, but for this study, the proposed model deconstructed “subjective norm” into student influences, colleague influences, and chair or supervisor influences. Based on previous studies decomposing subjective norm in a faculty TAM study (Ajjan & Hartshorne, 2008) and a student TAM study (Hartshorne & Ajjan, 2009), the subjective norm constructs of student, colleague, and superior influences were introduced as determinants to perceived usefulness. In a study utilizing path analysis to determine faculty intentions to adopt Web 2.0

technologies in the classroom, both superior influence ($\beta = 0.396, p < .001$) and student influence ($\beta = 0.356, p < .001$) had highly significant effects on subjective norm; peer (or colleague) influence was also significant ($\beta = 0.205, p < .05$) (Ajjan & Hartshorne, 2008).

In a related study utilizing path analysis to determine factors influencing student use of Web 2.0 technologies in the classroom, both peer ($\beta = 0.205, p < .01$) and superior influence ($\beta = 0.719, p < .01$) were significant predictors of behavioral intention (Hartshorne & Ajjan, 2009). Based upon Ajjan & Hartshorne's findings, three hypotheses were proposed as determinants to perceived usefulness (PU):

- H1:** Student influence on hospitality faculty positively affects PU.
- H2:** Colleague influence on hospitality faculty positively affects PU.
- H3:** Chair or superior influence on hospitality faculty positively affects PU.

2.8.2 Perceived ease of use. Perceived ease of use (PEU) defined by Davis (1989) is the degree to which a person believes using a particular technology system would be free from effort. In the Technology Acceptance Model, PEU is subjective and the antecedent to PU, which in turn is the determinant to intention. Previous information system researchers confirmed PEU had a positive effect on behavioral intention and the perceived usefulness of a system (Chin & Todd, 1995; Venkatesh & Davis, 2000), therefore hypotheses four and five state:

- H4:** Perceived ease of use positively affects perceived usefulness.
- H5:** Perceived ease of use positively affects hospitality faculty intention to teach a blended or full online course.

2.8.3 Perceived usefulness. Perceived usefulness (PU) is the degree to which a person subjectively believes the use of a technology will enhance performance (Davis, 1989). PU was initially theorized in the context of an employee's job performance, but the definition has expanded to include many ordinary tasks in non-organizational settings (Yousafzai et al., 2010).

Faculty have commonly expressed apprehension toward online instruction due to possible problems encountered with the technology resulting in unfavorable student evaluations (Gibson, Harris, & Colaric, 2008). Increased student online enrollments, along with pressure on faculty to adapt to online learning, make the acceptance of technology a critical issue (Gibson et al., 2008). The only study of its kind by Gibson et al. (2008) did not result in good predictive power of PEU on intention, but rather PU was found to be highly significant. This finding is contrary to the assumption that faculty apprehension toward online technology would not predict their intention to teach an online course. Previous investigation of TAM revealed PU had a positive effect on the behavioral intention to use the technology system (Chin & Todd, 1995), thus hypothesis six proposed:

H6. Perceived usefulness positively affects hospitality faculty intention to teach a blended or full online course.

CHAPTER III - METHODOLOGY

The purpose of this three-part research project was to investigate the role subjective norms play on hospitality faculty to teach and students' intentions to enroll in an online course. Using the Technology Acceptance Model 2 (TAM2) as the theoretical framework, the research design and survey instruments were created to explore the constructs within the model. The research design, survey instruments, data collection procedures, model development, and data analysis are discussed as they pertain to the following steps. More specifically, the objectives for each study were the following:

Step 1 – Qualitative Hospitality Faculty Interviews

1. Investigate hospitality faculty perceptions of online teaching based on the constructs of TAM2, isolating influences within subjective norm.
2. Target hospitality faculty with a variety of online teaching experiences to gain a more comprehensive understanding of their intention to teach online.

Step 2 – Quantitative Investigation of Hospitality Faculty Intentions to Teach Online

1. Develop a survey instrument based on TAM2, inclusive of a deconstructed subject norm.
2. Test TAM2 with isolated subjective norm independent variables to predict hospitality faculty intentions to teach a blended or full online course.
3. Deploy the survey to hospitality faculty respondents worldwide.

Step 3 – Quantitative Investigation of Hospitality Students' Intentions to Take an Online Course

1. Develop a mirrored student survey based upon the faculty survey instrument utilized in Step 2 based on TAM2 and the effects of a deconstructed subjective norm.
2. Test TAM2 with the isolated subjective norm independent variables to predict hospitality students' intentions to enroll in an online course.
3. Deploy the survey to hospitality undergraduate students in a large southwestern university in the United States.

3.1 Note on Human Subjects

This research was conducted in a series of three steps, each examining different samples and employing various data collection and analysis methods. Prior to data collection, the appropriate human subjects approval was received from the Texas Tech University Institutional Review Board. The initial proposal for Article 1 was submitted on June 15, 2012. This original proposal included two survey instruments: the qualitative faculty interview and the quantitative faculty survey. On June 28, 2012, the proposal was returned (#503473) with eight items requiring minor revisions. Five of the revisions referred to formatting and structural changes to the survey instruments and the recruitment materials. One of the revisions addressed the need to include the approximate odds for winning the iPad offered as incentive to participate in the faculty quantitative survey. Another revision questioned the researcher's ability to conduct the qualitative interview within the proposed 15-minute time allocation. The final revision addressed the need to include a respondent

information sheet to be given to faculty members participating in the qualitative interviews.

All eight proposed revisions were corrected: the five formatting and structural recommendations; the revision to state the approximate odds of winning the iPad were 1 in 600 was added; the time allocation for the qualitative interviews was extended to 30-40 minutes; and the inclusion of the respondent information sheet was clarified. The revised IRB proposal was submitted on July 3, 2012 and approval was received on July 5, 2012 (see Appendix A).

After the qualitative interviews were conducted at ICHRIE on August 4, 2012, a new theme emerged regarding hospitality faculty's increased interest in blended learning. Since the original quantitative faculty survey instrument only included questions about full online course delivery, a revision was deemed necessary to include a second set of mirrored questions about blended learning in order to attain more comprehensive results toward online learning in general. In addition, to bring balance to the research, a third instrument was created to survey hospitality undergraduate students, paralleling the faculty survey. These amendments to the original IRB proposal were submitted on September 3, 2012 and approved on September 17, 2012 (see Appendix A).

Immediately following deployment of the faculty quantitative survey, concerns arose about how to incentivize the hospitality students to participate in the 91-question survey. Realizing it would be challenging to capture a significant hospitality undergraduate sample, a \$100 gift card drawing was added to the proposal and a

second amendment prepared and submitted to the IRB on November 7, 2012. This amendment was approved on November 15, 2012 (see Appendix A).

3.2 Research Design

This study was conducted in three parts utilizing a multimethod design, which is defined as two or more interrelated research projects conducted separately within an overall research program (Morse, 2003). One qualitative and two quantitative projects were conducted independently and then triangulated to form a more comprehensive view of the phenomenon under investigation (Morse, 2003). The overall direction of the project was dictated by deductive theoretical drive (Morse, 2003). In deductive theoretical drive, quantitative methods are used simultaneously with qualitative methods, as the theoretical model is derived from the literature and tested quantitatively (Morse, 2003). In this case, the guiding theoretical framework was the Technology Acceptance Model 2 (TAM2) which was tested using structural equation modeling. Although the core of this project was quantitative in nature, a qualitative method was used to deepen understanding. Special care was taken to ensure methodological congruence in that the qualitative study was a complete project unto itself and used as a secondary perspective to the quantitative studies' theoretical drive (Morse, 2003).

The purpose of this three-part research project was to identify the specific subjective factors influencing hospitality instructors' intentions toward teaching and undergraduate students' intentions toward enrolling in an online course. The first part of the project included qualitative interviews with hospitality faculty for the purpose

of adding depth to the quantitative component. The second part was the quantitative faculty study which tested TAM2, the theoretical model. Specifically, the main purpose of the quantitative faculty study was to determine if the deconstructed influences of subjective norm were enough to significantly predict faculty's intention to teach online. The third and final part of this research project was a quantitative hospitality undergraduate student survey which mirrored the quantitative faculty study design. The student study was conducted for the purpose of assessing the attitudes and perspectives of hospitality undergraduate students in terms of online learning and applying the TAM2 model to students' intentions to enroll in an online course. The goal of the overall research project was to compare the perceptions of hospitality faculty teaching online with those perceptions of hospitality students taking online courses, and to determine how closely these groups were aligned with regard to blended or full online course delivery.

3.3 Step One – Qualitative Study of Hospitality Faculty

The first step in this study involved qualitative interviews which were conducted with hospitality faculty possessing various levels of online teaching experience. The objectives of this study were to: (1) investigate hospitality faculty perceptions of online teaching based on the constructs of TAM2, isolating influences within subjective norm and (2) target hospitality faculty with a variety of online teaching experience levels to gain a more comprehensive understanding of their intentions to teach online. A qualitative approach was deemed the most appropriate method for this exploratory study. Qualitative research is interpretive in nature and

defined as the study of local meanings of social actions for the actors involved in them (Erickson, 1986). Qualitative, open-ended questions were used, as there was not a predetermined scale to collect the data, nor were there any restrictions placed on the respondents' answers (Creswell & Plano Clark, 2011).

3.3.1 Sample. The target population for this study was all hospitality management instructors in higher educational programs from four-year institutions throughout the United States. While it is impossible to quantify the total number of individuals within this population, very conservative and rough estimates of the programs themselves include 295 hospitality, tourism and culinary arts programs in the U.S. that belong to the International Council on Hotel, Restaurant, and Institutional Education (ICHRIE) (<http://www.guidetocollegeprograms.org/>). It should be noted there are many hospitality programs in the United States which are not ICHRIE members, thus making the population even greater.

The sample of human subjects for the qualitative interviews consisted of ten faculty members who attended the ICHRIE 2012 Conference, held in Providence, Rhode Island from August 1—4, 2012. Twenty-two faculty members were initially recruited via email (see Appendix B) based on the target demographic from the schedule of poster and stand-up presentations at the ICHRIE conference. Recruitment emails were sent on July 7, 2012. Nine faculty members returned positive responses to participate in the research within seven days of the original email. Follow-up emails were sent to confirm dates and times of the interviews, which took place during the conference. One instructor did not attend the ICHRIE conference, but agreed to

conduct the interview over the phone. Another faculty member recommended a “practice interview” be conducted prior to the face-to-face interviews; this interview was handled by phone.

3.3.2 Data collection. The first interview was the practice phone interview, which took place on July 21, 2012. The second phone interview was conducted on July 23, 2012. At ICHRIE 2012, nine key informant (Gall et al., 2007) faculty interviews were confirmed and scheduled, however only eight interviews were actually completed at the conference as one faculty member failed to confirm an interview time. Hospitality faculty members from each of three distinct categories of online teaching experience (i.e. none, blended, and full online course delivery) were interviewed. The exact number of interviews per category in this study were not predetermined but rather was dependent on how quickly redundancy was reached (Gall et al., 2007), terminating at a total of ten interviews. No additional interviews were required after ten interviews due to reaching the data saturation point (Mason, 2010). The concept of saturation in qualitative research refers to the stage at which the collection of new data does not further elucidate the phenomenon under investigation (Glaser & Strauss, 1967).

Interviews lasted 35 to 45 minutes according to the criteria for phenomenological studies recommended by Creswell (2007). The interviews were both audio recorded and notated in hard copy. Upon transcription, a triangulation strategy was used to corroborate the transcribed interviews, as they were returned to their respective interviewees for cross-validation (Gall et al., 2007). Three of the ten

transcribed interviews were returned with minor corrections. The identity of each participant was held confidential and all recordings were erased after transcription (Bailey & Card, 2009).

3.3.3 Instrument development. Using the Technology Acceptance Model 2 (Venkatesh & Davis, 2000) as a guide, interview questions were created to examine each construct within the model: subjective norm, perceived usefulness, perceived ease of use, and intention to teach an online course (see Table 3). The instrument was comprised of 27 questions overall: one requesting permission to record the interview; six questions regarding demographics of the participants; four questions about online teaching and learning in general; and 16 questions related directly to the constructs of the model. The research format included standard open-ended interviews in which a predetermined set of questions in a specific sequence were asked of all participants to avoid bias (Gall et al., 2007). The oral script utilized for the qualitative interviews is included in Appendix B.

Table 3. *Development of Qualitative Survey Items According to TAM2 Constructs.*

Construct	Survey Item
Student Influence	Do you think your students expect you to provide your courses online? If yes, does student expectation influence your decision to teach a course online instead of in a traditional format?
Peer Influence	Do your colleagues support online teaching? If yes, in what way? If no, why do think they do not support online teaching?
Superior Influence	Has your department (chair) indicated that he/she would like for you to teach any/more online courses? If yes, do you think his/her expectation motivates you to teach more online courses? Is online teaching voluntary in your dept?

Table 3. (Continued)

Construct	Survey Item
Perceived Usefulness	Has your superior (department chair or administrator) indicated that he or she would like for you or anyone else in your department to teach online? If yes, do you think their encouragement would lead you to teach any or more online courses?
	Currently, in your department, is there a choice of whether to deliver your courses in the traditional or online format? If yes, who made the decision? (Department chair, another administrator in charge of scheduling, or you?)
	To what extent do you think online learning is useful to students?
Perceived Ease of Use	How does your department's tenure process impact your decision to teach in a traditional format (face-to-face) blended or full online course? For example, do you receive more (or same) credit by teaching a course online (i.e., full online delivery), compared to a traditional format? Or, are you required to teach online courses for your tenure?
	Do you expect additional compensation for online course development?
	What do you think about the quality of online learning for hospitality undergraduates? To what extent do you think online learning is easy for students?
	What challenges, if any, have you faced teaching online? What, if anything, concerns you about teaching online?
	Have you utilized technical support for online teaching/learning at your institution? Please describe your impression of technical support.
Intention to Teach Online	What type of training have you received, if any, for teaching online? Are you required to receive training before you teach online? If not, how did you obtain the skills to teach online?
	Do you intend to teach online in the near future?

3.3.4 Analysis. The data were analyzed using MAXQDA v.11 qualitative statistical software. In the first round of analyses, the transcripts were coded for general constructs within the TAM2 model: subjective norm, perceived usefulness, perceived ease of use, and intention to teach online. In the second round of coding, the main constructs were sub-coded revealing emergent themes and conceptual categories (Oomen-Early & Murphy, 2009) (see Table 4).

Table 4. *Primary Codes and Emergent Sub-codes within the Qualitative Transcripts.*

Primary Code	Sub-code
<i>Subjective Norm</i>	Chair Influence Colleague Influence Student Influence
<i>Perceived Usefulness</i>	Hybrid Courses Tenure
<i>Perceived Ease of Use</i>	Online Course Challenges Considerations Training Online Course Benefits Course Management System Tech Support
<i>Intention to Teach an Online Course</i>	Hybrid Courses

3.4 Step Two – Faculty Quantitative Study Using Structural Equation Modeling

Based on the results obtained in step one, and utilization of the TAM2 model which provided the theoretical foundation for the study, a quantitative survey was developed to predict hospitality instructors’ intentions to teach online. Specifically,

the study focused on the influences of a deconstructed subjective norm on intention to teach an online course (Venkatesh & Davis, 2000).

3.4.1 Sample and data collection. The sample chosen for this study included instructors from hospitality management programs associated with the International Council on Hotel, Restaurant, and Institutional Education (ICHRIE). Hospitality faculty from the ICHRIE 2012 conference attendees list were directly emailed with a link to the survey. A snowball sampling method (Gall, Gall, & Borg, 2007) was implemented by asking several participants from large hospitality management programs to distribute the survey throughout their respective departments. To decrease threats to internal validity, the items associated with both the blended and full online models were randomized for each individual participant (Shadish, Cook, & Campbell, 2002).

In order to attract more participation due to the extensive length of the survey, a raffle for a 16 GB Wi-Fi iPad was offered to incentivize participants. The odds for winning the iPad were estimated at approximately 1 in 600. Upon completion of the survey itself, respondents were asked if they would like to participate in the random drawing. If the respondent replied “no,” they were taken to the end of the survey. If the respondent indicated “yes,” they were redirected to a separate Qualtrics survey. The purpose of this secondary survey was to generate a separate list for personal information to award the iPad so that these responses could not be matched to original survey responses. One month was allocated to collect data. Due to participation being less than expected, the survey close date was extended six weeks.

When the targeted sample was not reached by the initial deadline, additional solicitation emails were sent directly to faculty members from the following hospitality programs: Michigan State University, University of North Texas, Florida State University, DePaul University, Georgia State University, University of New Hampshire, Widener University, Niagara University, the University of Tennessee, Florida International University, University of Massachusetts at Amherst, Temple University, New Mexico State University, California Polytechnic State University San Luis Obispo and Pomona, Boston University, and Indiana University-Purdue University Indianapolis. In addition, an email with the link to the survey was sent to all members of EuroCHRIE, an organization for hospitality and tourism educators in Europe affiliated with ICHRIE.

3.4.2 Instrument development. The survey instrument was designed to test TAM2 constructs for both blended and full online course delivery. From previous literature, three constructs predicted the influence of subjective norm: student influences, colleague influences, and chair or superior influences. Scales for the three subjective norm constructs were tested and found valid (Ajjan & Hartshorne, 2008; Hartshorne & Ajjan, 2009). In addition, previous scales supporting the remaining constructs were adapted to formulate the survey items (see Appendix B), specifically: subjective norm (Ajjan & Hartshorne, 2008); perceived usefulness (Ajjan & Hartshorne, 2008; Liaw, 2008; Liu et al., 2010); perceived ease of use (Davis, 1989; Jung et al., 2008; Liu et al., 2010); and intention to use (Davis, 1989; Davis, 1993;

Venkatesh & Davis, 1996; Venkatesh, 2001; Liaw, 2007; Liaw, 2008; Liu et al., 2010).

Once the initial survey was developed, two experts were consulted to ensure face validity (Nevo, 1985). An expert in educational psychology, structural equation modeling, and survey methodology was solicited to determine the overall logic of the model and the placement of the items on the constructs. An expert in survey development in the field of mass communications was recruited to analyze the individual items for content validity. Final modifications were made to the survey instrument on September 3, 2012. The survey was subsequently submitted to the IRB and approved on September 17, 2012. The final quantitative hospitality faculty survey is included in Appendix B.

A total of 77 questions were asked in the online survey. Thirty-three (33) items addressed blended instruction based upon the model in Figure 9. An additional 33 items which were identical to the blended learning questions examined the same model in the context of full online courses. The 33 items in each model were assigned to six constructs specifically measuring TAM2 (Venkatesh & Davis, 2000): six items on student influences; seven items on colleague influences; seven for department chair or supervisor influences; five each to measure both perceived usefulness (PU) and perceived ease of use (PEU); and three items measured intention to teach an online course. The questions pertaining to the model were based on a 5-point Likert scale of measurement (1 = strongly disagree to 5 = strongly agree). For the remaining 11 questions in the survey, five were demographic in nature, five were related to

experience with full online and blended learning, and one measured self-reported computer experience. Ten faculty participants were estimated per item (Schreiber, Nora, Stage, Barlow, & King, 2006) targeting a sample size of 330, which met Gorsuch's (1997) recommendation of 300 as a minimum for structural equation modeling.

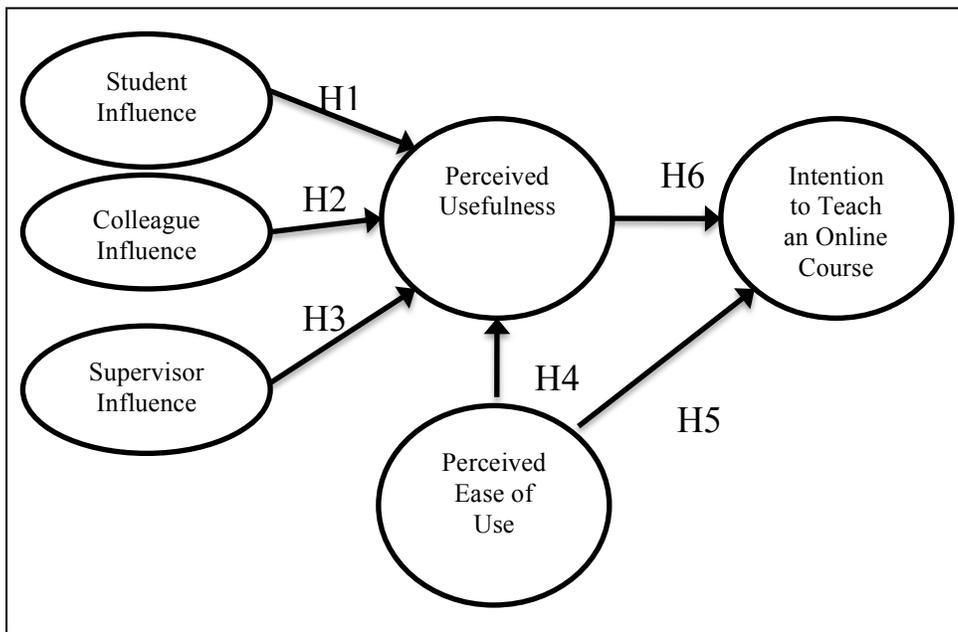


Figure 9. TAM2 for online learning in hospitality management higher education. (Venkatesh & Davis, 2000; Ajjan & Hartshorne, 2008).

3.4.3 Data analysis. Demographic characteristics of the hospitality faculty sample and the internal consistency of the constructs were measured in SPSS v.20. Structural equation modeling (SEM) was the chosen method to analyze the hypothesized TAM2 model representing the empirical data collected. The measurement (CFA) and structural models were estimated using Mplus v.7 software.

3.4.3.1 Data screening. Prior to the confirmatory and structural analyses for each model, the data was screened for missing values, outliers, univariate, and multivariate violations of normality using SPSS v.20. Mplus software was chosen over other structural equation modeling packages for its ability to process missing data values. Mplus uses all data that is available to estimate the model using maximum likelihood for data missing at random (MAR) (Rubin, 1976). Other statistical packages employ imputation to generate the missing values, but this can result in biased estimates with loss of power (Muthén & Muthén, 2012). In Mplus, parameters are estimated directly without first imputing values for those that are missing, as in other statistical programs that use listwise or pairwise deletion of missing data (Muthén & Muthén, 2012).

Univariate outliers are not generally problematic in Likert-scaled based data, as the range is specified prior to data collection. Therefore, if any outliers exist in this situation, it is usually due to input error. Multivariate violations of normality are detected in statistical tests of the variables and all linear combinations (Tabachnick & Fidell, 2001). When the assumption of multivariate normality is met, the residuals in the analyses chosen will be normally distributed and independent (Tabachnick & Fidell, 2001).

In this study, the chosen tests for multivariate normality were an analysis of the standardized residuals, the Mahalanobis distances, Cook's distance, and the centered leverage values (Tabachnick & Fidell, 2001). The recommended threshold for normality in the standardized residuals is $\sigma < 1.95$; $X^2 > 20.515$ in the Mahalanobis

distance; and values greater than one in the Cook's distance (Tabachnick & Fidell, 2001). It should be noted that outliers can mask other outliers (Rousseeuw & von Zomren, 1990) and as they are removed, new cases can be detected. Therefore, it is recommended to screen for outliers in several iterations until no new multivariate outliers are detected (Tabachnick & Fidell, 2001).

Multicollinearity exists when variables within the correlation matrix are too highly correlated, measuring .70 and above (Tabachnick & Fidell, 2001). Items too highly correlated weaken the analysis because they inflate the size of the error terms (Tabachnick & Fidell, 2001). Should items correlate higher than .70, one or both should be removed prior to confirmatory factor analysis.

Internal consistency, or reliability, of the instrument was measured using Cronbach's alpha. Reliability of an instrument refers to whether the instrument items consistently reflect the constructs for which it was intended to measure (Field, 2009). Values above .7 are acceptable, but values ranging from .8 to .9 are considered very good values for measuring Cronbach's alpha within the constructs (Kline, 1999). Validity of an instrument is often an impractical measurement in self-reported questionnaires because the attitudes and perceptions measured are based on the respondent's perception of reality (Field, 2009). Additionally, to be valid, an instrument must first be reliable (Field, 2009).

3.4.3.2 Structural equation modeling. Structural equation modeling (SEM) is a multivariate analysis technique used to determine the relationships between one or more independent variables against one or more dependent variables (Ullman, 2001).

The main advantage in using SEM is that it has the ability to predict multiple relationships between latent constructs in a hypothesized model (Ullman, 2001).

Latent constructs are those which cannot be directly observed or measured and must be inferred from a set of observed variables (Crockett, 2012).

3.4.3.3 Steps in structural equation modeling. Several steps are required to perform SEM including: model specification, model identification, model estimation, model testing, and model modification (Bollen & Long, 1993). Model specification is the first and most difficult step of SEM because it provides the theoretical model and all variables involved with the phenomenon in question (Cooley, 1978). Model development is derived from existing literature and provides the rationale for the research question (Crockett, 2012). In model specification a path diagram is used to visually represent hypothesized relationships (Crockett, 2012).

Model identification involves the determination of a unique solution for each parameter established using observed items to measure latent variables (Schumacker & Lomax, 2010). This unique solution uses confirmatory factor analysis (CFA) to identify the measurement model (Crockett, 2012).

The third step in the SEM process is model estimation, an iterative process in statistical program software that serves as a fitting function (Crockett, 2012). Final parameter estimates in Mplus were based on maximum likelihood, the most widely used type of estimation (Kelloway, 1998). The advantages in using maximum likelihood are that it assumes multivariate normality and estimates all the parameters in the model simultaneously (Crockett, 2012).

Model testing analyzes both the measurement model and the structural model simultaneously (Crockett, 2012). This produces indices of model fit for the entire model as well as the individual parameter estimates (Crockett, 2012). Prior to the analysis of the structural model, the measurement model must yield good fit according to the indices. Researchers characterize model fit into three categories: absolute, comparative, and parsimonious (Crockett, 2012). An indication of good model fit demonstrates the data supports the hypothetical model (Crockett, 2012). Absolute fit indices include Chi-square, root mean square error of approximation (RMSEA), goodness-of-fit (GFI), and adjusted goodness-of-fit (AGFI). Indices associated with absolute fit refer to how well the hypothesized relationships between the variables correspond to the actual or observed relationships (Meyer, Gamst, & Guarino, 2006). Comparative fit indices measure the theoretical model to a baseline model (Crockett, 2012). The most commonly examined comparative fit indices include the normed fit index (NFI), comparative fit index (CFI), the Tucker-Lewis index (TLI), and relative fit index (RFI). Parsimonious fit indices measure the effect of adding parameters to a model by determining the impact on the loss of degrees of freedom (Crockett, 2012).

The fit indices used for this research included Chi-square absolute fit index, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the standardized root mean square residual (SRMR), and the root mean square error of approximation (RMSEA). Cutoff criteria for these indices, as recommended by Schreiber, Stage, King, Nora, and Barlow (2006), are noted below in Table 5.

Table 5. *Criteria for Indices Determining Good Model Fit in this Study. (Schreiber et al., 2006).*

Index	Abbreviated	Criteria
Chi-square	χ^2	Decreasing value with each iteration
Comparative fit index	CFI	$\geq .90 - .95$
Tucker-Lewis index	TLI	$\geq .95$; $0 > TLI > 1$ acceptable
Standardized root mean square residual	SRMR	$\leq .08$
Root mean square error of approximation	RMSEA	$< .06$ to $.08$ (Reported with confidence interval)

The final step in SEM is model modification which involves adding or deleting parameters to improve model fit according to the indices specified (Crockett, 2012). It is important to note model modification is an exploratory procedure based on the data collected for the sample, rather than on previous literature (Crockett, 2012). Kline (2005), however, cautioned researchers about the re-specification of a model based solely on statistical criteria. Rather, he advised researchers to use knowledge of the theory along with extant literature to inform the use of the fit indices and statistics (Kline, 2005).

3.5 Step Three – Student Quantitative Study with Structural Equation Modeling

The purpose of conducting the quantitative hospitality undergraduate student survey was to bring balance to the overall research project testing the impact of subjective norm on hospitality instructors' intention to teach online. Teaching does not occur in a vacuum and student perceptions and beliefs about course delivery are critical factors in determining how courses are taught. The customers of a hospitality

program are students, industry, and the community (Assante, Huffman, & Harp, 2007) and as such, student demand regarding course delivery preference logically called for an analysis distinctly targeting this population's beliefs. The quantitative student study was conducted after both the qualitative faculty study was completed and the quantitative faculty survey was launched.

3.5.1 Sample. The target population for the quantitative student study was all hospitality and tourism management students in four-year institutions of higher education in the United States. Due to the seven constructs measured in the theoretical model by 33 items, ten participants were estimated per item, yielding a total of 330 targeted in the sample (Schreiber, Nora, Stage, Barlow, & King 2006). The sample was expected to yield 400 participants initially and concluded with 323. Based upon Gorsuch's (1997) recommended 300 minimum criteria, this sample was deemed appropriate for analysis.

3.5.2 Data collection. Two weeks after the initial deployment of the quantitative faculty survey, doubts arose around the ability to collect a large enough sample of undergraduate hospitality students to produce valid findings. At that time, a \$100 gift card drawing was added to the proposal as an incentive to participate and a second amendment to the IRB was submitted on November 7, 2012. The amendment was approved on November 15, 2012.

The survey was deployed in hard copy on November 26, 2012. A paper survey was chosen due to the poor rate of return often experienced with online survey distribution (Sax, Gilmartin, & Bryant, 2003). Convenience sampling was the method

employed to target undergraduate hospitality management students from a program located in the southwestern United States. Students were given paper surveys to complete both before and after class time, which were collected in a drop-box. In order to attract more participants, a raffle for a \$100 gift card was offered as an incentive. Included in the paper survey was a separate form in which the students could fill in contact information if they wished to participate in the drawing. The purpose of the additional form was to generate a separate list for personal information to award the gift card so these responses could not be matched to original survey responses. The odds of winning the gift card were approximately 1 in 400 and the drawing was held on December 31, 2012.

3.5.3 Instrument development. Based on previous validated scales and support from the TAM2 literature, the survey instrument was designed to test the Technology Acceptance Model 2 with deconstructed items in subjective norm. Three of the main TAM2 constructs borrowed scales from the literature: perceived usefulness (Ajjan & Hartshorne, 2008; Liaw, 2008; Liu et al., 2010); perceived ease of use (Davis, 1989; Jung et al., 2008; Liu et al., 2010); and intention to use (Davis, 1989; Davis, 1993; Venkatesh & Davis, 1996; Venkatesh, 2001; Liaw, 2007; Liaw, 2008; Liu et al., 2010). The remaining four constructs were adapted from the literature and examined subjective norms more precisely: peer influences; instructor influences; academic advisor influences; and parent and/or guardian influences (Ajjan & Hartshorne, 2008; Harshorne & Ajjan, 2009).

The survey was comprised of 33 questions, 30 of which were based on the TAM2 model. The 30 TAM2 questions utilized a 5-point Likert scale of measurement (1 = strongly disagree to 5 = strongly agree) and examined full online course delivery. The remaining three questions were demographic in nature.

3.5.4 Data analysis. The procedures for data analysis in this study were conducted in the same manner, using the same criteria, as in Step Two-Faculty Quantitative Study Using Structural Equation Modeling. First, the data were screened for missing values, outliers, univariate and multivariate violations of normality using SPSS v.20. Cronbach's alpha was measured using SPSS v.20. Mplus software was chosen as the structural equation modeling software package to conduct the confirmatory factor analysis and to determine the structural model.

The fit indices and criteria chosen for this study were the same as in Step Two: Chi-square absolute fit index; the comparative fit index (CFI) $\geq .90 - .95$; the Tucker-Lewis index (TLI) $\geq .95$, $0 > TLI > 1$ acceptable; the standardized root mean square residual (SRMR) $< .08$, and the root mean square error of approximation (RMSEA) $< .06$ to $.08$ (Schreiber et al., 2006).

3.6 Note on Electronic Survey Method

Step two in this research project utilized an online survey collection method. Hospitality faculty from the Summer 2012 ICHRIE conference attendees' list, EuroCHRIE members, and faculty listed on hospitality institutions' websites were emailed an invitation with a link to participate in the survey. The advantages to using a Web-based survey include: cost efficiency compared with mailed surveys; the

possibility of missing data is reduced; no need to transfer data manually from questionnaires into electronic format thus reducing the possibility of errors in the transfer process; and the software is more interactive, enhancing the participation experience of the respondent (Gall, Gall, & Borg, 2007). Computer interactive survey software also offers a great deal of flexibility in the sequencing of the questions, or the ability to randomize (Zikmund, 2003). Respondents are also more likely to be candid in Web-based surveys, due to the anonymity offered by Internet-based surveys (Zikmund, 2003).

One of the main disadvantages in using an online survey is the respondent must have access to the Internet, and if not, the study is subject to sampling bias (Bradley, 1999). Another disadvantage in using an online survey is the poor rate of return associated with this method of distribution (Sax, Gilmartin, & Bryant, 2003).

3.7 Response Rate Determination

Due to the use of the Internet-based survey in Step Two, a response rate was impossible to determine. Several email addresses from the ICHRIE list of attendees may have no longer been accurate. A few respondents were on vacation during the distribution, evidenced by the “out of office” emails returned, thus missing the cut-off date for participation. Some hospitality faculty members were asked to forward the email with the survey link, making it difficult to estimate how many emails were forwarded, or even if they were.

CHAPTER IV - ARTICLE ONE

BLENDED LEARNING AS A BRIDGE TO FULL ONLINE COURSE DELIVERY IN HOSPITALITY MANAGEMENT HIGHER EDUCATION

4.1 Abstract

A substantial body of empirical research exists on the topic of online teaching and learning; however, few qualitative studies have been conducted examining the deeper reasons for teaching online and no studies of this type have been performed in the hospitality discipline. This research sought to understand the subjective norms influencing hospitality faculty to teach online. Data were coded according to TAM2 constructs and sub-coded according to emergent themes. Findings demonstrated hospitality faculty's propensity for blended learning as well as other strategies for improved online instruction in this field.

4.2 Introduction

The early history of online learning can be traced back to the mid-1970s when educators first leveraged computer networking communications, emails and conferencing, to create online learning environments (Harasim, 1996). Since that time, the rapid evolution and adoption of this mode of course delivery has broken geographic and pedagogic barriers (Harasim, 1996), generating an entirely new paradigm of teaching. This paradigm shift resulted in the emergence of a new educational model with an unfamiliar set of expectations and rules governing how to manage an unproven learning environment (Harasim, 1996). Over the years, online learning generated controversy and produced a wide range of views regarding the

acceptance of this type of learning as a viable mode of course delivery. Apart from the early adopters, the majority of faculty in higher education has been rather unenthusiastic and often feel pressured into teaching online (May & Short, 2003). Faculty struggled with technology as well as pedagogy associated with online teaching (May & Short, 2003), which has subsequently led to instructor dissatisfaction and student attrition (Islam, 2002).

While faculty have not readily embraced online course adoption, institutions are actively pursuing this form of instruction. Citing increased enrollments in the face of reduced funding (Kelderman, 2010), greater flexibility for students and instructors (Tesone, Alexakis, & Wayne, 2003), and the potential for revenue generation (Blumenstyk, 2012), institutions consider online programs a major component to long-term strategic growth (Allen & Seaman, 2010). Hospitality program administrators and chairs find themselves in a precarious position having to disseminate institutional initiatives regarding online implementation to instructors who are reluctant to embark upon this form of instruction. Coupled with this apprehension, hospitality faculty must deliver these courses well, as their tenure and promotions process might depend on their online course student evaluations. In addition, the lack of understanding of online pedagogical practices which increase student satisfaction can appear an insurmountable task for instructors new to this form of instruction.

Since the early days of online learning, considerable research has emerged; a partial list includes faculty and student satisfaction (Park and Choi, 2009), pedagogy (Mishra, 2002; Patel, Gali, Patel, & Parmar, 2011), course quality (Allen et al., 2012),

compensation and recognition (Berge & Muilenberg, 2001; Porter, 2003; Orr, Williams, & Pennington, 2009), and the online learning environment (Frazee, 2003). To date there have been relatively few phenomenological studies about online learning and none have been conducted in a hospitality context. The study of hospitality management includes a multi-disciplinary approach with a particular focus on customer satisfaction. As the largest service industry in the world (WTTC, 2012), the goal of hospitality and tourism management programs is to develop competent managers with an ability to deliver exceptional customer service. This ambition brings an added challenge to the discussion surrounding online course delivery in hospitality.

4.3 Literature Review

The United States total travel and tourism contribution to GDP in 2011 was \$1,315.6 billion with projections of \$1,791.0 billion in 2022 according to The World Travel & Tourism Council (WTTC) (2012). WTTC also estimated 14.3 million jobs in the United States were supported by travel and tourism, projecting 17.2 million jobs by 2022. In response to industry's demand for human resources, hospitality management programs have grown 500% over the last 25 years (Stoller, 2008), resulting in approximately one thousand hospitality and tourism post secondary programs in the United States (Riegel & Dallas, 2006). Beginning with the first hospitality baccalaureate program offered at Cornell University in 1922, four-year hospitality management programs now encompass a wide range of curricula and pedagogies.

Throughout the 1920s and the 1930s, several land-grant institutions developed hospitality management programs including Purdue University, Michigan State University, and the University of Massachusetts (Barrows, 1999). Later, in the 1940s and 1950s, Pennsylvania State University and the University of Houston followed suit (Barrows, 1999). In the 1960s, 1970s, and 1980s rapid industry expansion led to a shortage of trained managers available to meet industry needs (Barrows, 1999). The overwhelming demand and lack of adequate supply prompted an unprecedented increase in the amount of hospitality programs. Additionally, the growth and expanding diversity of the hospitality industry naturally created a need for more specialized instruction (Barrows, 1999).

Despite the healthy industry and program expansion leading up to the 1990s, the economic recession during that decade (Barrows, 1999) and again in 2008, produced notable declines in student enrollments in hospitality higher education. Many programs disbanded, while others downsized. In 1996, an annual meeting at the International Council on Hotel, Restaurant, and Institutional Education (ICHRIE) held a workshop for hospitality program survival (Barrows, 1999). Faced with recession and budgetary cuts at the local and state levels, hospitality management programs have undergone massive changes to remain viable and sustainable in an increasingly challenging environment. For example, in 2011, the William F. Harrah College of Hotel Administration at UNLV eliminated faculty positions, 8 majors, and many classes to save the program due to a \$30 million budget cut (Benston, 2011). As hospitality management programs are forced to become more self-reliant, they have

looked to external funding to support their programs, including subsidies from private industry (Barrows, 1999).

4.3.1 Experiential learning. Due to the strong recommendations of recruiters, experiential learning, or active learning, has become a critical component in hospitality curricula (Dickerson, 2009). Built upon the belief that an effective manager needs practical experience (Baum, 1988), hospitality programs have built work experience (Leslie, 1994), and in many cases an experiential learning element, into the course of study (Girard, 1999). Previous research on the benefits of experiential learning revealed students who engage in these types of educational opportunities are better equipped for employment in the industry (Van Hoof, 2000). Courses employing experiential learning provide students the chance for moral development, leadership skills, and a respect for diversity (Eyler & Giles, 1999).

The vocational nature of hospitality education (Barron & Anastasiadou, 2009) supports experiential learning, both in and out of the classroom. In-class experiential exercises include computer-based simulations, student-run restaurants, critical incidents, action research, small group problem solving and case studies (Harrington, Ogbeide, & Ottenbacher, 2010). Research into active learning in the hospitality management curriculum concluded these tasks contributed to critical thinking and problem solving, as well as preparing students for their future jobs (Sivan, Leung, Woon, & Kember, 2000).

Active learning has been found to be more suitable for achieving the higher levels of complex learning (Lovell-Troy, 1989). In hospitality education, the use of

memorization has been discouraged as a teaching practice, replaced instead with methods that encourage the development of personal and intellectual skills (Sivan, Leung, Gow, & Kember, 1991). Many educators subscribe to the belief that hospitality students should be supported in finding their own conclusions through investigations into the industry. This encourages hospitality students to become active participants, taking more personal responsibility for their learning (Sivan et al., 1991).

Experiential learning outside the classroom most often refers to internship programs. Hospitality internships may be referred to as student work experience, placements, cooperative education, experiential education, or work-integration education (Tse, 2010). These types of practical, applied experiences are valuable as they afford students the opportunity to put into practice what they have learned in the classroom (Tse, 2010). Internships are critical to a hospitality curriculum because they provide students access to new technology applications, operational readiness and customer service skills (Petrillose & Montgomery, 1998). In addition, students gain critical insight into customer-employee interactions and management functions (Petrillose & Montgomery, 1998).

4.3.2 Working students. In recent years, higher education has witnessed an increase in the number of undergraduate students who part or full-time. Seeking to augment student loans to pay tuition, students often maintain part-time employment to afford necessities and generate spending money for social activities (Barron & Anastasiadou, 2009). In 2010, 40% of full-time and 73% of part-time undergraduate students worked while in college (Institute of Education Sciences, 2012).

This practice bodes well for the hospitality industry which requires flexible and inexpensive labor to sustain business operations (Curtis & Lucas, 2001). Hospitality students who work part-time in the industry recognize valuable personal and career development (Barron & Anastasiadou, 2009). Furthermore, consistent part-time work, as opposed to sporadic summer employment, has been found to support the student financially while enhancing career opportunities (Curtis & Lucas, 2001).

Unfortunately, there is a price students pay to work while gaining an undergraduate education. Studies have shown students who work often have less time to study than those who remain unemployed throughout their college career (Manthei & Gilmore, 2005). In addition, working part-time can have a negative effect on students' physical and mental health (Carney, McNeish, & McColl, 2005) and promotes absenteeism in the form of subpar class attendance (Curtis & Shani, 2002).

Studies have demonstrated students, industry, and institutions can benefit from supporting students who work part-time while enrolled in an undergraduate program. Work experience, internship, and recruitment offices within institutions often act as a broker or intermediary between the student and the employer (Barron & Anastasiadou, 2009) which is beneficial to students as it protects them from working excessively.

Research confirms institutions could be more supportive and understanding of those students working part-time while in school (Barron & Anastasiadou, 2009) by encouraging faculty to be more sympathetic toward these students and providing flexible educational alternatives (Barron & Anastasiadou, 2009). Flexible educational options include decreasing the number of subjects studied, offering various modes of

course delivery (i.e. face-to-face, full online or blended learning), and assorted methods of assessment (Barron & Anastasiadou, 2009).

4.3.3 Nontraditional students. The total college enrollment in the United States is predicted to increase 13% from 2009 to 2020 (Institute of Education Sciences, 2011). A significant impetus behind this growth is the return of many nontraditional students, those individuals between 25 and 34 years of age, to higher education. Predictions expect the percentage of nontraditional students to increase 21% during the next decade (Institute of Education Sciences, 2011). Though nontraditional students are often characterized as those older than the typical college age, i.e. 18-24, individuals from multiethnic backgrounds, first generation college students, students from low socio-economic circumstances, and those with families and jobs are also included in this demographic (Miller & Lu, 2003). These students are increasing in number but often have difficulty graduating due to personal and professional commitments. Nontraditional students typically attend school on a part-time basis and perceive the college degree as a necessary career credential (Miller & Lu, 2003). Institutions of higher learning stand to lose revenues by failing to support nontraditional student enrollment (Miller & Lu, 2003). In addition, loss of nontraditional students equates to disrupted learning as well as decreased retention rates and satisfaction among students (Miller & Lu, 2003).

Recessionary times and the nature of a changing workforce are prompting nontraditional students to pursue terminal degrees in higher education (Supiano, 2010). Research has shown nontraditional students are easier to recruit than retain in

higher education; however, Pennsylvania State University has formed a strategic plan to accomplish both goals (Hoover, 2010). Penn State predicates this action upon the belief that the needs of nontraditional students vary and there is no “one size fits all” approach (Hoover, 2010). Based on the feedback of former nontraditional students, Penn State implemented accelerated programs, better access to financial aid, and increased blended and full online course offerings to serve the needs of these students (Hoover, 2010). The flexibility of distance education programs is a major proponent for encouraging Americans with family and work obligations to continue in post-secondary degrees (Kolowich, 2010).

4.3.4 Online hospitality education. A study by Sciarini, Beck, and Seaman (2012) which examined hospitality faculty’s perceptions of online education reported in January 2012 that 44.3% of respondents agreed online education was important to the long-term strategy of the academic unit. When compared to a larger study encompassing a variety of academic disciplines, 65.5% agreed online learning was important to the long-term strategy of the institution (Sciarini, Beck, & Seaman, 2012). These statistics demonstrate hospitality faculty place a less significant value on online learning as compared to faculty in other academic fields.

Blended courses are more widely embraced than full online course offerings within hospitality programs. Over sixty-one percent (61.8%) of hospitality programs offer blended courses as opposed to 52% who offer full online courses (Sciarini, Beck, & Seaman, 2012). Of the hospitality management programs already engaged with

online education, 13.6% offer full online course delivery for their entire program (Sciarini, Beck, & Seaman, 2012).

One advantage of online learning over traditional instruction is the flexibility it provides to student. Slightly higher than 80% of hospitality management program respondents in the Sciarini, Beck, and Seaman study (2010) thought online education was preferable to face-to-face instruction in terms of scheduling flexibility for students and their ability to work at their own pace. Online learning was also believed to be superior to face-to-face learning in terms of supporting student-to-student interactions (Sciarini, Beck, & Seaman, 2012).

The trend toward a more positive outlook regarding online course delivery in hospitality management higher education is growing. Eighty percent (80.0%) of faculty believe within 5 years the majority of all higher education students will be taking at least one online course during the course of their undergraduate studies (Sciarini, Beck, & Seaman, 2012). Furthermore, hospitality faculty claim there will be increasing competition in the future for online students within their own programs (Sciarini, Beck, & Seaman, 2012). Regarding hospitality program administrators, there is no longer a question of *if* they will have online offerings, but rather *when* and *what type*. The preference for blended or hybrid learning over full online course delivery in hospitality management might already indicate the type of online offerings in the future.

4.3.4.1 Institutional strategic planning. It has been reported that the future of online learning directly corresponds to institutional long-term strategic planning goals.

In 2011 Indiana University identified online learning as one of its primary initiatives in its overall strategic plan for the institution. Several reasons for providing quality online education for undergraduates included timely progress toward earning degrees, convenient access to education for working adults, and facilitating retention. The most important factor in providing undergraduate online instruction was to offer additional sections of required core undergraduate courses

(<http://www.indiana.edu/~newacad/docs/IU-online-educ-strategic-plan-2011.pdf>).

Indiana University supplied a different focus for graduate online education maintaining the primary goal was to meet the needs of working professionals seeking degreed credentials. Additionally, Indiana University aimed to attract new markets in the graduate segment both nationally and internationally

(<http://www.indiana.edu/~newacad/docs/IU-online-educ-strategic-plan-2011.pdf>).

When revenue generation is part of a strategic plan, some universities depend on distance learning to create profit. Without physical space limitations, online classes present the opportunity for high course enrollments, thus serving as a significant profit generating mechanism for the institution (Blumenstyk, 2012). This is evident at the University of Massachusetts at Amherst where the online MBA program accounts for 25% of the enrollment, but 40% of the \$25 million annual budget in the Isenberg School of Management (Blumenstyk, 2012).

4.3.4.2 Increased enrollments. Enrollment management is a formal field within higher education that governs the size and composition of student bodies (Penn, 1999). Since the early 1970s (Dixon, 1995), as the number of colleges and

universities increased while the number of high school graduates declined, institutions have encountered more competition for the same students (Healey & Schmidt, 1997). Exacerbating this dilemma is the additional pressure to acquire funding at the state and federal levels (Breneman, 1997).

State financed institutions are experiencing decreased funding after the recent recession while concurrently enrollments are growing (Kelderman, 2010). Budgetary cuts can no longer support the enrollment in many state-funded institutions. From 2007 to 2009, national full-time enrollment grew 3.4% while state assistance for higher education only increased by 1% (Kelderman, 2010). Institutions have fewer resources to meet the needs of a growing body of students. Online education has alleviated this gap, and in some cases, produced a profit for state-run institutions. The University of Massachusetts at Lowell and the State University of New York Delhi campus implemented online learning programs to serve nontraditional students (Fain, 2010). Both universities claim online education helped alleviate the gaps in state appropriations. Lowell reported \$25 million in revenue in 2009, with a net profit of \$10 million as a result of these expanded online course offerings (Fain, 2010).

4.3.3.3 Greater flexibility. Nontraditional adult students occupy the largest proportion of distance learners (Gibson, Tesone, Hodgetts, & Blackwell, 2001). These students may be enrolled in either undergraduate or graduate programs and often must balance work and family responsibilities during their course of study in a part-time format (Gibson et al., 2001). Meeting the needs of this population of students is paramount to institutions who seek to increase enrollments. Online learning allows for

greater flexibility of time for nontraditional students along with increased convenience of learning, and exposure to a diverse student population (Tesone, Alexakis, & Wayne, 2003). Professional adult learners working in remote locations and international students are two of the most prevalent nontraditional student segments which benefit from online courses since they are unable to attend regular on-campus class sessions (Tesone et al., 2003).

Students who are employed in internships away from their home campus also appreciate online instructional methods as it allows them to continue making progress toward their degree uninterrupted (Tesone, 2000). Research in this area has shown the common thread linking nontraditional students to online learning is the flexibility of time and location (Gibson et al., 2001). Online learning creates alternatives to traditional educational formats for nontraditional students and provides greater access to opportunities where none existed previously.

4.3.4 Faculty perspectives of online learning. Faculty opinions regarding course quality remain a point of contention in online learning today. In a report examining faculty attitudes toward online education, 58% of faculty polled reported low levels of optimism toward online learning. Faculty without any online teaching experience expressed more fear than excitement (Allen et al., 2012). However, enthusiasm grew as faculty gained more experience. For example, instructors who taught courses within online programs had the most favorable view toward online learning, followed by those instructors with only some experience outside an established program (Allen et al., 2012).

Allen et al. (2012) reported faculty at two-year institutions were more positive about the growth of online programs than their counterparts in four-year universities. This may be due in part to the prevalence of online learning in two-year colleges, as 91% offer online courses compared to 89% in public four-year universities and 60% in private four-year colleges (Taylor, Parker, Lenhart, & Patten, 2011). In the same study, faculty members with the most years in academia expressed less passion for online learning than faculty members just beginning their careers (Allen et al., 2012).

4.3.4.1 Quality. While the majority of chief academic and program officers hold few reservations about the quality of online learning within their own institutions, faculty still expressed negative attitudes toward this form of instruction (Allen et al., 2012). Sixty-six percent (66%) of faculty expressed negative views toward online learning, saying they felt the quality was inferior to face-to-face education (Allen et al., 2012). This pessimistic outlook is attributed in large part to faculty members' previous experience, or lack of experience, with online courses (Allen et al., 2012).

Eighty-three percent (83%) of faculty working in institutions without online programs felt online learning was inferior to face-to-face learning. Even those faculty with some online teaching exposure expressed doubts as to the effectiveness of this teaching technology. Among faculty working at institutions offering online courses, 69% felt this delivery system was "inferior" or "somewhat inferior." Even in institutions with full online programs 55% of faculty still expressed their aversion to online course delivery (Allen et al., 2012).

Other studies demonstrated an opposing view, reporting learning outcomes in online courses are similar to traditional face-to-face courses (Stewart, Bachman, & Johnson, 2010). The conflicting findings on these views of online learning could be explained by the fact faculty might consider their own online courses high quality, while harboring reservations about the online course quality of their peers or faculty members at other institutions (Allen et al., 2012).

Despite prevailing negative attitudes about the quality of online learning, 50% of faculty members with prior online teaching experiences were favorable towards online learning and it's potential to help students learn (Allen, et al., 2012). Additionally, faculty members who were currently teaching at the time of the study compared to faculty who did not teach online reported nearly two to one that online learning was as effective as face-to-face course delivery.

In recent years higher education accountability has intensified, as more institutions are required to demonstrate transparency through student learning outcomes (Huffman, Adamopoulos, Murdock, Cole, & McDermid, 2011). Justification of tax dollars (Banta & Pike, 2007), improvement of student learning, reaching institutional goals, and responsibility to students and parents are cited as adding increased pressure on administrators to demonstrate transparency and support of student learning outcomes (Hamilton & Banta, 2008). High stakes assessments for institutions have been well documented for face-to-face instruction, but for online programming, less research has been conducted to date. Allen et al. (2012) reported fewer than 50% of all instructors believe their institutions had good quality assessment

for face-to-face instruction, but only one-quarter expressed confidence the institution had adequate policies in place to assess online instruction.

4.3.4.2 Compensation and recognition. Previous studies regarding online learning reported a common grievance among hospitality instructors was the increased preparation time required to develop an online course, compared to teaching face-to-face (Allen et al., 2012). Thus, a course release in exchange for development has been one proposed solution for faculty opposed to online course creation. In addition to increased preparation time, other barriers to faculty members' intention to teach online included compensation for course development and concerns over intellectual property rights (Berge & Muilenberg, 2001; Porter, 2003; Orr, Williams, & Pennington, 2009). The issue of compensation prompted faculty unions to generate new language in their contracts to guarantee additional compensation for the development of online courses (Carnevale, 2004); however, many administrators view online learning as increasingly mainstream, and often claim development should be part of a faculty member's workload (Carnevale, 2004).

Although research demonstrated the importance of faculty being compensated monetarily for online course development and teaching, faculty reported this was not their primary motivation for teaching online (Orr et al., 2009). Instead, faculty rated time as a critical factor toward motivation to teach an online course (Orr et al., 2009). A recent study involving perceptions of fair compensation for online course instruction reported one-third of faculty believed their payment was fair, one-third

were neutral on the issue, and the remaining third disagreed with how their institutions financially compensated those instructors teaching online (Allen et al., 2012).

Faculty development of digital pedagogy and subsequent recognition of online teaching contributions was reported as slightly less than fair among faculty teaching online (Allen et al., 2012). However, when attached to promotion and tenure initiatives, the majority of faculty who taught online reported their institutions had a fair tenure and promotion system with respect to teaching online courses (Allen et al., 2012).

4.3.4.3 Theory. Two learning paradigm shifts have taken place over the course of the rapid adoption of online learning by higher education institutions. The first is a shift away from the traditional face-to-face learning pedagogy, characterized by instructor-led learning environments, toward an online model, with instructors occupying more of a supporting role (Sigala, 2002). The second, and more comprehensive paradigm shift, is within online learning itself, as evidenced by the variety of online learning environments including traditional online learning (courses taken completely online), blended learning (using online learning as a mixed mode with face-to-face), and virtual eLearning (supplemented face-to-face instruction with online learning) (Mishra, 2002; Patel, Gali, Patel, & Parmar, 2011).

In an effort to better understand the effects and impact of collaborative online learning environments, several learning theories highlight online learning pedagogy from the standpoint of both students and instructors. Among these are behaviorism, cognitivism, constructivism, and social constructivism (Hung, 2001; Mishra, 2002;

Patel et al., 2011) with constructivism identified as the leading theory for online learning environments (Hung, 2001). Table 6 highlights the main characteristics of online learning theories (Hung, 2001).

Skinner's (1974) behaviorist theory is based on a stimulus and response modality where learning takes place through memorization and is achieved through response and reinforcement (Mishra, 2002). Online learning approaches to behaviorism include self-assessment, interactive activities, and learning materials deployed as small pieces of information (Villalba & Romiszoski, 2001; Mishra, 2002).

Cognitive theory explains the acquisition of knowledge based on contextual factors, where meanings and relationships are derived from interpersonal environments (Clancey, 1992) (see Table 6). Cognitivism, like behaviorism, still is dependent on memorization but also includes the higher orders of learning, including application and elaboration. In an online learning environment, cognitive theory is demonstrated in annotated note taking, peer-assessment, and the seeking of research information for projects via Internet search engines, for example (Mishra, 2002).

Table 6. *Characterization of Online Learning Theories (Hung, 2001).*

Theory	Learning Process	Type of Learning	Instructional Strategy	Key Concepts
Behaviorism	Stimulus and response	Memorization and response	Practice and feedback	Reinforcement
Cognitivism	Transmission and knowledge processing	Memorization and application	Cognitive learning strategies	Reproduction and elaboration
Constructivism	Personal discovery	Problem solving and case study	Active and self-regulating learning methods	Personal discovery
Social Constructivism	Via different cultural perspectives	Collaborative learning and problem solving	Scaffolding in the learning process	Discovering different perspectives and shared meanings

4.3.4.4 Constructivist theory. Constructivist theory, based on cognitive learning strategies, was formulated by Piaget (1960) and proposed that individuals constructed knowledge through personal discovery. Learning modalities for constructivism include collaborative and problem solving strategies that encourage active and self-regulated learning (see Table 6). Online teaching approaches to support constructivism include the use of synchronous and asynchronous discussion forums (Schellens & Valcke, 2006), group projects, and streaming media (Villalba & Romiszowski, 2001; Mishra, 2002).

Vygotsky (1978) further developed constructivism to include the cultural and social contexts of learning, renaming it ‘social constructivism.’ Emphasizing the importance of personal interaction, Vygotsky’s social constructivist theory focused on the view that human knowledge is of social origins and dependent on cultural contexts (Hung, 2001). More specifically, Hung (2001) analyzed the similarities between constructivist and social constructivist theories concluding:

4. Learning is an active process of constructing rather than acquiring knowledge;
5. Knowledge can be socially constructed where the social interactant may include just oneself;
6. The interpretation of knowledge is dependent on a) the prior knowledge and beliefs held in one’s own mind and b) the cultural and social context through which the knowledge was constructed. (p. 283)

Social constructivism calls upon collaborative and problem solving learning environments (see Table 6). Due to the varying levels of student understanding within a typical learning environment, in order to assist students in a collaborative atmosphere, scaffolding is applied as an instructional strategy (Hung, 2001). Instructional scaffolding, from constructivism, is a process by which instructors support students on an as-needed basis until the student demonstrates proficiency of task (Pressley, 1996).

4.3.4.5 Learning environment design. The technology boom of the 1990s helped propel online learning theory and practice in the 2000s. During this time, Pallof and Pratt (1999) advised against the transference of existing face-to-face course delivery strategies to online learning, as they indicated this would not advance the use of the medium. Furthermore, Collins (1996) warned it was not the sophistication of

the technology, but rather the utilization and implementation of that technology which would improve online learning. Sigala (2002) described the role of an online instructor as one of evolving from educator to facilitator, which in turn transformed students from passive to active, independent learners, immersed in a personalized online learning experience (see Figure 10).

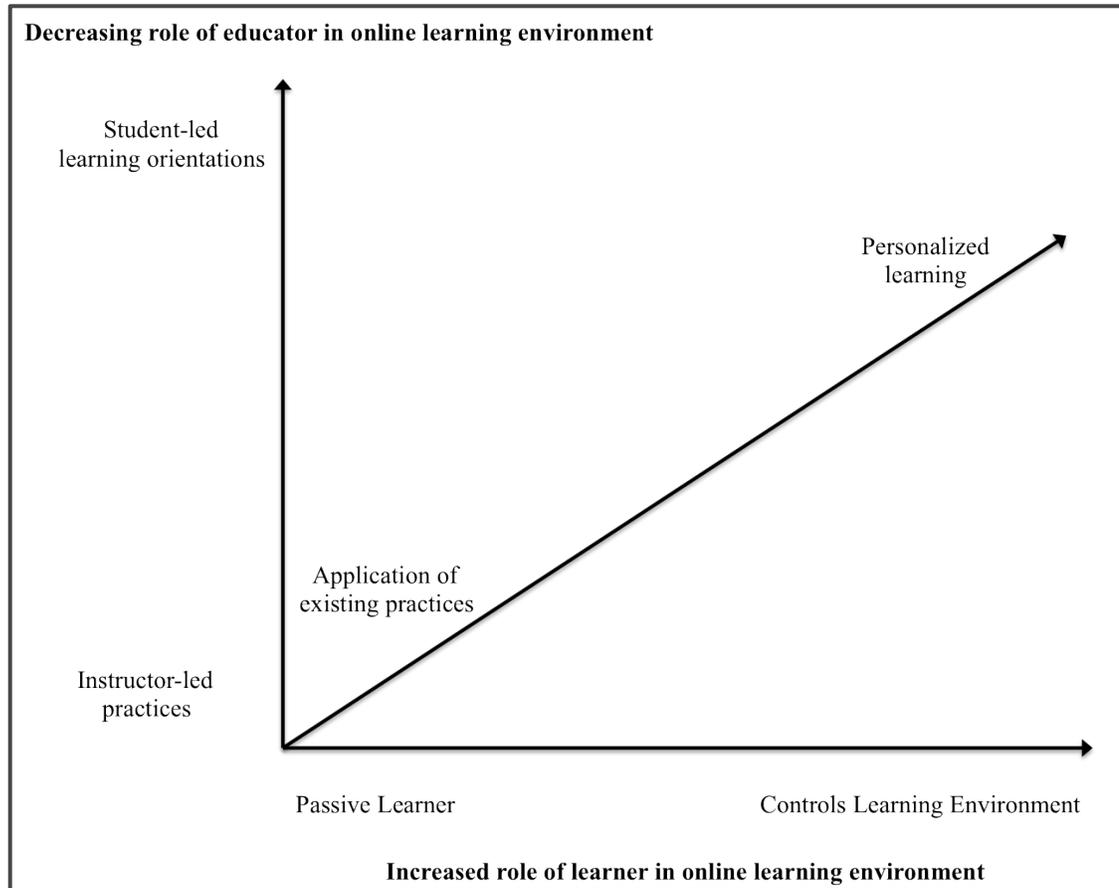


Figure 10. Role of educator in the design of the learning environment (adapted from Sigala, 2002).

Innovative online instructional techniques, pertinent to student learning outcomes, require faculty training and development (Gautreau, 2011). Since 1999, institutions of higher learning have been concerned with the readiness and training of

instructors, preparing them for the inevitable growth of information and communications technology (Simpson, Payne, Munro, & Hughes, 1999). Teaching online courses requires a whole new set of skills, pedagogy, and knowledge; however many faculty development programs have overlooked the needs for learning new technologies (Gautreau, 2011). One of the most basic skills useful to faculty teaching either online or in blended learning environments is the use and application of a course management system (CMS), also known as a learning management system (LMS) (Gautreau, 2011). Blackboard, WebCT, and Moodle are among the most popular CMSs in higher learning. The primary function of a CMS or LMS is to deliver online instruction using various multimedia modes to improve the online instruction and learning process (Mullinix & McCurry, 2003). Understanding the potential for online or blended learning instruction using a CMS is critical for the adoption of a CMS by faculty (Gautreau, 2011).

4.3.5 Instructional formats for online learning. As the most adopted theory for online learning, constructivism was a popular choice due to its support of online course design and management (Chu, Mamchur, Parker, & Rossner-Merrill, 1998). Online course design, or instructional design, is difficult to categorize by technology alone, and thus to become more objective, online technology was categorized according to communication formats: synchronous and asynchronous (O'Connor, 2010). Synchronous communication is defined as two or more persons communicating together simultaneously, while asynchronous communication occurs separately over a longer time frame (O'Connor, 2010).

The benefit of asynchronous communication is that it allows for greater flexibility for both the student and instructor. In contrast, the disadvantage of asynchronous communication is that there is no immediate interaction between learners or between students and the instructor (O'Connor, 2010). Synchronous communication however is not without its disadvantages, as statements are immediate and prevent students from spending any significant amount of time contemplating the material before responding.

4.3.6 Theoretical framework. The theoretical basis for this study was the Technology Acceptance Model 2 (TAM2) (Venkatesh & Davis, 2000). TAM predicts an individual's intention to use a technology (Davis, 1989) and is rooted in the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975) and the Theory of Planned Behavior (TPB) (Ajzen, 1991). TAM has been tested across many disciplines, validated as a rigorous model for predicting user intention of technologies (Taylor & Todd, 1995), and was developed to identify points of training interventions within organizations.

TAM has evolved over time and for this study, the second iteration, TAM2, was the model used due to the inclusion of the subjective norm construct (Venkatesh, Morris, Davis, & Davis, 2003). Subjective norms are beliefs that other referent groups will influence an individual's behavior after having used the technology in question (Venkatesh, et al., 2003). In the initial years of TAM research, subjective norms were dismissed because findings revealed they did not play a role in mandatory work settings (Venkatesh & Davis, 2000). Due to the nature of the rapid adoption of new

technologies, the study of subjective norms within TAM research has resurfaced (Jan & Contreras, 2011; Lee et al., 2011; Teo, 2010). Social psychologists have recently reported that a cumulative subjective norm construct was too naive a measure for understanding the impact of referent others on technology use intentions (Eckhardt, Laumer, & Weitzel, 2009). In this study, it was this view that provided the impetus to extract the various referent groups from the collective subjective norm construct.

Few empirical studies have deconstructed second order constructs within subjective norm. The Decomposed Theory of Planned Behavior (DTPB), which was the precursor to TAM, was the basis for a study performed measuring students' decisions to adopt Web 2.0 technologies as a supplement to in-class activities (Hartshorne & Ajjan, 2009). Separated into superior and peer influences, both had a significant and positive influence on subjective norm; however superior influences were very significant on subjective norm, and therefore behavioral intention (Hartshorne & Ajjan, 2009). In a related study to determine faculty decisions to adopt Web 2.0 technologies, DTPB was used again to predict behavioral intention. Separated into three constructs: student, peer, and superior influences (Ajjan & Hartshorne, 2008), all influences measured had significant effects on subjective norm, but in that study subjective norm failed to predict behavioral intention (Ajjan & Hartshorne, 2008).

4.3.7 Gaps in the literature. There is a significant body of empirical research investigating faculty motivations toward eLearning from the perspective of faculty both unfamiliar with online learning along with those who have readily adopted the

technology (Howell, Saba, Lindsay, & Williams, 2004; McKenzie, Mims, Bennet, & Waugh, 2000). Fewer studies have examined this phenomenon qualitatively (Oomen-Early & Murphy, 2009) and currently, there are no qualitative studies investigating hospitality faculty intentions' to teach online, whether blended or full online delivery. Missing from this body of general online teaching research is a more in-depth and detailed investigation regarding the normative influences on faculty intentions to teach online. In an increasingly digital age, where online technologies are easily accessible and commonplace, technological obstacles no longer exist. Instead, perceived obstacles might be a result of other factors associated with online learning, validated and otherwise. Hospitality faculty work in a multidisciplinary and social setting where they are constantly exposed to the opinions and beliefs of those around them: students, colleagues, and administrators, each with their own agenda about online teaching and learning. Over time and with increased exposure to evolving pedagogical technologies, hospitality faculty must constantly stay abreast of these instructional innovations, including online teaching. In addition, due to the pervasive nature of these technologies, institutional expectations are such that faculty might inadvertently be pressured to teach online.

4.3.8 Research design and objectives. The purpose of this research was to understand the perceptions of hospitality faculty from all levels of online experience together with their combined attitudes toward full online course delivery. In addition, the Technology Acceptance Model 2 (TAM2) was the theoretical foundation for this

research and as such, a secondary purpose of the project was to examine more deeply the subjective factors influencing faculty's decisions to teach online.

This study was part of a larger research project examining hospitality faculty intentions to teach online. This portion of the project implemented a qualitative design, using in-depth interviews with hospitality faculty to gain a more comprehensive understanding of the phenomenon within TAM2 constructs. The results of this study guided the empirical studies that followed. The objectives of this particular study were specifically to:

1. Investigate hospitality faculty perceptions of online teaching based on the constructs of TAM2, isolating influences within subjective norm.
2. Target hospitality faculty with a variety of experience levels teaching online to gain a more comprehensive understanding of their intentions to teach online.

4.4 Methodology

4.4.1 Instrument development. Using the Technology Acceptance Model 2 (Venkatesh & Davis, 2000) as a guide, interview questions were created to examine each construct within the model: subjective norm, perceived usefulness, perceived ease of use, and intention to teach an online course (see Table 7). The instrument was comprised of 27 questions overall: one requesting permission to record the interview; six questions regarding demographics of the participants; four questions about online teaching and learning in general; and 16 questions related directly to the constructs of the model. The research format included standard open-ended interviews in which a

predetermined set of questions in a specific sequence were asked of all participants to avoid bias (Gall et al., 2007). The oral script utilized for the qualitative interviews is included in Appendix B.

Table 7. *Development of Qualitative Survey Items According to TAM2 Constructs*

Construct	Survey Item
Student Influence	Do you think your students expect you to provide your courses online? If yes, does student expectation influence your decision to teach a course online instead of in a traditional format?
Peer Influence	Do your colleagues support online teaching? If yes, in what way? If no, why do think they do not support online teaching?
Superior Influence	Has your department (chair) indicated that he/she would like for you to teach any/more online courses? If yes, do you think his/her expectation motivates you to teach more online courses? Is online teaching voluntary in your dept?
	Has your superior (department chair or administrator) indicated that he or she would like for you or anyone else in your department to teach online? If yes, do you think their encouragement would lead you to teach any or more online courses?
	Currently, in your department, is there a choice of whether to deliver your courses in the traditional or online format? If yes, who made the decision? (Department chair, another administrator in charge of scheduling, or you?)
Perceived Usefulness	To what extent do you think online learning is useful to students?
	How does your department's tenure process impact your decision to teach in a traditional format (face-to-face) blended or full online course? For example, do you receive more (or same) credit by teaching a course online (i.e., full online delivery), compared to a traditional format? Or, are you required to teach online courses for your tenure?
	Do you expect additional compensation for online course development?
Perceived Ease of Use	What do you think about the quality of online learning for hospitality undergraduates? To what extent do you think online learning is easy for students?
	What challenges, if any, have you faced teaching online? What, if anything, concerns you about teaching online

Table 7. (Continued).

Construct	Survey Item
	Have you utilized technical support for online teaching/learning at your institution? Please describe your impression of technical support.
	What type of training have you received, if any, for teaching online? Are you required to receive training before you teach online? If not, how did you obtain the skills to teach online?
Intention to Teach Online	Do you intend to teach online in the near future?

4.4.2 Sample. The target population for this study was all hospitality management instructors in higher educational programs from four-year institutions throughout the United States. While it is impossible to quantify the total number of individuals within this population, very conservative and rough estimates of the programs themselves include 295 hospitality, tourism and culinary arts programs in the U.S. that belong to the International Council on Hotel, Restaurant, and Institutional Education (ICHRIE) (<http://www.guidetocollegeprograms.org/>). It should be noted there are many hospitality programs in the United States that do not belong to ICHRIE, which would make the population even greater.

The sample of human subjects for the qualitative interviews consisted of ten faculty members who attended the ICHRIE 2012 Conference, held in Providence, Rhode Island from August 1—4, 2012. Twenty-two faculty members were initially recruited via email (see Appendix B) based on the target demographic from the schedule of poster and stand-up presentations at the ICHRIE conference. Recruitment emails were sent on July 7, 2012. Nine faculty members returned positive responses

to participate in the research within seven days of the original email. Follow-up emails were sent to confirm dates and times of the interviews, which took place during the conference. One instructor did not attend the ICHRIE conference, but agreed to conduct the interview over the phone. Another faculty member recommended a “practice interview” be conducted prior to the face-to-face interviews and this interview was administered by phone.

4.4.3 Data collection. The first interview was the practice phone interview, which took place on July 21, 2012. The second phone interview was conducted on July 23, 2012. At ICHRIE 2012, nine key informant (Gall et al., 2007) faculty interviews were confirmed and scheduled, however only eight interviews were actually completed at the conference as one faculty member failed to confirm an interview time. Hospitality faculty members from each of three distinct categories of online teaching experience (i.e. none, blended, and full online course delivery) were interviewed. The exact number of interviews per category in this study were not predetermined but rather was dependent on how quickly redundancy was reached (Gall et al., 2007), terminating at a total of ten interviews. No additional interviews were required after ten interviews due to reaching the data saturation point (Mason, 2010). The concept of saturation in qualitative research refers to the stage at which the collection of new data does not further elucidate the phenomenon under investigation (Glaser & Strauss, 1967).

Interviews lasted 35 to 45 minutes according to the criteria for phenomenological studies recommended by Creswell (2007). The interviews were

both audio recorded and notated in hard copy. Upon transcription, a triangulation strategy was used to corroborate the transcribed interviews, as they were returned to their respective interviewees for cross-validation (Gall et al., 2007). Three of the ten transcribed interviews were returned with minor corrections. The identity of each participant was held confidential and all recordings were erased after transcription (Bailey & Card, 2009).

4.4.4 Analysis. The data were analyzed using MAXQDA v.11 qualitative statistical software. In the first round of analyses, the transcripts were coded for general constructs within the TAM2 model: subjective norm, perceived usefulness, perceived ease of use, and intention to teach online. In the second round of coding, the constructs were sub-coded according to emergent themes (see Table 8).

4.5 Results

4.5.1 Description of the sample. The majority of faculty in this sample maintained the rank of Assistant Professor (6), two were Associate Professors, and two had achieved the rank of Full Professor (see Table 9). Of the ten hospitality management instructors interviewed for this study, three were male and seven female. The sample was evenly distributed between those members from Gen X (5) and Baby Boomers (5). In this study, Gen X was defined as those persons born between the years of 1965 and 1983; Baby Boomers were those born between 1946 and 1964 (Oblinger, 2003). Four respondents had prior experience teaching both blended and full online courses, while two respondents had never taught either a blended or full online course. Three instructors had prior experience teaching blended courses and

one respondent had full online teaching experience (see Table 9). Contrary to findings from a recent online study reporting faculty members with the most years in academia expressed less enthusiasm over the future of online learning than faculty members just beginning their careers (Allen et al., 2012), Associate and Full Professors in this study actually were more favorable than Assistant Professors towards this type of course delivery.

Table 8. *Primary Codes and Emergent Sub-codes within the Qualitative Transcripts.*

Primary Code	Sub-code	Frequency	Percent
Subjective Norm			
	Chair Influence	28	45.9
	Colleague Influence	21	34.4
	Student Influence	12	19.7
Perceived Usefulness			
	Hybrid Courses	50	82.0
	Tenure	11	18.0
Perceived Ease of Use			
	Online Course Challenges	71	31.8
	Considerations	53	23.8
	Training	43	19.3
	Online Course Benefits	23	10.3
	Course Management System	21	9.4
	Tech Support	12	5.4
Intention to Teach an Online Course			
	Hybrid Courses	5	100.0

Table 9. *Demographics of Hospitality Instructors Interviewed for the Qualitative Study.*

Rank	Gender	Generation	Online Teaching Experience	
			Blended	Full Online
Assistant	Female	Gen X	✓	✓
Assistant	Male	Gen X	✓	✓
Assistant	Female	Gen X	-	-
Assistant	Female	Gen X	-	✓
Assistant	Male	Gen X	-	-
Assistant	Male	Baby Boomer	✓	-
Associate	Female	Baby Boomer	✓	✓
Associate	Female	Baby Boomer	✓	-
Full	Female	Baby Boomer	✓	✓
Full	Female	Baby Boomer	✓	-

4.5.2 Emergent themes. The primary codes in this study were derived from the major constructs within TAM2: subjective norm, perceived usefulness, perceived ease of use, and intention to teach an online course. Emergent themes in the form of sub-codes were measured in terms of frequencies with respect to how often they appeared in the transcripts (see Table 8).

4.5.2.1 Subjective norm. The subjective norm construct was broken into three components: chair, colleague and student influences; measured in terms of percent frequency.

4.5.2.1.1 Chair influences. Respondents in this study spoke most often about chair or institutional influences affecting their intentions to teach an online course (45.9%). Although faculty members did not feel their chairs were pressuring them into teaching online, several mentioned the impetus for teaching online came from the institution, claiming, “there is a major push from our university to develop more [online courses]” and the mandate for teaching online is “not from the college, but from the university itself.”

Some hospitality instructors interviewed were in a position of authority within their respective programs and collectively felt they did not want to push faculty into teaching online. One instructor said most of the faculty in the department were not interested in teaching online and in an effort to lead by example and teaching online courses herself, the “hope is that in another year or two after people are more used to it and they see that it’s going well, then we can put more classes online.” Another instructor did not feel pressured to teach online but recognized the chair’s future interest in adopting online technology, reporting

“I think he’s [the chair] very intrigued by technology and very open to the idea of how to integrate it in, but he’s also a very good teacher. So, I think he’ll be one of the first ones to say, there’s a right way and a wrong way to do it.”

Hospitality chairs and administrators in this study were in a tenuous relationship with faculty, having to implement components of an online program with instructors who were oftentimes not interested in taking part.

4.5.2.1.2 Colleague influences. Colleague influences were the second most identified sub-code (34.4%) under the subjective norm construct. Hospitality

instructors reported both positive and negative influences by colleagues regarding online teaching. Colleagues informed respondents about the advantages of flexibility in teaching an online class. Citing the ability to work on research projects, teach from remote locations around the world, and not having to physically be present for a class, the respondents conceded to the versatility of an online course.

Participants in the study also reported disadvantages to online teaching, as influenced by their colleagues. Hospitality faculty addressed concerns about the time requirement for developing and loading a course online, particularly for those who were new to the instructional technology. The idea of re-conceptualizing a course taught over an instructor's career was explained,

“It's a time commitment; it takes a lot of time. It requires [faculty] to actually re-think their classes. And why change something that has worked for thirty years? It's been in somebody's mind for over twenty years.”

Some respondents were convinced by their colleagues that hybrid, or blended, courses were an easier adjustment to this type of instruction, rather than making the transition to full online. One instructor mentioned,

“My colleagues support hybrids; I think hybrids are a little bit easier for professors to kind of ease into. Most of the professors that I work with believe in that same kind of philosophy: a portion of the learning needs to be this eyeball to eyeball, face-to-face type learning.”

The theme of combining the automated advantages of online teaching with face-to-face interactions in blended learning emerged several times throughout the study. As a service discipline, one participant explained the importance of personal interactions with hospitality students,

“I think that face-to-face eye contact is important to our industry especially. We’re not only a facts driven industry; we’re a service-based industry. So the interaction between people is important. I think technology is a component of that, but I don’t think it can replace the face-to-face contact.”

In a similar vein, another respondent in the study equated teaching hospitality students with demonstrating good customer service in the industry:

“Online learning concerns me because of the lack of interaction with my students. With my hospitality background and customer service background, my students are sort of my customers and I can’t read their reactions [online]. How do I interact with them, how do I respond to them? By having them in my classroom, I can look at their facial expressions, and realize I need to cover a subject again.”

Regardless of the influences colleagues had on respondents, the faculty in this study were exposed to multiple ideas by their peers. Those instructors with little or no online teaching experience were more doubtful of online learning as proposed by their peers.

4.5.2.1.3 Student influences. Although not discussed as much as chair or colleague influences, the topic of student influences on a hospitality instructor’s decision to teach online was met with mixed results. When asked if their students influenced their decisions to teach online, the respondents in this study gave very clear “yes” or “no” answers. Those respondents who reported that students requested courses online already had prior online teaching experience and well-known ongoing online courses. Of those respondents who did not have students requesting online courses, most had limited online teaching experience.

Hospitality students requested blended learning formats especially in the applied segments of hospitality (i.e. beverage and culinary). Students desired more

time in the classroom to watch demonstrations and food preparations and so were willing to view content on their own time. One instructor reported a student's request, "if moving stuff online allows you to free up more time in the lecture for demos, that would be great." The main concern reported by this instructor was the impression that students want to sit passively watching demos instead of being actively engaged in rigorous learning. The instructor was further concerned with meeting learning objectives and whether students could stay focused throughout the demonstration.

4.5.2.2 Perceived usefulness. Participants in the study acknowledged online learning was useful not only to students, but also to instructors. One respondent viewed online learning as "learning for life:"

"Online learning is probably a little bit more learning for life. I think if you can be a person who can really do online courses well, you are probably set up for a lot more responsibility for yourself. In fact, if I were an employer looking at somebody and realized [the student] worked at a hotel or restaurant and at the same time they got this online degree, right there I would be like 'wow, this person must have some serious self-motivation and perseverance.' Maybe seeing what they did, and how they kept at it, sets them up in a way to persevere further in life."

Other hospitality instructors believed online learning was useful to students particularly during their summer internships and while working throughout the academic school year. Reaching students from remote locations was also defined as a useful aspect of this mode of course delivery.

One instructor was ambivalent about the perceived usefulness of time management for students enrolled in online courses. The respondent saw the potential for students to manage time more effectively, especially for those who had multiple

commitments. Even though the respondent acknowledged this potential, there was still apprehension about students' lack of abilities to manage an online course resulting in compromised learning:

“I think it’s useful in terms of time management and in terms of the things they have to balance in their lives. I also think in that same vein, they can then lower the priority of the class because they can do it at various times. I struggle sometimes with the college students’ ability to prioritize the online classes as much as they do face-to-face courses. They think you can do it at 2 in the morning after you’ve been out goofing off with friends. From a student’s perspective, I just don’t know about the quality of learning that occurs online in that situation, compared to face-to-face.”

This was a common concern among instructors averse to online learning that the perception is students can “work in their pajamas,” lessening the rigor of a course. Other instructors who were more favorable toward online learning felt the casual nature of “sitting at home and learning in your pajamas” was actually one of the benefits to this mode of instruction.

4.5.2.2.1 Blended or hybrid courses. While not as interested in full online course delivery, hospitality instructors were more intrigued with discussing blended learning formats. This topic accounted for 82% of the discussion centered on perceived usefulness. Respondents believed blended learning was advantageous over full online instruction due to the benefits of human interaction. A proponent of blended learning explained,

“I think there are times when we need that face-to-face. There are stories I can tell in class that I can’t really tell through the computer. When I tell them face-to-face and drive a point home, I think that’s when I thought I was actually a teacher. I just got some engagement and they’re going to remember that.”

Other participants who preferred blended learning to full online delivery also valued their in-class interactions with students. One instructor described,

“Blended learning is the best of both worlds because you get to see the students in person at least once a week. You do get a sense of who they are. You can put a face with a name. You can also do different things in a classroom that you can’t do online.”

Another hospitality instructor felt the time in-class while in a blended format was more productive and that there was less “wasted time” than in a face-to-face format.

4.5.2.2.2 *A ‘sage on the stage.’* Respondents were polarized when asked about usefulness in terms of teaching style. In one corner were those instructors who enjoyed the theater of teaching to large groups, colloquially referred to as “the sage on the stage.” One hospitality instructor, while vehemently opposed to this style of teaching, praised the potential for learning in an asynchronous online environment,

“The asynchronicity and interactivity of online learning [is useful to students.] The old chalk and talk, sage on the stage, I hate that. I can get up in front of the audience, 100 students, and talk their ear off. But, are they learning anything? No. They’re tolerating me and I’m tolerating them. We are going through the motions. Are we learning? No.”

This view of instructors facilitating student learning online, rather than being the central figure in a hospitality classroom was shared by another respondent,

“I’m not a sage on the stage. That’s not my view of education. It’s not about what I do, it’s about what I can help them [the students] do. So, if you can’t even tell I’m there [online], that’s OK because it’s not about me, it’s about them [the students]. This is not a criticism of my colleagues, but I realize sometimes there are people who want a big lecture format, they like being the sage on the stage. Well, I like it too; I’m a pretty extroverted person. But, when I think about education, that is not the goal.”

Other participants expressed enjoyment and a preference for face-to-face lecture formats and the benefits to reading students' expressions. One respondent thought in-person instruction enhanced student learning objectives and was more useful than a course delivered fully online,

“I feel like my delivery and my ability to add stories to situations when students have question marks in their eyes [is helpful]. I think that one of my strengths as a teacher is the ability to add humor and stories to tie things together. For me, teaching online would be difficult in that I would not be able to see the ‘question marks’ in their [the students’] eyes.”

The polarization of the “sage on the stage” style of teaching compared with the online facilitator approach revealed hospitality instructors have a wide variety of motives for teaching in their chosen format. A few of the respondents characterized themselves as being able to fit into both roles, but chose the facilitating role even when teaching face-to-face courses.

4.5.2.2.3 Tenure. Some hospitality faculty interviewed did not agree online teaching was useful in terms of tenure and promotion within their respective institutions and for some, online teaching was not even part of the criteria for tenure. One instructor cited the lack of feedback in the form of student evaluations as the reason teaching online courses were not counted toward tenure. Conversely, another instructor from a well-established online hospitality program reported how a specialized student evaluation procedure was developed in order to capture students' responses, which could then be used in the tenure appraisal process.

Others expressed how common online teaching was and that it was not a barrier to promotion and tenure. One faculty member who sits on a university tenure and promotion committee expressed,

“When we’re looking at people’s files and they [have taught] online, well, everybody’s teaching online. There’s a tremendous percentage [of instructors] at our university who teach online, so it’s no big deal.”

Several Assistant Professors in this study voiced the importance of generating research and publications toward tenure and felt the time it takes to develop online courses prohibits them from reaching their research goals. One faculty member contemplated generating a research project out of developing an online course, thereby consolidating efforts toward both the teaching and research demands on tenure,

“I would have to somehow figure out a way in my mind, pre- and post-assess [the development of an online course] and turn it into a study. No matter what they say, at a tier-one research university...they could say that teaching counts equally with research and [service]. But the reality is, not all things are created equal.”

Respondents who did not have prior online teaching experience in this study were unsure whether online courses counted toward their tenure goals.

4.5.2.3 Perceived ease of use. Most of the instructors interviewed were well versed with using course management systems (CMS) to augment face-to-face instruction. Therefore, they felt students were also accustomed to navigating the software, indicating ease of use of the CMS. There were, however, a few examples of the intricacies of online teaching and learning that appeared as obstacles for both hospitality instructors and students.

4.5.2.3.1 Online course challenges. Operational challenges in online teaching were the most discussed concerns (31.8%) in the perceived ease of use construct. Respondents in the study were quick to point out the potential for cheating as a major challenge faced by online instructors. One Full Professor with vast online teaching experience reported having to work under the constant assumption that students will cheat during online tests and exams:

“You have to assume they are going to cheat on tests and exams. You’ve got to find a way to minimize that possibility. I’ve talked to a lot of people about how you minimize that possibility and potential for them to cheat. I’ve learned a lot of tricks you know.”

Although this respondent developed strategies for combating online cheating during exams, there was still frustration surrounding students’ abilities to circumvent these measures,

“I have a test bank, so not everybody is getting the same questions. But, what they’ve done, I didn’t realize until this past summer, is after the time expires, the students can see the correct answers. They then print out the entire exam and come to my office to discuss particular questions. So, now they have it [the test bank] and if next semester I use the same test bank, they’ve got it. I didn’t realize they were doing it. There’s no way to control for that and I’ve looked into different ways. If they hit ‘print screen,’ they print it.”

Instructors with no online teaching experience expressed similar concerns about protecting the integrity of a course and ensuring the student enrolled in the course was actually the student who completed the work to earn the grade. The participant illustrated,

“I don’t know if students do it [complete the course work] themselves, or search for the answers online, or something like that. That could be difficult to control. Something I don’t want to see as an instructor. I want to make sure I deliver the content and those ‘A’ students really

deserve an ‘A’ and ‘F’ students really deserve an ‘F.’ I want to be fair and have the same rules apply to everyone based on the learning, not based on how many tricks they [the students] can play.”

4.5.2.3.2 Considerations. The respondents raised several points about special considerations regarding the perceived ease of use of an online course, which was the second most discussed topic under PEU (23.8%). Specific considerations included: a need for academic discussion about online learning in hospitality; factors to understand in the preparation to develop and teach an online course; and various incentives to teach online.

4.5.2.3.3 Academic discussion. Instructors in this study who had substantial online teaching experience expressed a desire to have more frequent discussions about the challenges hospitality instructors faced when teaching online. As eight of the faculty interviews were conducted at ICHRIE, respondents suggested ICHRIE could potentially provide such a forum. One participant explained,

“I would just say that I think we as educators need to have more conversations about online education. I speak from my university perspective within our college, within our department. We need to have more of these conversations about what’s working and what’s not. What should go online, and what should not go online? What faculty should be online? What [courses] could be hybrids? How does technology play into [online learning]? ICHRIE, a professional organization, ought to be having, in addition to the papers or posters people submit, a bigger conversation about [online learning]. We are the Council of Hotel, Restaurant, and Institutional Education, so let us have some bigger conversations about the educational piece. You know, maybe we do a debate, online versus face-to-face education and have people play at the extremes, and then somewhere in the middle, you end up meeting as to when it’s appropriate, when it works, and all of that.”

As a suggestion for finding a hospitality instructor to discuss ideas about online teaching, another participant recommended the network of hospitality instructors at ICHRIE, because “ICHRIE would be a great place to find a mentor, to find someone to talk to [about online learning].”

4.5.2.3.4 Preparation to teach online. When experienced online teaching respondents were asked what they suggested a new online hospitality instructor might do to prepare to teach online, there was substantial advice offered. One faculty member suggested starting from a pedagogical perspective,

“Take some education classes. There’s a lot of research out there about online learning and on ways to do it. So, rather than reinvent the wheel, start doing your lit review and learn from what the people have gone before you have done. Learn what works and what doesn’t work, because otherwise, you’re just doomed to make their mistakes. That would be the first thing I would do if put in that situation. I know that literature is out there. I know there are classes in education and there are professors whose whole area is this stuff. Knock on the door, buy them a cup of coffee and say, “point me in the right direction.”

Another perspective on preparing to teach online for the first time was from an experienced online instructor who said to start small:

“Start small with a class you’re familiar with. Don’t try to use all the tools available to you in whatever platform you’re using. Only use a few of them, you don’t have to use everything. It’s easier to manage and really figure out how many students you should have in this online class. The more students you have in the class, the more discussions you have to read, the more assignments you have to grade. Start with a class you’re familiar with and decide very specifically what you’re going to put online and what makes sense to put online.”

Other hospitality instructors recommended making the online courses more interactive as opposed to only uploading PowerPoint presentations. Making a course interesting for students using the technology was important to this instructor:

“I would say do something different than just post your PowerPoints. Do some video lectures, do some short video clips with discussions or blogs afterward. Use the technology that you have to make a more interactive class. If all you’re doing is putting up PowerPoints and doing a quiz, why not just hand that out to students in person? Why even use online technology? I think you have to be willing to try some different things online.”

For those instructors who never had an online course experience as either a student or an instructor, a seasoned online faculty member made a recommendation,

“Go experience [an online course]. Be a student first, and while you are being a student and maybe teaching another course on campus, every day you have a class, after your class, go take about 15 minutes and write down notes of how you think you would get that subject matter across online. When you give an assessment think about how you could affect the learning other than a paper and pencil test. Spend that semester really trying to make use of the new knowledge you are learning and the old knowledge that you already have on the subject matter and start to marry them.”

Another experienced online instructor concurred with gaining some experience prior to teaching, but added the importance of taking the time to build an online course for the first time:

“It’s something that should not be rushed in terms of putting a class together because it does take time to make sure it’s cohesive before you ever agree to offer [the online course]. I think some professors start to build the class as they’re actually teaching it online and it becomes a huge mess because they run out of time and students want to work ahead and [the instructor] is not ready. Then, they end up having to mess around with how they’re doing their grading and then it becomes really sloppy. The other thing is that some people put classes online and they really have no idea as to what they’re doing. They should take an online course themselves, or take a course about how to teach online. I think it’s helpful to get with somebody else who has students in a class to see how somebody else does it.”

A respondent with full online and blended teaching experience underscored the idea of taking time to develop a good online course for the sake of the students:

“Invest the time. I think the perception is that if it’s online, you can do it in your pajamas. Yes, you can do it in your pajamas, but you have to put a lot of time and effort into it and think through the whole process: the beginning, the middle, and the end. What’s the whole end product? What’s the outcome? What’s the value to the student when they’re done? You can’t just slap up your PowerPoints and expect the [students] to do well.”

The overarching concern among the respondents was not only to take time to develop an online course, but also to seek out help and experience an online course, especially for those instructors who had never taught or taken an online course.

4.5.2.3.5 Incentives. Participants reported when they first began teaching online in years prior, institutions offered cash incentives to promote the growth of an online program. According to the majority of respondents, these types of cash incentives diminished due to decreased state and federal funding. Over time, the participants resolved to view “time” as an incentive to teach online. In other words, instructors increasingly viewed preparation time in the form of course buy-outs as compensation to develop an online class. One participant with only blended teaching experience expected compensation in forms other than time,

“If somebody were to ask me to develop [an online course], I would ask about what I call ‘the 4 T’s.’ Do I have the time, are you going to give me the time to do this and do it well? Do I have the tools? Are you going to upgrade my computer and my Internet access? Do you need to buy me software, or are you going to support that? Finally, do I have the talent, and if not, do I get the training to build up that talent? I’m going to ask these 4 T’s and if the answer is no, no, no, no, then I’d rather not do it. So, in my mind, I’m looking for some sort of compensation. I don’t like to do things that are set up to fail. Give me the tools, give me the time. Time would probably be the best compensation because I’ll spend hours on that type of thing. If you’re expecting me to do my normal course load on top of that, then I’ll be a very grumpy instructor by the end of the semester. But, I’ll do it.”

4.3.2.3.6 Training. The third-most discussed theme under perceived ease of use (19.3%) was the issue of training. Respondents' answers varied when asked whether training was required prior to teaching online. Two instructors spoke about very rigorous training certifications offered at the university level which was required before being permitted to teach either a blended or a full online course within their departments. One respondent reported a bottleneck in the prerequisite online training and the inability of the university to provide the training fast enough to satisfy demand. The remainder of respondents reported training opportunities were not subsidized by the university or department, but were available through the university's faculty development programs.

4.3.2.3.7 Online teaching benefits. Respondents were asked about the benefits to online teaching in terms of ease of use which was the fourth most cited theme (10.3%). Most discussed the benefit of flexibility for both instructors and students. One instructor stated the CMS was easy to use and accessible, making students who worked during their program of study more inclined to participate in this method of instruction. This instructor reported flexibility of online learning enabled students to work and earn money while completing a degree.

An unexpected benefit of online learning reported by one experienced instructor was that it was an "individualized" type of learning and the instructor felt stronger communication with students,

"I love teaching online. The funny thing is I know that there are different communication models and some people say you can't communicate well online. There are other people who say that

[communication with students] takes a bit longer and that it requires more effort. I happen to believe in the second one. Actually, I feel like sometimes I really know my students. I may not know what kind of employee they will be, but I really know what kind of student they are, because it's very individual online. You really know what someone's work is like."

Another respondent who had significant online teaching experience voiced a similar opinion about developing professional relationships with students online as well as becoming a mentor,

"I actually believe that I get to know my students more individually online. I may not know their face or their personality as they come across face-to-face, but I do believe that I get to know them more individually. I have students come back to me frequently, not only graduate but undergraduate [students], who have [taken my online course] that understand I believe in mentoring students. I'm able to do that online."

Conversely, those respondents who had fewer or no online teaching experiences, expressed concern over not being able to know students better in an online format compared to a face-to-face course. One such participant preferred the personalized interaction that occurs face-to-face:

"I feel like I get better interaction with my students in the classroom. I get to know them better. Part of it is that I see them and so I recognize them in the hallway. I know who they are. They have more of a tendency if I'm right there to come up and talk to me about their internship, their new dog, or something. Whereas in the online courses, yes, I have plenty of interaction with my students, but I find that I don't have that extracurricular interaction. All the interaction I have with [online students] is 100% related to the course and not to anything else related to their lives."

Having limited online teaching experience justified this common concern among similar respondents, as they could not envision the potential of developing more individualized relationships with students.

4.5.2.3.8 Course management system (CMS). Although most respondents felt their CMSs were excellent, many reported obstacles associated with the CMS that translated into difficulty of use with the system. Although lower in frequency to the other themes from PEU (9.4%), the CMS was a well-mentioned concern.

Four instructors in this study were in the process of transferring into new CMSs as delegated by their institutions. The time dedicated to transferring existing content to a new format required a steep learning curve for many of the instructors. One faculty member mentioned, “Technology changes so quick and if the faculty don’t have the time for just getting cursory instruction, it leads to a lot of frustration.” This view coincided with other respondents’ perspectives in the study. Another instructor who had taught over 10 years online, has experienced first-hand the rapid changes in technology,

“I’m not a ‘techie’ person. I am a user of technology, not a fixer of technology. That’s why it’s frustrating to me. I’ve learned all I’ve been able to do. I was very surprised how I was able to go in and fix a lot of problems. To be able to go in and fix an exam a student couldn’t get into the first time; little things like that I struggled through and I figured out. There’s no new instruction manual as all the upgrades come along. You just got to hunker through it and figure it out for yourself.”

4.5.2.3.9 Tech support. Associated with challenges of the CMS, overall, the respondents reported positive feedback about their interactions with their respective tech support personnel. The tech support emergent theme was the lowest frequency under PEU (5.4%), but an important topic to consider as faculty reported the importance of good tech support for both students and instructors.

Two respondents who came from well-supported online programs reported the benefit of an instructional designer, in addition to tech support. One instructor stated,

“My instructional designer is the guy that I’ll send my documents to and he’ll format them the right way. When I have tests and quizzes, I send those to him and he uploads them. The tech people come in, for example, when a student says to me, ‘I’m having trouble getting into the class’ and they don’t know why. I see that they’re registered in the class and there’s no reason they shouldn’t be able to see it. They call tech support and it may be their browser, or it may be who knows what. I kept getting system error messages constantly. So I would ask my instructional designer, and he would say ‘I don’t know why you’d be getting that.’ He would say to talk to the tech people.”

The remaining instructors in the study reported mostly positive interactions with tech support, adding in general they were “fast, attentive, quick to fix problems,” and that they want instructors to succeed in their online courses.

4.5.2.4 Intention to teach an online course. Regardless of whether the respondents had significant online teaching experience or none, when asked about their intentions to teach an online course, eight instructors said they would only like to teach in a blended format in the future. One instructor who had more full online teaching experience and was relatively new to the blended format answered,

“Hybrid, yes. I like having some face-to-face. I have students who have graduated and I’ll run into them. They say they took my class online and I have no idea who they are. I hate that.”

Citing personal interactions as an important practice in the hospitality field; one instructor said,

“I do struggle with the full online [courses]. I would not want to have a student go through our program and not be interacting in different ways. At work in our industry, they are going to be interacting with people. You can only do so much with technology. In a way, technology has taken us away from the core essence of what we are in

hospitality. I guess I personally would not want to teach, unless someone forced me to, a fully online course.”

The concept that hospitality as a service industry would be taught better using blended instruction rather than full online modes was one that was held across all demographics of hospitality respondents in this study. Even seasoned full online instructors reported, “not all hospitality classes are meant to be online.”

4.6 Discussion

The emergent theme within the entirety of this study was the preference for teaching blended courses, whether respondents had previous online teaching experience or not. Several factors contributed to this preference, and none were consistent across genders, rank, generation, or online teaching experience. Hospitality faculty’s predilection for a hybrid learning model were based on factors both experienced and perceived, meaning some instructors who had significant experience teaching online still preferred a blended model. Other respondents with less online teaching experience viewed blended learning as a less threatening alternative to course delivery than the full online mode. One argument in support of the blended model was the personal interaction hospitality faculty wanted with students, both in terms of personal preference and alignment with the discipline, which is responsible for teaching customer service, a critical industry component.

In this study using questions built around the constructs in the TAM2 model, hospitality instructors’ intentions to teach a blended course were not empirically measured, but rather their perceptions of the constructs were interwoven throughout factors along the model. A model was generated in the MAXQDA 11 software

examining the relationships between the codes activating all transcripts (see Figure 11).

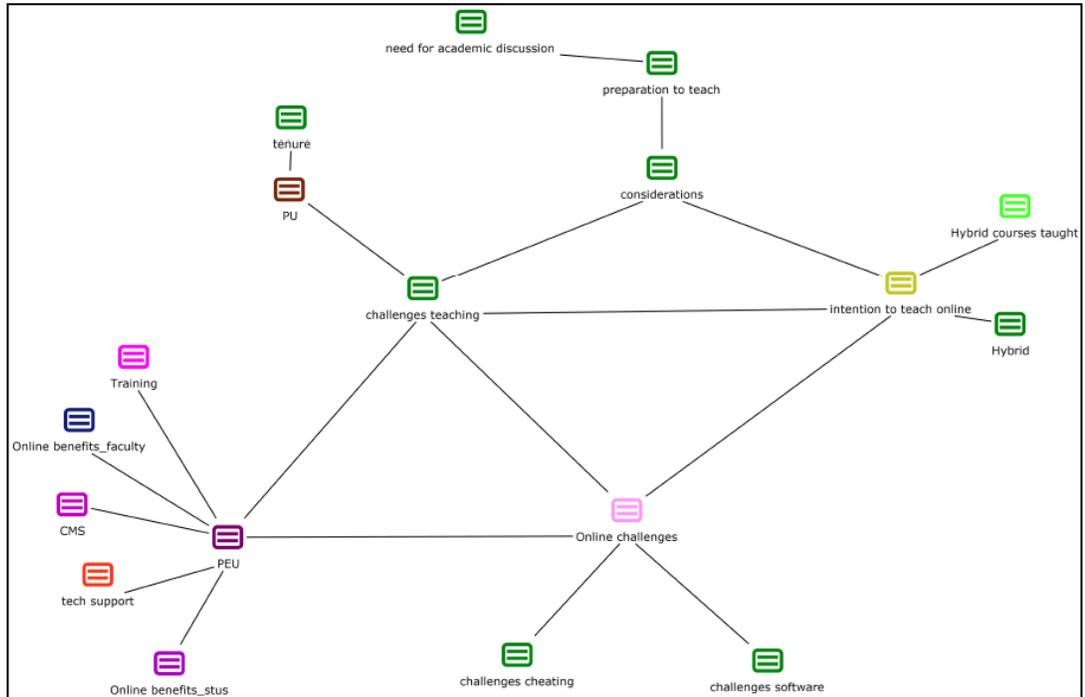


Figure 11. Emergent themes along the TAM2 model predicting hospitality faculty intentions to teach an online course.

The typical TAM2 model predicts a user’s intention of a technology based on perceived ease of use (PEU) and perceived usefulness (PU). Subjective norms are predictors of PU; however in this qualitative study, other themes emerged as predictors and mediators of the constructs in the model. For example, PEU was influenced by training, online benefits cited for both faculty and students, the CMS, and tech support. Usually, PEU predicts PU, but in this model online teaching challenges (i.e. protecting the integrity of the course) was a mediator between PEU and PU. This suggests that although an instructor may find a system easy to use, they

may not find it useful if it compromises the integrity of the subject matter of the course.

Perceived usefulness (PU) in the model was influenced by tenure, which was a shared concern among many respondents in the study. PU typically predicts intention to use, but in this model, PU was mediated by teaching challenges and considerations. All the ways students could cheat while enrolled in an online course characterized the mediator “teaching challenges.” Consequently, if a hospitality instructor found a system useful, but was concerned about the variety of ways students could cheat, the instructor’s intention to teach an online course was affected to the extent of the concern.

General considerations, such as preparations recommended prior to teaching and the need for academic discussion about online learning, all mediated the relationship between an instructor’s PU and their intention to teach online. If these considerations overwhelmed an instructor and were coupled with teaching challenges mentioned above, a novice instructor might quickly become discouraged from teaching online.

The path from PEU to intention was mediated in this model by challenges associated with cheating and software challenges. Therefore, if an instructor thought a system was easy to use, but was not trained to harness the safeguards to prevent cheating within the system, the instructor may not intend to teach online. Similarly, if the system was perceived as easy to use, but challenges with new software emerged as reported in this study, an instructor may not choose to teach online.

Finally, the intention to use construct was characterized by blended or hybrid courses, meaning instructors were more open to teaching hybrid courses over full online courses. This finding was supported by the personal service orientation in the hospitality discipline, as discussed by novice and experienced online instructors. The finding that hospitality instructors are more interested in teaching a blended course than a full online course is telling in that hospitality instructors are aware of the imminent changes in the nature of hospitality education. Eighty percent (80%) of hospitality faculty in a recent study of perceptions of online learning believed within 5 years the majority of all higher education students will be taking at least one online course (Sciarini, Beck, & Seaman, 2012). If this statistic is accurate, this may be the impetus for teaching using a blended model, as a way to transition into full online course delivery in the future.

4.7 Conclusion

It is not surprising that hospitality faculty would have a preference for blended learning over full online course instruction. First, the hospitality discipline in higher education is historically slow to adapt new technologies (Sigala, 2002) and even if instructors are fully aware of the increase in demand for online instruction, the logic in choosing a blended model of instruction bridges their trepidation to their keen awareness of changes in the future. The command of personal and gracious communications critical to the hospitality industry was also rationalized as justification for the preferred blended model. This concern might be shared among

many other service-oriented disciplines, such as those in business, retailing, banking, and education.

This view supports a current trend in higher education which highlights the value of a flipped course. A flipped course has been defined as similar to a blended model, but more specific in terms of learning pedagogies. In a flipped course, students review content on their own time, mostly online, in the form of instructional videos, PowerPoint slides, and discussion blogs (Bergmann & Sams, 2012). Class time is then spent on active learning techniques where students may or may not work in groups to solve problems and complete case studies (Bergmann & Sams, 2012). The important concept in a flipped course and the reason for its name is that students work on the traditional “in class” components of the course at home and do their “homework” in class, hence the name “flipped course” (Bergmann & Sams, 2012).

The blended or flipped course model could exploit the inter-personal communication objective in a hospitality curriculum by having students learn critical concepts at home and work on real-life case studies, re-enactments, and other modes of active learning instructional techniques during class time. Although not mentioned by any of the respondents in this study, the trend toward full online models is a concern among faculty in higher education who fear the extinction of face-to-face courses along with their jobs. Flipped courses provide a way to bring value to an institution by offering the benefits of an online format, supplemented by interpersonal active learning techniques prized in the hospitality industry.

The original intent of this study was to examine more closely the major constructs within the Technology Acceptance Model 2 (TAM2), including subjective norms. When respondents were asked about the effects of their students, colleagues, and chair on their intention to teach an online course, there was a mixed set of responses. The majority of instructors who felt they were influenced by students were those faculty who had a significant amount of online teaching experience and were well known among the student body in their respective institutions. It seems fitting students who would inquire about bringing more courses online would do so with faculty known for teaching using this medium.

The majority of respondents who cited colleague influences spoke about the convenience of online learning and how their colleagues enjoyed the ability to teach from multiple locations, even while abroad conducting research. For some respondents, this notion was not appealing enough to embark upon the development of an online course. For others, it was enticing enough to contemplate implementing a blended version of a current face-to-face course.

Consistent with TAM literature, chair or supervisor influences had the most impact on respondents, even for those who had no interest in online learning. This finding supports prior TAM research examining intention to use in a mandatory setting (Taylor & Todd, 1995; Venkatesh & Davis, 2000). One respondent reported during the interview that even though she did not subscribe to full online course delivery and was opposed to this form of instruction in a hospitality program, she was still obligated to develop and teach an online course. Presumably, because this was

not consistent with her philosophy about hospitality management education, it can only be assumed she was being “asked” to teach an online course from a superior.

Online learning, particularly within the hospitality discipline, is currently in a state of flux. Hospitality management programs are particularly apprehensive about course quality (Sciarini, Beck, & Seaman, 2012) due largely to the personal nature of the business. At the same time, the vast majority of hospitality instructors acknowledge the importance of online education and the impending role it will have in the future of higher education (Sciarini, Beck, & Seaman, 2012).

This is a critical time for hospitality program administrators and chairs. Institutional pressures to grow programs with limited funding and physical space make online learning more appealing as a strategy to increase enrollment. The challenge for administrators and chairs will be to motivate and educate hospitality instructors about this form of instruction. Strategies to support hospitality faculty include: providing a mentor with significant online teaching experience; seeking assistance from faculty development centers to provide course management software training; clearly outlining expectations as they relate to the tenure and promotion process; addressing concerns and administering strategies to combat cheating in online courses; and finally, perhaps easing faculty into blended learning models as a way of transitioning to full online course delivery in the future. To quell concerns faculty may have about online course quality compared to face-to-face instruction, hospitality instructors may be well advised to enroll as students in well-taught, successful online courses throughout the institution, thus learning first-hand how a good online class is

conducted. In addition, specific benchmarks measuring student satisfaction in online courses within individual institutions could be developed.

4.8 Limitations and Future Research

In this study, self-selection bias was a natural limitation because those hospitality instructors who were interested in speaking about online learning responded positively to the invitation to participate in the qualitative interviews. Future research might include a methodology for collecting data that is more random in nature. For example, instead of contacting hospitality professors in advance, a researcher might choose to randomly select instructors in a hospitality conference environment and approach potential respondents during breaks to collect the data. This study could also be conducted using online open-ended surveys or a quantitative questionnaire to attract a wider sample.

Relevant to qualitative interviews, interviewer bias was a limitation due to the interplay between the interviewer and the respondents (Zikmund, 2003). In face-to-face interviews, facial expressions, voice, and tone can impact the answers of a respondent, thus threatening the validity of the study. Future research might consider conducting interviews by phone to avoid inadvertent cues from body language.

Any qualitative research is threatened by the interpretation of the researcher. In this study, to ensure accuracy in the interviews, the transcripts were returned to the respondents to triangulate the data. Coding of the manuscripts followed rigorous standards and was left to the interpretation of the primary researcher. Future research should include one to two other researchers to corroborate and triangulate the findings.

The generalizability of the findings was a limitation in this study (Gall, Gall, & Borg, 2007) in that only 10 respondents were interviewed. Potentially, these participants were representative of a minority of instructors in the discipline and therefore could not illustrate the opinions of a larger population. Future research should seek to gain access to instructors who are not members of ICHRIE, but who teach in hospitality management programs.

This was the first qualitative study conducted by the researcher and as such, this was a major limitation. Qualitative research is highly labor-intensive by nature and requires highly developed language skills to command the constructs under investigation (Gall, Gall, & Borg, 2007). Future research should employ qualitative researchers who have experience identifying major themes and emergent patterns in the verbal data.

The original intent of this study was to examine hospitality instructors' perceptions of online learning as it pertained to TAM2 and full online course delivery; however, after the data were analyzed, it became clear a preference for a blended learning model emerged. This qualitative study was an investigation preceding a quantitative study designed specifically to test TAM2. It became immediately apparent, following the interviews that the empirical study would be inclusive of blended and full online learning models. Thus, revisions were made to the quantitative survey instrument for the faculty study which followed. Future research should more narrowly focus on the intentions of hospitality faculty to teach a blended learning model along with perceived barriers to teach in this mode of instruction.

Additionally, the emphasis on the service component of the hospitality industry, directing a preference for blended learning, should be explored more thoroughly. This notion would be helpful to a variety of service-based disciplines. Future research should investigate this phenomenon quantitatively with a specific focus on blended learning and full online course delivery, as well as a comparison of the two models.

CHAPTER V - ARTICLE TWO

IMPACT OF SUBJECTIVE NORMS ON HOSPITALITY INSTRUCTORS' INTENTIONS TO TEACH ONLINE COURSES

5.1 Abstract

The rapid growth of online learning in higher education is met with varying degrees of acceptance among faculty and administrators. Although hospitality management instructors recognize the prominence of online learning as the future of higher education, their current apprehensions may hinder institutional strategic objectives. This study examined hospitality instructors' intentions to teach a blended or full online course using TAM2 by deconstructing the subjective norm construct into student, colleague, and department chair influences. The findings from this research will be useful to program administrators who seek to encourage hospitality faculty to teach online courses.

5.2 Introduction

Online learning in higher education has undergone dramatic growth in recent years (Allen & Seaman, 2010). In 2010, one million more students were enrolled in higher education online courses than in the previous year (Allen & Seaman, 2010). Research regarding online course delivery clearly supports the trend toward increasing student enrollments and the rising popularity of this mode of instruction. Strategic objectives also lend credence to online learning, as 63% of institutions participating in a recent survey agreed online course offerings were an integral component to long-term growth (Allen & Seaman, 2010). By contrast, in the same study, isolating

responses specifically from hospitality management programs, only 44.3% stated online learning was a vital part of long-term strategic planning (Sciarini, Bech, & Seaman, 2010).

Hospitality management programs have been historically slow to adopt new teaching formats (Sigala & Baum, 2003). Consistent with previous findings, hospitality instructors are not alone in this predicament, as faculty from other disciplines also exhibit a reluctance to embrace online teaching technologies (Allen & Seaman, 2010). However, concerns are rising about increased student enrollments coinciding with decreased state and federal funding. The advantages in creating distance-learning opportunities are abundant. Some of the most prevalent reasons for implementing online education includes scheduling flexibility for working and nontraditional students (Miller & Lu, 2003) and the ability to circumvent physical space limitations on campus while creating opportunities for increased course enrollments (Blumenstyk, 2012). Leveraging distance learning has also proven to be an excellent revenue generator and profit source for some institutions (Blumenstyk, 2012).

Research demonstrates a trend toward more students working while pursuing post-secondary degrees. In 2010, 40% of full-time and 73% of part-time undergraduate students worked while attending college (Institute of Education Sciences, 2012). The rigors of employment have resulted in online learning opportunities being particularly appealing to students as these types of courses offer greater schedule flexibility. This is particularly beneficial for nontraditional students,

as it allows them to balance work and family while achieving necessary program objectives (Gibson, Tesone, Hodgetts, & Blackwell, 2001). Due to the 24/7 nature of the hospitality industry, professional adult students working in these positions typically do not have friendly work schedules which permit them to participate in formal learning environments, making online learning opportunities especially attractive (Tesone, Alexakis, & Wayne, 2003). Similarly, students employed in mandatory hospitality internships may elect to enroll in online courses allowing them to make progress toward degree completion while simultaneously fulfilling their internship obligations.

5.3 Literature Review

5.3.1 Online hospitality education. While there is a large body of research examining online education, this phenomenon is grossly under-investigated with regard to hospitality higher education. To date, only one researcher has examined online learning in hospitality, but from a user satisfaction perspective (Song, 2010). According to Mejia (2013, Dissertation Article 1), hospitality instructors have expressed concerns about the appropriateness of teaching a service-based discipline online due to the importance of teaching students customer relations skills crucial to the industry. The interdisciplinary component of a hospitality management program supports experiential learning, evidenced in hospitality faculty's preference for a blended learning model (Mejia, 2013, Dissertation Article 1). However, some hospitality faculty have conceded that general survey courses are suitable for online formats (Mejia, 2013, Dissertation Article 1). Regardless, as institutional strategic

initiatives put pressure on programs to increase enrollment, hospitality administrators might be persuaded to adopt online learning more readily to meet program needs.

5.3.2 Faculty concerns. Although student satisfaction is a factor in determining the success or failure of an online course, it is primarily faculty acceptance and attitudes that dictate the overall success of an online program (Wilson & Stacey, 2004; Green, Alejandro, & Brown, 2009; Sloan Consortium Survey Report, 2009). Adoption of this mode of delivery is challenging and faculty have expressed concerns over a variety of issues including low course quality (Allen, Seaman, Lederman, & Jaschik, 2012) and issues with compensation (Berge & Muilenberg, 2001; Porter, 2003; Orr, Williams, & Pennington, 2009). In general, faculty in higher education have expressed negative views over the quality of online teaching and 66% believe it is inferior to face-to-face instruction (Allen et al., 2012). Compensation has also become a contentious issue as faculty often dislike or do not have the additional time needed to develop an online course (Allen et al., 2012) and believe they should receive additional stipends for course development while retaining intellectual property rights (Berge & Muilenberg, 2001; Porter, 2003; Orr, Williams, & Pennington, 2009).

Hospitality faculty have also expressed concerns about online learning in general. In a recent study about online learning in hospitality management programs, only 29% of faculty reported favorable opinions about this mode of instruction (Sciarini, Beck, & Seaman, 2012). Conversely, in the same study, 80% of respondents believed that within 5 years, the majority of all higher education students will be

taking at least one online course (Sciarini, Beck, & Seaman, 2012). It is evident that although hospitality faculty have adverse opinions about online instruction in general, they overwhelmingly agree this form of course delivery is becoming more prevalent.

5.3.3 Experiential learning. Due to the strong recommendations of recruiters, experiential learning (or active learning) has become a critical component in hospitality curricula in the United States (Dickerson, 2009). Built upon the belief that an effective manager needs practical experience (Baum, 1988), hospitality programs have incorporated work experience into the course of study (Leslie, 1994). As a result, most hospitality management programs have added a required experiential learning element (Girard, 1999). Previous research about the benefits of experiential learning revealed students who engage in these opportunities are better equipped for employment in the industry (Van Hoof, 2000). Courses employing experiential learning facilitate moral development, leadership skills, and a respect for diversity (Eyler & Giles, 1999).

The vocational nature of hospitality education (Barron & Anastasiadou, 2009) supports experiential learning, both in and out of the classroom. In-class experiential learning, or active learning, includes simulated experiences, computer-based games, student-run restaurants, critical incidents, action research, small group problem solving and case studies (Harrington, Ogbeide, & Ottenbacher, 2010). Research on active learning in the hospitality management curriculum concluded it contributed to critical thinking and problem solving, as well as prepared students for their future jobs (Sivan, Leung, Woon, & Kember, 2000).

Active learning has been found to be more suitable for achieving the higher levels of complex learning (Lovell-Troy, 1989). In hospitality education, the use of memorization of facts has been discouraged as a teaching practice, replaced instead by methods that encourage the development of personal and intellectual skills (Sivan, Leung, Gow, & Kember, 1991). Many educators subscribe to the belief that hospitality students should be supported in finding their own conclusions through investigations into the industry. This encourages hospitality students to become more active participants, taking more responsibility for their learning (Sivan et al., 1991).

Experiential learning outside the classroom most often refers to internship programs typically promoted by either the program or the institution. Hospitality internships may also be referred to as student work experience, placements, cooperative education, experiential education, or work-integration education (Tse, 2010). These types of practical, applied student experiences are valuable as they provide students the opportunity to put into practice what they have learned in the classroom (Tse, 2010). Internships are critical to hospitality education because they permit students the opportunity to develop practical skills, such as working with customers, learning new technology applications, and incorporating operational procedures (Petrillose & Montgomery, 1998). In addition, students gain valuable insight into customer-employee interactions, both through observation and by taking part in supervisory and management functions (Petrillose & Montgomery, 1998). More importantly, students who are able to complete online courses while working

during their internships are at an advantage compared to those without online opportunities.

5.3.4 Working students. In recent years, the number of undergraduate students employed in part or full-time work has increased. In 2010, 40% of full-time and 73% of part-time undergraduate students worked (Institute of Education Sciences, 2012). Seeking to augment student loans to pay for tuition, students often hold some form of part-time employment to pay for other necessities and generate spending money for social activities (Barron & Anastasiadou, 2009). This practice bodes well for the hospitality industry which requires flexible and inexpensive labor to sustain business operations (Curtis & Lucas, 2001) while simultaneously permitting hospitality students to gain valuable personal and career development (Barron & Anastasiadou, 2009). Furthermore, consistent part-time work, as opposed to sporadic summer jobs, has been found to support the student financially while enhancing career opportunities (Curtis & Lucas, 2001).

Unfortunately, when working, students pay a price, which may be reflected in their transcripts. Studies have shown students who work often have less time to study than those students who remain unemployed throughout their college career (Manthei & Gilmore, 2005). In addition, working part-time can have a negative effect on students' physical and mental health while enrolled in a full time undergraduate program (Carney, McNeish, & McColl, 2005). Working has been found to promote absenteeism in the form of subpar class attendance, as students who work part-time have been found to miss lectures on a regular basis (Curtis & Shani, 2002).

Studies have demonstrated students, industry, and the institution can all benefit from supporting students who work part-time while enrolled in an undergraduate program. Work experience, internship, and recruitment offices within institutions often act as a broker or intermediary between the student and the employer (Barron & Anastasiadou, 2009) as well as protecting students from working excessively.

Research shows institutions are more understanding of students working part-time while in school (Barron & Anastasiadou, 2009). Institutional initiatives to assist working students could include sympathetic faculty and more flexible course schedule offerings (Barron & Anastasiadou, 2009). Other flexible educational options include decreasing the number of subjects studied, offering various modes of course delivery (i.e. blended or full online course delivery), and altering assessment methods (Barron & Anastasiadou, 2009).

5.3.5 Nontraditional students. The total college enrollment in the United States is predicted to increase 13% from 2009 to 2020 (Institute of Education Sciences, 2011). A significant impetus behind this growth is the return of many nontraditional students, those individuals between 25 and 34 years of age, to higher education. This demographic is expected to increase by 21% during the next decade (Institute of Education Sciences, 2011). Though nontraditional students are often characterized as those older than the typical college age, i.e. 18-24, nontraditional learners also include adults from multiethnic backgrounds, first generation college students, individuals from low socio-economic circumstances, and those with families and jobs (Miller & Lu, 2003). These students are increasing in number and often have

difficulty graduating due to personal and professional conflicts with school.

Nontraditional students also tend to be enrolled part-time and view the college degree as a necessary career credential (Miller & Lu, 2003). Institutions of higher learning stand to lose revenues by not supporting nontraditional student enrollment (Miller & Lu, 2003). In addition, loss of nontraditional students equates to disrupted learning and a failure on the part of the institution in terms of student retention and satisfaction (Miller & Lu, 2003).

Recessionary times and the nature of a changing workforce are prompting nontraditional students to pursue terminal degrees in higher education (Supiano, 2010). Pennsylvania State University has formed a strategic plan to both recruit and retain nontraditional students (Hoover, 2010). Penn State predicates this action upon the belief that the needs of nontraditional students vary and there is no “one size fits all” approach (Hoover, 2010). Based on the feedback of former nontraditional students, Penn State implemented accelerated programs, better access to financial aid, and increased blended and full online course offerings to serve the needs of these students (Hoover, 2010). The flexibility of distance education programs is a major proponent for encouraging Americans with family and work obligations to continue post-secondary degrees (Kolowich, 2010).

5.3.6 Technology Acceptance Model 2 (TAM2). Since it was initially proposed in 1989, TAM has undergone several iterations improving the model by adding determinants to user intention. The second iteration of TAM (TAM2) included the subjective norm construct, which is the belief that a person’s behavior will be

influenced by the way they believe others will view them after having used the technology in question (Venkatesh, Morris, Davis, & Davis, 2003).

In 2000, Venkatesh and Davis extended TAM to include several other antecedents to perceived usefulness (PU) (see Figure 12), which provided more detailed explanations as to why consumers would find a system useful (Chuttur, 2009; Venkatesh & Davis, 2000; Venkatesh et al., 2003; Venkatesh & Bala, 2008). The Technology Acceptance Model 2 (TAM2) included new variables: subjective norm, image, job relevance, output quality, and result demonstrability. These variables were added to improve the original TAM via the PU construct and increase the variance explained (Venkatesh & Davis, 2000).

Seeking to assist organizations widely invested in information technologies, Venkatesh and Davis (2000) grew increasingly concerned with the inability of those organizations to recognize a return on investment, as evidenced by low system usage. In an effort to pinpoint the exact mode of entry into TAM to employ training interventions, researchers set out to expand the original TAM to include several other determinants to PU. Considering the vast body of research confirming PEU and its mediating effect on PU, Venkatesh and Davis (2000) further explored conditions surrounding PU and proposed that all things being equal, the easier a system is to use, the more useful it would be (Venkatesh & Davis).

Although a vast array of empirical TAM studies ensured PU was a strong predictor of intention to use, Venkatesh and Davis (2000) still felt the determinants of PU were overlooked. Due to rapidly changing technologies and the increasing

familiarity of systems and their use, Venkatesh and Davis (2000) worked to improve the model and developed TAM2 (see Figure 12).

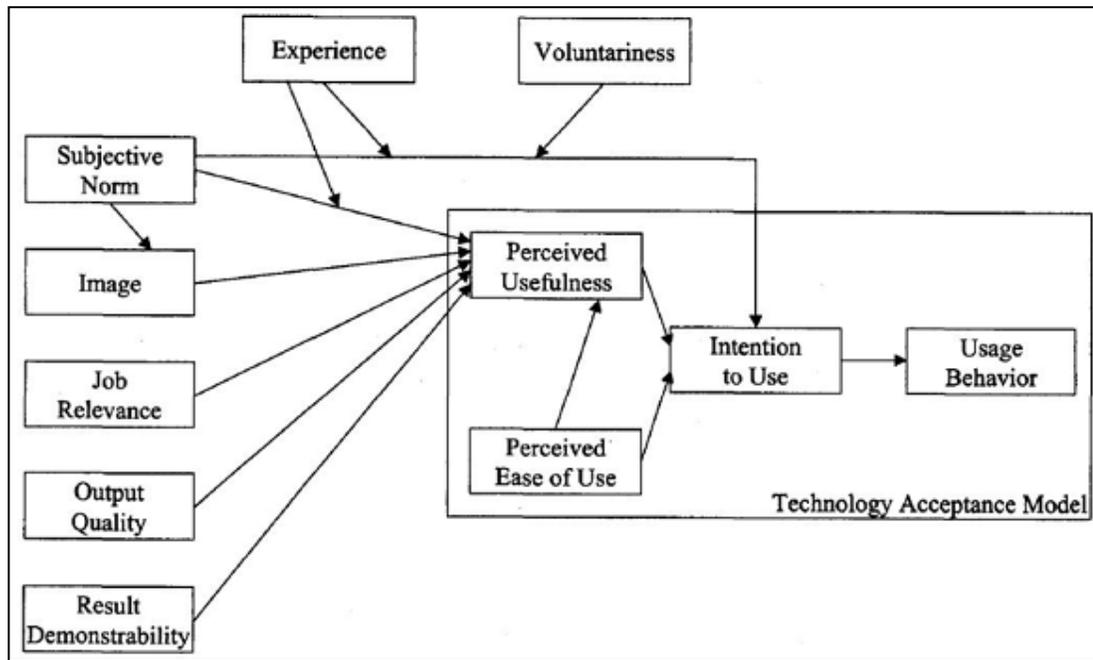


Figure 12. The Technology Acceptance Model 2 (TAM2) (Venkatesh & Davis, 2000).

5.3.6.1 Subjective norm. TAM2 introduced several new determinants: subjective norm, image, job relevance, output quality, result demonstrability, experience, and voluntariness. For the purposes of this dissertation, only the constructs of subjective norm, voluntariness and image were examined. According to Fishbein and Ajzen (1975), subjective norm is defined as a person's belief that most people who are important to him think he should or should not perform a behavior in question. Subjective norm was a predictor of intention in the TRA model (Fishbein & Ajzen, 1975), the predecessor to TAM. However, Davis (1989) removed the construct from the model because subjective norm had no significant effect on predicting

intention in TAM in mandatory settings. Mathieson (1991) concurred in his research and reported no significance of subjective norm, while Taylor and Todd (1995) later found a significant effect on intention.

The major point of contention in keeping or dropping subjective norm from the model, which is still ongoing today, was whether or not the users of the system were in voluntary or mandatory settings (Hartwick & Barki, 1994). Venkatesh and Davis (2000) affirmed the compliance effect of subjective norm on intention occurs whenever an individual perceives that a social actor wants him or her to perform a certain behavior, and the social actor has the ability to reward the behavior or punish non-behavior (French & Raven, 1959; Kelman, 1958; Warshaw, 1980 in Venkatesh & Davis, 2000). The early hypothesis of TAM2 included the belief that subjective norm would only have a significant effect on PU in mandatory settings. However, even within the confines of mandatory usage of the system, there existed varying degrees of user intentions (Hartwick & Barki, 1994).

To deepen the investigation of subject norm, Venkatesh and Davis (2000) included the theories of internalization and identification to differentiate subtleties within subjective norm. Internalization is defined as a cognitive process that occurs when an individual perceives a referent, i.e. important person, thinks he should use a system, causing that individual to incorporate the referent's belief into his or her own belief structure (Kelman, 1958 and Warshaw, 1980 in Venkatesh & Davis, 2000). Schepers and Wetzels (2007) defined internalization in the context of subjective norm more simply as the human tendency to interpret information from referent others as

evidence about reality. Internalization was described by Venkatesh and Davis (2000) as a more loosely fitting social influence that had an indirect effect on intention through PU, as opposed to a direct compliance effect on intention. These two categories of social norm, internalization and mandatory compliance, were predicted to coexist, and therefore, testing within voluntary settings could be possible with TAM2, as it included the mediating effect of voluntariness.

TAM2 introduced the mediating effect of image, or identification, between subjective norm and PU. Image is defined as the degree to which use of an innovation is perceived to enhance a person's status in the system (Moore & Benbasat, 1991). Image was hypothesized to occur in both voluntary and mandatory settings.

5.3.6.1.1 Empirical validation of subjective norm as a determinant to PU.

The problem of underutilization of new and expensive IT systems continued to be an increasing concern among business organizations and IT researchers. Considered a high-priority research topic, Venkatesh and Davis (2000) were committed to investigating training interventions more thoroughly for new computer systems in business environments. Working with TAM as the tested and validated model for determining user acceptance, Venkatesh and Davis (2000) developed TAM2 which incorporated social influences (subjective norm, voluntariness, and image) and cognitive processes (job relevance, output quality, result demonstrability, and PEU). As the purpose of this dissertation was to examine the impacts of subjective norm on intention to use, the following experiments will be discussed only in terms of the results of subjective norm, voluntariness, and image.

The extension of TAM2 was tested over four longitudinal studies of four different systems, across four separate organizations, each implementing a new system: two in voluntary settings and two mandatory settings. Subjects from each of the four studies received questionnaires at three different times during the research: after the initial informational training, one month after implementation, and three months after implementation.

The first study consisted of 48 participants in a manufacturing firm where a new system was launched in a voluntary setting. The second study, also utilizing a voluntary setting with a new system, contained 50 participants in a personal financial services firm. The third and fourth studies included users in a new systems launch, both in mandatory settings. Study three was comprised of 51 participants in an accounting firm, and the fourth study consisted of 51 participants in an international investment banking firm.

The measurement scales for the four experiments were previously validated from prior TAM research. PU, PEU, and intention to use were adapted from the work of Davis (1989). Subjective norm measurement was borrowed from Taylor and Todd (1995), while measures of result demonstrability and image were adapted from Moore and Benbasat (1991).

Procedurally, the four groups each received specific training pertaining to their individual systems. While this training differed across groups, the process for questionnaire deployment was the same. After each group received the training, the participants filled out an online questionnaire regarding the new system. One month

and again three months after implementation, the participants received the questionnaires in hard copy and were asked about user reactions and self-reported usage of the system. At the five-month mark after system implementation, participants again filled out hard copy questionnaires about self-reported usage only (Venkatesh & Davis, 2000).

Cronbach's alpha for all four longitudinal studies yielded high reliability from .80 to .98 (Venkatesh & Davis, 2000). Construct validity was confirmed both in the factor analysis method and in the multitrait-multimethod matrix. In a stepwise regression analysis, the entire TAM2 (including subjective norm, image, job relevance, output quality, result demonstrability, and PEU) accounted for 60% of the variance in explaining usage intentions (Venkatesh & Davis, 2000). Subjective norm significantly predicted a direct effect on PU in mandatory settings, particularly in the early stages of implementation, but not in voluntary settings. The indirect effects of internalization and image identification both mediated subjective norm and PU across all three points of measurement in both voluntary and mandatory settings.

When pooled across all four studies and time periods, TAM2 was consistent with the previous four individual studies. The basic TAM relationships of intention-usage, PU-intention, PEU-intention and PEU-PU were confirmed with full mediation of intention (Venkatesh & Davis, 2000). However, no moderation was found by voluntariness or experience. The subjective norm-intention relationship was moderated by both experience and voluntariness confirming subjective norm is a

significant predictor of intention only when usage is mandatory and experience is in the early stages (Venkatesh & Davis, 2000).

The inconsistencies of prior research (Davis, 1989; Mathieson, 1991; Taylor & Todd, 1995) on the significance of subjective norm on PU could be explained in the nuances of Venkatesh and Davis' (2000) findings. It was posited that when individuals gained direct experience with a system over time, they relied less on social information in forming PU and intention and continued to judge a system's PU based on potential benefits resulting from system usage (Venkatesh & Davis, 2000).

Concerned with training interventions and long-term support for new IT, Venkatesh and Davis (2000) proposed organizational mandatory technology implementation would not be long-lasting compared with targeting social influences and their effects on PU, especially in the early stages of execution. Included in the suggestions for preventative measures were increased credibility of social sources and raising prestige associated with implementation to increase image identification (Venkatesh & Davis, 2000).

5.3.6.1.2 Refinement of the subjective norm construct. The Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) model combined several competing models concerning theories of IT behavior, including: Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), Technology Acceptance Model (TAM) (Davis, 1989), Motivational Model (MM) (Vallerand, 1997), Theory of Planned Behavior (TPB) (Ajzen, 1991), Combined TAM and TPB (C-TAM-TPB) (Taylor & Todd, 1995), Model of PC Utilization (MPCU) (Triandis, 1977; Thompson

et al., 1991), Innovation Diffusion Theory (IDT) (Rogers, 1995), and Social Cognitive Theory (SCT) (Bandura, 1986).

Combining the eight models, UTAUT was formulated to utilize the constructs of performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh, 2003) (see Figure 13). Prior to this determination, based on the models under investigation, Venkatesh et al. (2003) observed only seven constructs within the eight separate models had a direct effect on intention or PU. Four of these constructs were selected for the UTAUT model because the remaining three (attitude toward using technology, self-efficacy, and anxiety) were not theorized to predict user acceptance or usage behavior (Venkatesh et al., 2003).

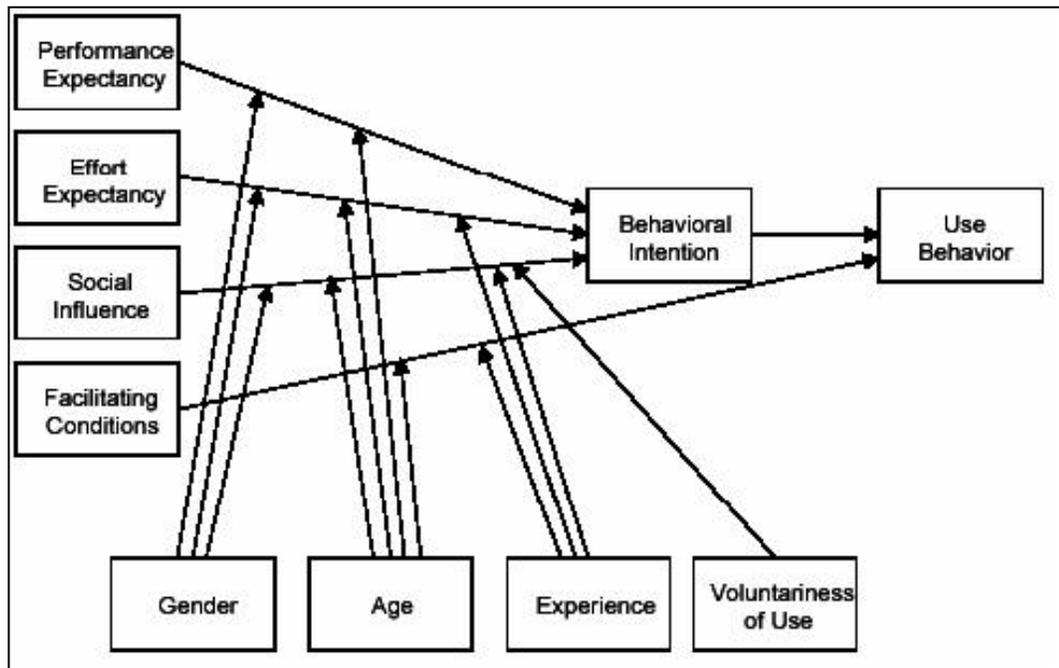


Figure 13. Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003)

In UTAUT none of the subjective norm constructs were significant in voluntary scenarios, but became significant in mandatory use situations (Venkatesh et al., 2003). In addition, subjective norm was found to be important only in the early stages of the individual's experience with the technology, with its role lessening over time and eventually becoming insignificant with ongoing usage (Venkatesh et al., 2003). Due to the fact normative pressures diminish over time, repeated experience with a system became the basis for an individual's intention to use the system (Venkatesh et al., 2003).

Based on the works of Miller (1976), Venkatesh et al. (2000), Venkatesh and Morris (2000), Lubinski et al. (1983) and Rhodes (1983), a hypothesis in UTAUT was formulated indicating women were more sensitive to others' opinions, particularly with respect to opinion formation of new technologies. Included in this complex hypothesis was that as workers age, they looked toward social influence when formulating opinions on new technology use. Venkatesh et al. (2003) then hypothesized social influences would be a significant predictor of user intention especially for older women in mandatory settings in the early stages of system implementation.

The validation of the UTAUT constructs found social influences were predictors of intention to use a technology, however these social norms were more salient for older female employees who were new to a system in a mandatory setting (Venkatesh et al., 2003). Venkatesh et al. (2003) also posited the contingent nature of social influences, especially as they changed over time. The caveats of gender and age

on social influences in a particular setting within a specific timeframe suggest as technology use becomes more commonplace, the effect of social influences on intention to use will evolve. Venkatesh et al., (2003) pointed out the importance of understanding the implications of these results in a variety of contextual settings and as technologies expand and progress.

5.3.6.1.3 Maturation of the subjective norm construct. Eckhardt, Laumer, and Weitzel (2009) tested social influences on intention to use a technology implementing the UTAUT model. It was their belief that a single cumulative measure of subject norm was too naïve and future research would improve our understanding of IT adoption pertaining to the normative impact of various peer groups (Eckhardt et al., 2009).

The measurement of subjective norm in TRA and TPB was criticized by social psychology researchers (Warshaw, 1980; Miniard & Cohen, 1983; Liska, 1984) and believed to not be distinctive enough to examine social influence in a proper manner (Eckhardt et al., 2009). Workers in an organization generally do not exist in a vacuum. There are typically groups and levels within the social structure conducting work either simultaneously, or at some point, together. Social psychology researchers proposed people in a work environment are different and vary in terms of numbers working together (Eckhardt et al., 2009). Moreover, researchers claim it is not possible to combine all levels and types of referents into one category. For example, in an academic setting, an instructor might have several different groups of people (i.e. other colleagues, superiors, and students) influencing his or her behavior. These sets

of individuals could simultaneously exist as a referent together and also impose social influences separately.

Eckhardt et al. (2009) applied the UTAUT model to a study of corporate recruiters and their adoption of resume database software. Fifty-four companies were selected for collecting the sample of 152 usable responses, separated into adopter and non-adopter categories. Findings revealed various levels of subjective norm categories such as operations, IT, customers, and superiors all present social influence on a recruiter to varying degrees. Consistent with previous TAM findings (Venkatesh & Davis, 1996; Venkatesh et al., 2003) the strongest predictor of user adoption was from superiors. However, Eckhardt et al. (2009) did report significant findings across other, less important groups. The implications of this research indicated the possibility for future theoretical growth aimed toward improved understanding of the interaction effects between referent groups and social norm (Eckhardt et al., 2009).

5.3.7 Research of TAM and social networks. Since the inception of TAM, and later TAM2 and UTAUT, researchers have mostly examined subject norm as a single construct (Lee, et al., 2003). The intent of TAM and UTAUT was to examine an individual's intent to use a technology in a work setting. However, researchers suggest now that workers exist in a social setting, or a social network, and TAM is ill equipped to measure social networks surrounding an individual (Sykes et al., 2009). Social networks are defined as a set of affiliations among a specific set of persons, with the additional characteristic that these affiliations interpret the social behavior of all persons involved (Laumann et al., 1978). Social networks were found to influence

an individual's intention to use, but at varying degrees, depending on the referent's influence on the individual (Eckhardt, 2009). As TAM was a model designed to measure an individual's intention to use, and social networks were at the group level, a mediating variable was proposed to exist through subjective norm (Kate, Haverkamp, Mahmood, & Feldberg, 2010). In their research, Kate et al. (2010) approached TAM differently, via the social network characteristics of tie strength, centrality, and density borrowed from the work of Cross and Parker (2004). Social networks have been found to be influential on subjective norm due to the exposure, exchange, and legitimization of information throughout referent groups (Haythorntwaite, 1996).

5.3.8 Justification for using TAM. The focus on subjective norm in the TAM2 model was dismissed early in its development because intention to use the technology was driven only in mandatory settings (Venkatesh & Davis, 2000). In recent years, due to the ubiquitous nature of Internet technologies and eLearning, the construct of subjective norm has resurfaced as a topic of interest to determine if normative pressures predict an intention to use a technology. The use of TAM2 to predict intentions to use an online learning system has shifted from simply predicting use behavior to identifying more refined constructs impacting the original TAM (Hartshorne & Ajjan, 2009; Liu et al., 2010; Liaw, 2008; Liaw, Huang, & Chen, 2007).

The Technology Acceptance Model was devised to determine the behavioral intentions of an *individual* user, yet the nature of subjective norm is considered by many social researchers as existing within a social context (Srite & Karahanna, 2006),

which implies existing in a *group* environment. To account for the group or network characteristics on TAM, Kate et al. (2010) proposed a mediating role of subjective norm that tied together social network characteristics (tie strength, density, and centrality) with the original TAM. Regardless, information systems researchers still have confidence in TAM's ability to predict users' behavioral intentions in social work environments. In a study investigating the role of subjective norm in a workplace environment, superiors, colleagues, and an IT department were studied to determine the effect of subjective norm on intention to use from these various workplace referent groups (Eckhardt, Laumer, & Weitzel, 2009). The researchers found that a cumulative subjective norm construct was too simplistic a measure for understanding the impact of peers on technology adoption intentions (Eckhardt et al., 2009). This notion supported the investigation of extracting the various referent groups out of a collective subjective norm construct in TAM2.

The deconstruction of subjective norm in TAM is relatively new to the literature. Using the Decomposed Theory of Planned Behavior (DTPB), the precursor to TAM, Hartshorne and Ajjan (2009) performed a study of students' decisions to adopt Web 2.0 technologies as a supplement to in-class activities. While subjective norm was separated into superior and peer influences, both constructs had a significant and positive influence on subjective norm, however superior influences had a very strong influence on subjective norm, and therefore behavioral intention (Hartshorne & Ajjan, 2009).

In a study devised to determine faculty decisions to adopt Web 2.0 technologies, DTPB was used to predict behavioral intention. In that study, subjective norm was divided into three constructs: student, peer, and superior influences (Ajjan & Hartshorne, 2008). All three influences had significant effects on subjective norm; however subjective norm failed to predict behavioral intention (Ajjan & Hartshorne, 2008).

Hartwick and Barki (1994) noted that when an individual is not properly informed about a new technology and is in a mandatory setting, subjective norm constructs are significant. However, as the individual gains experience with the technology over time, the user will rely more heavily on his or her own experience, reducing dependence on social influences (Hartwick & Barki, 1994; Venkatesh et al., 2003).

Other studies confirmed subjective norm as an important determinant of intention and subsequent usage of the technology and suggested subjective norm was more important prior to, or in the initial stages of IT deployment when users had little or no direct experience from which to develop attitudes (Hartwick & Barki, 1994; Marcinkiewicz & Regstad, 1996; Sugar, Crawley, & Fine, 2004; Taylor & Todd, 1995). Taylor and Todd (1995) found when individuals had prior experience with the IT behavior; behavioral intention was more predictive of that behavior. Indeed, in the same study (Taylor & Todd, 1995), when behavioral intention was omitted as the mediating variable between the behavior and attitude, the predictive power of the behavior decreased dramatically.

With respect to the results of the UTAUT study by Venkatesh et al. (2003), under subjective norm several key findings emerged which are of relevance to this dissertation using the TAM2 model. In mandatory settings, social influences (i.e. subjective norm) were significant for women, older workers, and those workers with limited experiences (Venkatesh et al., 2003). As stated previously, those workers in mandatory settings possessing limited experience with the technology in question relied more heavily on the social components until they gained experience with the system (Venkatesh et al., 2003). In addition to confirming the basic TAM relationships, Schepers and Wetzels' (2007) meta-analysis of previous TAM research expanded the role of subjective norm in this model.

TAM2 was selected as the guiding theory for this study because it takes into account more directly and simply the normative pressures influencing faculty associated with online course delivery. Marcinkiewicz and Regstad (1996) examined the influence of subjective norm on technology and found it was the most predictive variable of technology use. Later, Sugar, Crawley, and Fine (2004) confirmed these findings and reported subjective norm was the main antecedent to instructor's intention to use technology. In that study, the subjective component was identified as superiors, parents, peers, and students of the instructors.

5.3.9 Diffusion of Innovations. Diffusion of Innovations theory (DOI) or innovation diffusion theory (IDT) is a model (see Figure 14) explaining the degrees of willingness to adopt an innovation over time (Rogers, 1962). The term innovation refers to "an idea, practice, or object that is perceived as new by an individual or other

unit of adoption” (Rogers, 1995, p. 11). Straub (2009) stressed the importance that it is the *perception* of the innovation that comes into question, and not whether it is a new idea, practice, or object.

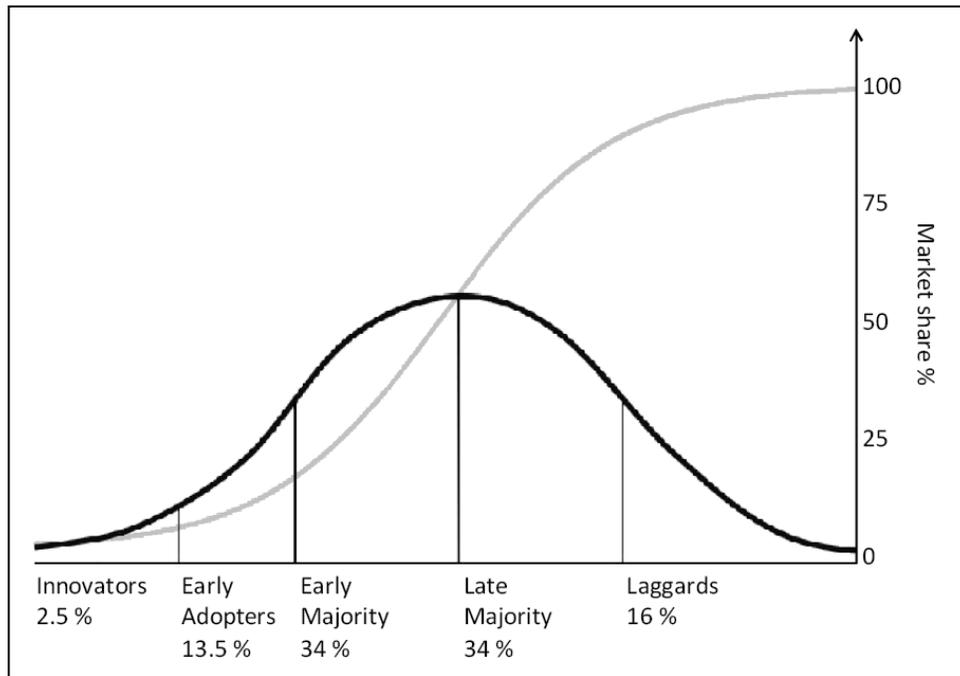


Figure 14. Diffusion of Innovations Theory (Rogers, 1962).

According to the theory, individuals can be categorized into one of five groups with regard to technology adoption: innovators, early adopters, early majority, late majority, and laggards. Innovators are considered educated individuals who are adventurous in terms of adopting a new technology. Early adopters are seen as popular, educated, and viewed as societal leaders. The early majority individuals are deliberate and gain their information through social contacts while late majority individuals are more skeptical, traditional, and perhaps from a lower socio-economic

status. Finally, laggards are those individuals who adopt a new technology last and typically gain their information through family and friends.

Based on five specific characteristics of innovation, DOI has been widely implemented in education, sociology, communication, and marketing (Rogers, 1995). These five characteristics include: relative advantage, compatibility, complexity, trial ability, and observability. Relative advantage is defined as the benefit that new innovations create over traditional methods. Compatibility is explained as how the innovation is perceived by the user's existing values, experiences, and needs. Complexity is similar to TAM's PEU in that it conveys the level of knowledge needed to understand the innovation. Trial ability is defined as how the new innovations can be tested and observability explains how easily new users can view the benefits of the new innovation (Chang & Tung, 2008; Rogers, 1962).

Technology adoption is considered a complex normative developmental process (Straub, 2009). Diffusion of Innovations Theory (DOI) has been tested together with TAM to predict user intentions of technology while preserving the changing nature of technology inclusive in the model. Previous research combining the models have examined user intentions (Morre & Benbasat, 1996), online instruction in higher education (Keller, 2005), and students' intentions to use online course websites (Chang & Tung, 2008). Diffusion of Innovations Theory is a critical component to this study in that it supports the social effect of technology adoption.

5.3.10 Limitations of TAM research. The most commonly cited limitation of any TAM-based research was self-reported usage versus measuring actual usage (Lee

et al., 2003). Self-reported usage was criticized as distorting and exaggerating the relationship between independent and dependent variables in the model (Agarwal & Karahanna, 2000; Podsakof & Organ, 1986). Additionally, generalizability became problematic in studies researching one technology with a homogeneous group at a certain point in time (Lee et al., 2003). Venkatesh and Davis (1996; 2000) avoided this limitation by conducting longitudinal studies in most of their research. Since individuals' perceptions of use changes over time, thus affecting intention to use, it is important to measure these variables longitudinally (Lee et al., 2003). In their meta-analysis of TAM research from 1986 to June 2003, Lee et al. (2003) found additional limitations including poor explanations of low variance where external variables were not included, non-descript mandatory or voluntary measurement, single measurement scales, participants' brief exposure to the technology in question, student participants, and self-selection bias of the subjects.

5.3.11 TAM and online learning. Originally intended to predict user intentions toward a new technology in a business setting, researchers have also employed TAM in an academic setting. TAM has been widely used to study online learning. To better predict student intentions to learn online, researchers adopted this model to advance various determinants and mediators (Park, 2009; Liaw, 2007; Liu et al., 2010; Sun et al., 2008; Jung et al., 2008). TAM has also been widely used to predict instructor intentions to teach online (Al-alak & Alnawas, 2011; Liaw et al., 2007; Hsieh, 2011; Yuen, 2008; Park, Lee, & Cheong, 2007). Other relevant studies have investigated students' behavioral intentions to use online learning course

websites (Chang and Tung, 2008) and university students' behavioral intention to use eLearning (Park, 2009). Gibson, Harris, and Colaric (2008) examined business faculty attitudes towards online learning employing TAM as the theoretical framework while Al-alak and Alnawas (2011) measured the acceptance and adoption of eLearning by academic staff. The validation of TAM as it pertains to online learning has been well documented, confirming the constructs of the original and extended models.

5.3.11.1 Hospitality context. In the study of hospitality management, TAM has most widely been utilized to understand consumer behaviors and employee technology applications. Wang and Qualis (2007) used TAM to investigate the adoption and acceptance of hospitality organizations' use of technology to improve performance and strategic competitiveness. Hotel guest empowerment (Schrier, Erdem, and Brewer, 2010), and tourist acceptance of mobile technology (Kim, Park and Morrison, 2008) are two of the more notable guest-focused examples of TAM in hospitality research. Other studies have considered the service provider perspective by examining employees' acceptance of front office systems (Kim, Lee and Law, 2008) and information systems in upscale hotels (Huh, Kim and Law, 2009).

The technology acceptance model has also been utilized in hospitality education research to determine the formal and informal uses of technology in the classroom (Jacques, Deale, & Garger, 2006). Determinants of intention to use a technology were also examined to predict hospitality students' intentions to use mobile learning technologies in the classroom (Smith & Walters, 2012).

5.3.12 Gaps in the literature. The evolution of the Technology Acceptance Model has produced an extensive body of research regarding the capability to predict an individual's intention to use a technology in a variety of settings. Originally intended for business applications, TAM has been tested across several disciplines including education. While productive research exists examining TAM in the context of online education in general (Al-alak & Alnawas, 2011; Liaw et al., 2007; Hsieh, 2011; Yuen, 2008; Park, Lee, & Cheong, 2007), there are no published studies utilizing TAM in hospitality online education. There is currently only one researcher in preliminary investigations examining student (Song, 2010) and faculty (Song, 2011) acceptance of online learning, both with a focus on user satisfaction.

Hospitality management programs have grown 500% in the last 25 years (Stoller, 2008). This, together with the rapid and inevitable expansion of online learning, dictates more serious inquiry into the expansion of online hospitality courses and programs. Hospitality management education is historically slow to adapt new learning technologies (Sigala & Baum, 2003) and the lack of online course adoption in this discipline threatens the long term relevance and viability of hospitality programs. The Technology Acceptance Model has been used extensively to pinpoint training interventions in technology users' intentions. In this quantitative faculty study, TAM2 via the subjective norm construct was used to identify points along the model where hospitality faculty might be supported more successfully to teach online.

5.3.13 Research objectives. The purpose of this research was to understand the perceptions of hospitality faculty from all levels of online experience along with

their combined attitudes toward full online course delivery. The Technology Acceptance Model 2 (TAM2) was the theoretical foundation for this research and as such, a secondary purpose of the project was to test TAM2 for faculty members' intention to teach an online course via deconstructed subjective norm. The specific objectives for this study were to:

1. Develop a survey instrument based on TAM2, inclusive of a deconstructed subject norm.
2. Test TAM2 with isolated subjective norm independent variables to predict hospitality faculty intentions to teach a blended or full online course.
3. Deploy the survey to hospitality faculty respondents worldwide.

5.4 Methodology

5.4.1 Model development. Based on an extensive review of the literature, findings from the qualitative interviews with hospitality educators (Mejia, 2013 Dissertation Article 1), and using the Technology Acceptance Model 2 (Venkatesh & Davis, 2000) as the theoretical foundation, the following model was proposed to predict hospitality instructors' intentions to teach both blended and full online courses (see Figure 15). Although the theoretical model was applied to measure data collected for both blended and full online models, the analysis and conclusions drawn are reported separately.

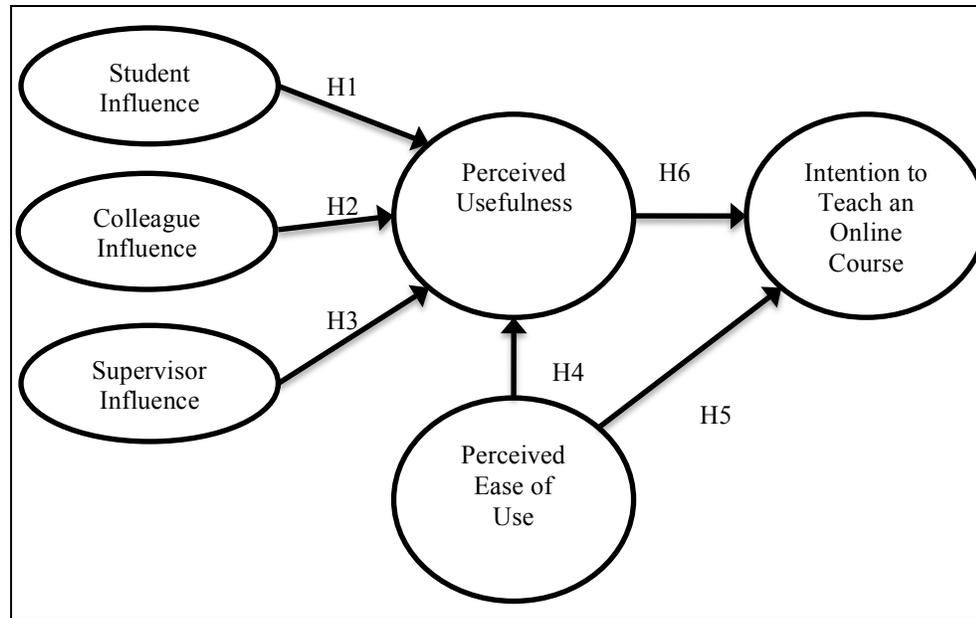


Figure 15. TAM2 for online learning in hospitality management higher education (Venkatesh & Davis, 2000; Ajjan & Harshorn, 2008).

5.4.1.1 Subjective norm. According to Fishbein and Ajzen (1975), subjective norm is defined as a person's belief that most people who are important to him think he should or should not perform a behavior in question. In previous TAM research, subjective norm was consolidated into one construct, but for this study, the proposed model deconstructed "subjective norm" into student influences, colleague influences, and chair or supervisor influences. Based on previous studies decomposing subjective norm in a faculty TAM study (Ajjan & Hartshorne, 2008) and a student TAM study (Hartshorne & Ajjan, 2009), the subjective norm constructs of student, colleague, and superior influences were introduced as determinants to perceived usefulness. In a study utilizing path analysis to determine faculty intentions to adopt Web 2.0 technologies in the classroom, both superior influence ($\beta = 0.396, p < .001$) and student influence ($\beta = 0.356, p < .001$) had highly significant effects on subjective

norm ($p < .001$), while peer (or colleague) influence had a less significant effect on subjective norm ($\beta = 0.205, p < .05$) (Ajjan & Hartshorne, 2008).

In a related study utilizing path analysis to determine factors influencing student use of Web 2.0 technologies in the classroom, both peer ($\beta = 0.205, p < .01$) and superior influence ($\beta = 0.719, p < .01$) were significant predictors of behavioral intention (Hartshorne & Ajjan, 2009). Based upon Ajjan & Hartshorne's findings, three hypotheses were proposed as determinants to perceived usefulness (PU):

- H1:** Student influence on hospitality faculty positively affects PU.
- H2:** Colleague influence on hospitality faculty positively affects PU.
- H3:** Chair or superior influence on hospitality faculty positively affects PU.

5.4.1.2 Perceived ease of use. Perceived ease of use (PEU) defined by Davis (1989) is the degree to which a person believes using a particular technology system would be free from effort. In the Technology Acceptance Model, PEU is subjective and the antecedent to PU, which in turn is the determinant to intention. Previous information system researchers confirmed PEU had a positive effect on behavioral intention and the perceived usefulness of a system (Chin & Todd, 1995; Venkatesh & Davis, 2000), therefore hypotheses four and five state:

- H4:** Perceived ease of use positively affects perceived usefulness.
- H5:** Perceived ease of use positively affects hospitality faculty intention to teach an online course.

5.4.1.3 Perceived usefulness. Perceived usefulness (PU) is the degree to which a person subjectively believes the use of a technology will enhance

performance (Davis, 1989). PU was initially theorized in the context of an employee's job performance, but the definition has expanded to include many ordinary tasks in non-organizational settings (Yousafzai et al., 2010).

Faculty have commonly expressed apprehension toward online instruction due to possible problems encountered with the technology resulting in unfavorable student evaluations (Gibson, Harris, & Colaric, 2008). Increased student online enrollments, along with pressure on faculty to adapt to online learning, make the acceptance of technology a critical issue (Gibson et al., 2008). The only study of its kind by Gibson et al. (2008) did not result in good predictive power of PEU on intention, but rather PU was found to be highly significant. This finding is contrary to the assumption that faculty apprehension toward online technology would not predict their intention to teach an online course. Previous investigation of TAM revealed PU had a positive effect on the behavioral intention to use the technology system (Chin & Todd, 1995), thus hypothesis six proposed:

H6. Perceived usefulness positively affects hospitality faculty intention to teach an online course.

5.4.2 Sample. The sample chosen for this study included instructors from hospitality management programs associated with the International Council on Hotel, Restaurant, and Institutional Education (ICHRIE). Hospitality faculty from the ICHRIE 2012 conference attendees list were directly emailed with a link to the survey. A snowball sampling method (Gall, Gall, & Borg, 2007) was implemented by asking

several participants from large hospitality management programs to distribute the survey throughout their respective departments.

In order to attract more participation due to the extensive length of the survey, a raffle for a 16 GB Wi-Fi iPad was offered to incentivize participants. The odds for winning the iPad were estimated at approximately 1 in 600. Upon completion of the survey itself, respondents were asked if they would like to participate in the random drawing. If the respondent replied “no,” they were taken to the end of the survey. If the respondent indicated “yes,” they were redirected to a separate Qualtrics survey. The purpose of this secondary survey was to generate a separate list for personal information to award the iPad so that these responses could not be matched to original survey responses. One month was allocated to collect data. Due to participation being less than expected, the survey close date was extended six weeks.

When the targeted sample was not reached by the initial deadline, additional solicitation emails were sent directly to faculty members from the following hospitality programs: Michigan State University, University of North Texas, Florida State University, DePaul University, Georgia State University, University of New Hampshire, Widener University, Niagara University, the University of Tennessee, Florida International University, University of Massachusetts at Amherst, Temple University, New Mexico State University, California Polytechnic State University San Luis Obispo and Pomona, Boston University, and Indiana University-Purdue University Indianapolis. In addition, an email with the link to the survey was sent to

all members of EuroCHRIE, an organization for hospitality and tourism educators in Europe affiliated with ICHRIE.

5.4.4 Instrument development. The survey instrument was designed to test TAM2 constructs for both blended and full online course delivery. From previous literature, three constructs predicted the influence of subjective norm: student influences, colleague influences, and chair or superior influences. Scales for the three subjective norm constructs were tested and found valid (Ajjan & Hartshorne, 2008; Hartshorne & Ajjan, 2009). In addition, previous scales supporting the remaining constructs were adapted to formulate the survey items (see Appendix B), specifically: subjective norm (Ajjan & Hartshorne, 2008); perceived usefulness (Ajjan & Hartshorne, 2008; Liaw, 2008; Liu et al., 2010); perceived ease of use (Davis, 1989; Jung et al., 2008; Liu et al., 2010); and intention to use (Davis, 1989; Davis, 1993; Venkatesh & Davis, 1996; Venkatesh, 2001; Liaw, 2007; Liaw, 2008; Liu et al., 2010).

A total of 77 questions were asked in the online survey. Thirty-three (33) items addressed blended instruction based upon the model in Figure 15. An additional 33 items identical to the blended learning questions examined the same model with regard to full online courses. The 33 items in each model were assigned to six constructs specifically measuring TAM2 (Venkatesh & Davis, 2000): six items on student influences; seven items on colleague influences; seven for department chair or supervisor influences; five each to measure both perceived usefulness (PU) and perceived ease of use (PEU); and three items measured intention to teach an online

course. The questions pertaining to the model were based on a 5-point Likert scale of measurement (1 = strongly disagree to 5 = strongly agree). For the remaining 11 questions in the survey, five were demographic in nature, five were related to experience with full online and blended learning, and one measured self-reported computer experience. Ten faculty participants were estimated per item (Schreiber, Nora, Stage, Barlow, & King, 2006) targeting a sample size of 330, which met Gorsuch's (1997) recommendation of 300 as a minimum for structural equation modeling.

5.4.5 Analysis. To decrease threats to internal validity, the items associated with both the blended and full online models were randomized for each individual participant (Shadish, Cook, & Campbell, 2002). A total of 305 hospitality instructors opened the survey. Of those who opened the survey, 276 began the blended learning portion with 202 respondents actually completing all the questions in that section. The cooperation rate of the entire survey, the number of participants who completed the survey after opening the link (Basson, 2008), was 73.1%.

The 33 items for the full online course delivery section were presented after the blended questions. Two hundred sixteen (216) respondents started this section, with 211 completing this portion of the survey. The completion rate for the full online segment was 97.7%. Demographic characteristics of the hospitality faculty sample and the internal consistency of the constructs were measured in SPSS v.20. Structural equation modeling (SEM) was the chosen method to analyze the hypothesized TAM2

model representing the empirical data collected. The measurement (CFA) and structural models were estimated using Mplus v.7 software.

Mplus software was chosen over other structural equation modeling packages for its ability to process missing data values. Mplus uses all data that is available to estimate the model using maximum likelihood for data missing at random (MAR) (Rubin, 1976). Other statistical packages employ imputation to generate the missing values, but this can result in biased estimates with loss of power (Muthén & Muthén, 2012). In Mplus, parameters are estimated directly without first imputing values for those that are missing, as in other statistical programs that use listwise or pairwise deletion of missing data (Muthén & Muthén, 2012).

5.4.5.1 Data screening. Prior to the confirmatory and structural analyses for each model, the data was screened for univariate and multivariate violations of normality using SPSS v.20. No univariate outliers were detected for either model due to all responses being collected on the Likert 5-point scale. Eight multivariate outliers were detected in the blended model based on analysis of the standardized residuals and the Mahalanobis distances. Three cases were outside both the recommended threshold of 1.95 in the standardized residuals (Tabachnick & Fidell, 2001) and were extreme outliers in the Mahalanobis distance results. A decision was made to delete these eight cases within the blended model reducing the data set to $n = 194$.

In the full online model, five multivariate outliers were detected in the combined analysis of the standardized residuals, the Mahalanobis distances, Cook's distance, and the centered leverage values (Tabachnick & Fidell, 2001). These five

cases were deleted, bringing the sample to $n = 206$. Both sample sizes for the blended and full online models were deemed adequate according to criteria set by Bentler and Chou (1987) of 5 cases per free parameter. In the blended and full online models, there were 33 items each and so the minimum of $n = 165$ cases were met.

Internal consistency of the instrument was measured with Cronbach's alpha (see Table 10). Both models measured six constructs, all indicating good levels of reliability (Schmitt, 1996). In the blended model, item B30 was dropped due to multicollinearity. This resulted in an improved Chronbach's alpha for perceived ease of use (PEU) $\alpha = .825$.

Table 10. *Reliability Analysis of the Constructs, Faculty Quantitative Study.*

Construct	Items for two models: Blended and Full Online Course Delivery	α Value Blended	α Value Full Online
<i>Student Influence</i>		.901	.920
O1	Students have an influence on my intentions to teach online.		
O2	Students who are important to me want me to teach online.		
O3	Students who I trust desire that I teach an online course.		
O4	Students whose opinions I value prefer I teach an online version of one of my face-to-face classes.		
O5	Students whom I admire have indicated that I should teach an online course.		
O20	I think it's important to my students that I teach online.		
<i>Colleague Influence</i>		.913	.926
O6	My colleagues have positively influenced my decision to teach an online course.		
O7	I am likely to teach an online course based on the opinions of an important colleague.		

Table 10. (Continued).

Construct	Items for two models: Blended and Full Online Course Delivery	α Value Blended	α Value Full Online
O8	Colleagues have indicated that I should teach online.		
O9	I have received encouragement from colleagues whom I respect to teach an online course.		
O10	I am likely to teach an online course based on the opinions of a colleague whom I trust.		
O16	Based on the views of respected colleagues, it is important for me to teach an online course.		
O17	My colleagues think I will benefit from teaching an online course.		
<i>Chair or Supervisor Influence</i>		.928	.935
O11	My department chair (supervisor) has indicated that I should teach an online course.		
O12	My department chair (supervisor) prefers that I teach an online course.		
O13	My department chair (supervisor) has told me to teach an online course.		
O14	My department chair (supervisor) wants me to learn how to teach online.		
O15	I feel pressure from my department chair (supervisor) to teach an online course.		
O18	It is important to my department chair (supervisor) that I teach online.		
O19	My department chair (supervisor) confirms my ability to teach online.		
<i>Perceived Usefulness</i>		.860	.876
O21	I believe teaching an online course is useful to students.		
O22	Teaching a course online could improve my teaching effectiveness.		
O23	Teaching an online course could increase my teaching productivity.		
O24	I think teaching an online course will help my career in academia.		
O25	I think teaching an online course will improve students' understanding of course material.		

Table 10. (Continued).

Construct	Items for two models: Blended and Full Online Course Delivery	α Value Blended	α Value Full Online
<i>Perceived Ease of Use</i>		.825	.818
O26	Teaching a course delivered fully online is easy.		
O27	It is easy to become skillful at teaching an online course.		
O28	It is easy to interact with the technology used to teach an online course.		
O29	It is easy to handle a problem when teaching an online course.		
O30	Interacting with the technology to teach an online course requires a lot of mental effort.		
<i>Intention to Teach an Online Course</i>		.903	.936
O31	It is important to me that I teach an online course in the near future.		
O32	I plan on teaching an online course.		
O33	I intend to teach an online course.		

5.4.5.2 Structural equation modeling. Structural equation modeling (SEM) is a multivariate analysis technique used to determine the relationships between one or more independent variables against one or more dependent variables (Ullman, 2001). The main advantage in using SEM is that it has the ability to predict multiple relationships between latent constructs in a hypothesized model (Ullman, 2001). Latent constructs are those which cannot be directly observed or measured and must be inferred from a set of observed variables (Crockett, 2012).

5.4.5.2.1 Steps in structural equation modeling. Several steps are required to perform SEM including: model specification, model identification, model estimation, model testing, and model modification (Bollen & Long, 1993). Model specification is the first and most difficult step of SEM because it provides the theoretical model and

all variables involved with the phenomenon in question (Cooley, 1978). Model development is derived from existing literature and provides the rationale for the research question (Crockett, 2012). In model specification a path diagram is used to visually represent hypothesized relationships (Crockett, 2012).

Model identification involves the determination of a unique solution for each parameter established using observed items to measure latent variables (Schumacker & Lomax, 2010). This unique solution uses confirmatory factor analysis (CFA) to identify the measurement model (Crockett, 2012).

The third step in the SEM process is model estimation, an iterative process in statistical program software that serves as a fitting function (Crockett, 2012). Final parameter estimates in Mplus were based on maximum likelihood, the most widely used type of estimation (Kelloway, 1998). The advantages in using maximum likelihood are that it assumes multivariate normality and estimates all the parameters in the model simultaneously (Crockett, 2012).

Model testing analyzes both the measurement model and the structural model simultaneously (Crockett, 2012). This produces indices of model fit for the entire model as well as the individual parameter estimates (Crockett, 2012). Prior to the analysis of the structural model, the measurement model must yield good fit according to the indices. Researchers characterize model fit into three categories: absolute, comparative, and parsimonious (Crockett, 2012). An indication of good model fit demonstrates the data supports the hypothetical model (Crockett, 2012). Absolute fit indices include Chi-square, root mean square error of approximation (RMSEA),

goodness-of-fit (GFI), and adjusted goodness-of-fit (AGFI). Indices associated with absolute fit refer to how well the hypothesized relationships between the variables correspond to the actual or observed relationships (Meyer, Gamst, & Guarino, 2006). Comparative fit indices measure the theoretical model to a baseline model (Crockett, 2012). The most commonly examined comparative fit indices include the normed fit index (NFI), comparative fit index (CFI), the Tucker-Lewis index (TLI), and relative fit index (RFI). Parsimonious fit indices measure the effect of adding parameters to a model by determining the impact on the loss of degrees of freedom (Crockett, 2012).

The fit indices used for this research included Chi-square absolute fit index, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the standardized root mean square residual (SRMR), and the root mean square error of approximation (RMSEA). Cutoff criteria for these indices, as recommended by Schreiber, Stage, King, Nora, and Barlow (2006), are noted below in Table 11.

Table 11. *Criteria for indices determining good model fit in this study (Schreiber et al., 2006)*

Index	Abbreviated	Criteria
Chi-square	χ^2	Decreasing value with each iteration
Comparative fit index	CFI	$\geq .90 - .95$
Tucker-Lewis index	TLI	$\geq .95$; $0 > TLI > 1$ acceptable
Standardized root mean square residual	SRMR	$\leq .08$
Root mean square error of approximation	RMSEA	$< .06$ to $.08$ (Reported with confidence interval)

The final step in SEM is model modification which involves adding or deleting parameters to improve model fit according to the indices specified (Crockett, 2012). It is important to note that model modification is an exploratory procedure based on the data collected for the sample, rather than on previous literature (Crockett, 2012). Kline (2005), however, cautioned researchers about the re-specification of a model based solely on statistical criteria. Rather, he advised researchers to use knowledge of the theory along with extant literature to inform the use of the fit indices and statistics (Kline, 2005).

5.5 Results

5.5.1 Description of sample respondents. Hospitality instructors ranged in age from younger than 25 to over 61 years old (see Table 12), as reported in both models. Respondents were provided age categories to select; therefore a complete age range beyond stated classifications is unknown. The majority of instructors in the blended and full online models were between 41 and 60 (55.7% and 58.9%, respectively), meaning more than half of respondents were members of either Generation X or Baby Boomers (Oblinger, 2003). The majority of participants were male: 52.6% in the blended and 57.6% in the full online questionnaire.

There was an equally distributed range of teaching experience in the hospitality discipline and the vast majority of hospitality instructors were from four-year universities (see Table 12). According to rank, instructors were almost evenly distributed across both groups of respondents with the exception of graduate students (6.7% blended/5.9% full): 22.2%/26.6% were instructors; Assistant Professors,

21.1%/23.2%; Associate Professors, 23.7%/23.6%; and 19.6%/20.7% of respondents were Full Professors.

Finally, a large majority of participants taught in the United States (over 80%). The remainder represented other countries including: Canada, Malaysia, Peru, United Kingdom, Hong Kong, Holland, the Philippines, Taiwan, Austria, Switzerland, Zimbabwe, Italy, South Africa, Germany, and Turkey.

Table 12. *General Demographics of Hospitality Instructors Reported in Both Models, Faculty Quantitative Study.*

Variable	Blended <i>n</i> = 194		Full Online <i>n</i> = 206	
	Freq	%	Freq	%
Hospitality Instructors				
Age				
< 25	1	.5	1	.5
26-30	8	4.1	10	4.6
31-40	40	20.6	39	19.2
41-50	49	25.3	58	26.9
51-60	59	30.4	65	32.0
61+	24	12.4	30	14.8
Gender				
Male	102	52.6	117	57.6
Female	78	40.2	86	42.4
Years Taught in Hospitality				
1-5	45	23.3	46	23.6
6-10	41	21.2	49	25.1
11-20	54	28.0	61	31.3
20+	53	27.5	39	20.0
Type of Institution				
Two-year	4	2.1	4	2.0
Four-year	175	90.2	197	98.0
Highest Rank				
Graduate Student	13	6.7	12	5.9
Instructor	43	22.2	54	26.6
Assistant Professor	41	21.1	47	23.2
Associate Professor	46	23.7	48	23.6
Full Professor	38	19.6	42	20.7
Country of Work				
United States	157	80.9	173	85.6
Other	22	11.3	29	14.4

Hospitality instructors were asked general questions about online teaching and support, computer use, and computer expertise. From those respondents in the blended model, 45.8% had taught online previously. Over half the respondents in the full online model (52.5%) reported they had taught an online course (see Table 13). The majority of instructors felt online learning was encouraged (59.3% blended, 63.2% full online) within their respective departments and reported good institutional support to teach online (77.8% blended, 84.5% full).

Regarding computer use and expertise, respondents reported spending at least one hour per day on the computer (see Table 13). Over one third of the sample (39.7% blended, 44.4% full online) spent one to five hours per day on a computer, though a significant minority (17% in both models) reported spending 9 or more hours per day on a computer.

Hospitality instructors in this study had a good level of confidence in self-reported levels of computer expertise: 8.2% blended, 8.4% in the full online model reported beginner status; 51% and 55.2% felt they had achieved an intermediate level of expertise; and over a third (33.5% and 36.5%, respectively) were very confident in their level of computer expertise, signifying advanced levels of mastery.

Table 13. *Hospitality Faculty Descriptive Statistics Concerning Blended and Full Online Models.*

Variable	Blended <i>n</i> = 194		Full Online <i>n</i> = 206	
	Freq	%	Freq	%
Hospitality Faculty				
Taught 100% Online				
Yes	89	45.8	106	52.5
No	90	46.4	96	47.5
Online Learning Encouraged in the Department				
Yes	115	59.3	127	63.2
No	65	33.5	74	36.8
Institutional Support to Teach Online Courses				
Yes	151	77.8	169	84.5
No	28	14.4	31	15.5
Total Hours per Day Spent on the Computer				
1-2	6	3.1	7	3.5
3	17	8.7	19	9.6
4	24	12.4	27	13.6
5	30	15.5	35	17.7
6	26	13.4	33	16.7
7	7	3.6	8	4.0
8	32	16.5	34	17.2
9+	33	17.4	35	17.7
Self-reported Level of Computer Expertise				
Beginner	16	8.2	17	8.4
Intermediate	99	51.0	112	55.2
Advanced	65	33.5	74	36.5

5.5.2 Blended model results.

5.5.2.1 The blended measurement model (CFA). Latent constructs in the blended hypothesized model were first measured using confirmatory factor analysis (CFA) to identify a unique and parsimonious solution (Schumacker & Lomax, 2010). The initial model was not a satisfactory fit and so it was re-specified several times until good model fit was achieved (see Table 14). Several items were fixed to “one”

according to the parameter estimates in the output. As per the modification indices, two pairs of items presented a correlation of errors (B10 with B7 and B33 with B32). When these items were correlated, model fit greatly improved (see Table 14). The correlation of errors was justified in this instance based upon the logic of the items in the model as well as correlation of the items themselves in the initial data screening for multicollinearity (Byrne, 2012).

Table 14. *Blended Model Modification Decisions Based on Fit Indices, Faculty Quantitative Study.*

#	Step	Reason for Modification	χ^2 (df) <i>p</i>	CFI	TLI	SRMR	RMSEA (90% CI)
1	Hypothesized Measurement Model	33 items, 6 scales	1121.671 (481) <i>p</i> < .0001	.870	.857	.095	.083 (.077, .089)
2	student by B2 colleague by B16 chair by B12 peu by B27 int by B33	Respecify	1026.210 (479) <i>p</i> < .0001	.889	.877	.091	.077 (.070, .083)
	B10 with B7 B33 with B32	Modification indices					
3	Structural Model	33 items, 6 scales	1044.807 (482) <i>p</i> < .0001	.886	.875	.094	.078 (.071, .084)
4	Remove peu from int	Non-significant	1045.547 (483) <i>p</i> < .0001	.886	.875	.094	.077 (.071, .084)
5	int on chair	194 observations	1035.631 (483) <i>p</i> < .0001	.888	.877	.091	.077 (.070, .083)

Factor determinacy scores indicated all 6 factors were well measured for the blended model: Student Influence (6 items) = .981; Colleague Influence (7 items) = .962; Chair or Supervisor Influence (7 items) = .971; Perceived Usefulness (5 items) = .955; Perceived Ease of Use (4 items) = .915; and Intention to Teach an Online Course (3 items) = .944 (see Figure 16). Good model fit was achieved for the blended measurement model: χ^2 (479) = 1026.210, $p < .0001$, CFI = .889, TLI = .877, SRMR = .091, RMSEA = .077 (90% CI .070 - .083) (see Table 15).

Table 15. *Model Fit Summary for the Blended Measurement and Final Structural Models, Faculty Quantitative Study.*

Fit Index	Measurement Model (CFA)	Structural Model (SEM)
χ^2	1026.210	1035.631
Degrees of Freedom (df)	(479)	(483)
p	< .0001	< .0001
Comparative Fit Index (CFI)	.889	.888
Tucker-Lewis Index (TLI)	.877	.877
Standardized Root Mean Square Residual (SRMR)	.091	.091
Root Mean Square Error of Approximation (RMSEA)	.077	.077
(90% CI)	(.070, .083)	(.070, .083)

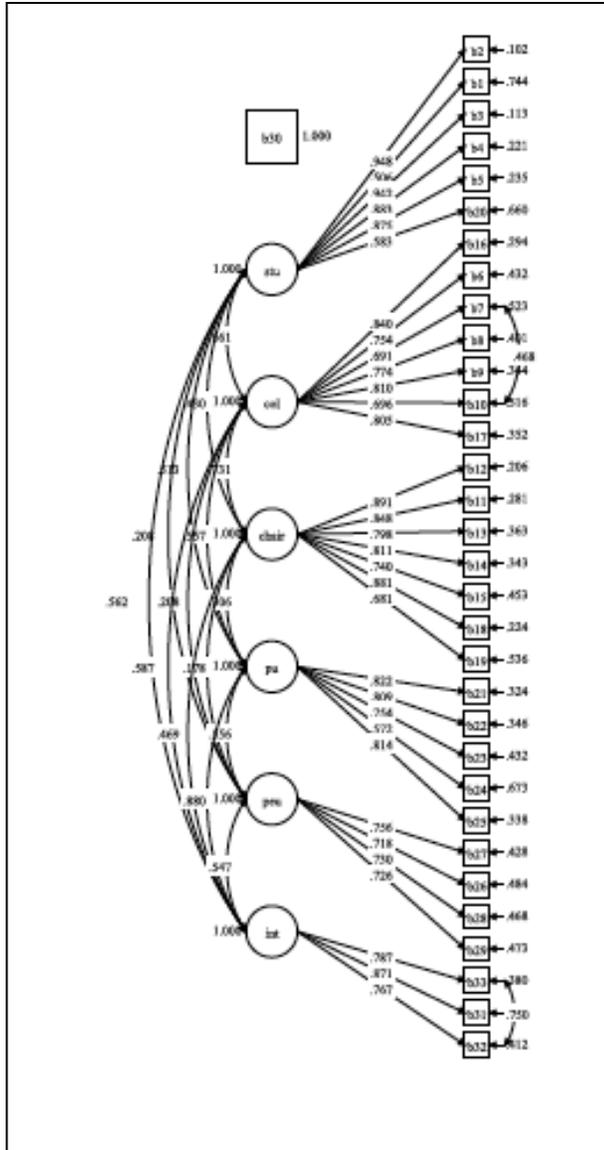


Figure 16. Measurement model of TAM2 for blended model in hospitality management higher education (Venkatesh & Davis, 2000; Ajjan & Harshorn, 2008).

5.5.2.2 The blended structural model (SEM). The structural model was estimated with 33 items on 6 constructs. The initial solution required modifications, as good model fit was not achieved in the first run, $\chi^2(482) = 1044.807, p < .0001$, CFI = .886, TLI = .875, SRMR = .094, RMSEA = .078 (90% CI .071 - .084) (see

Table 14). Modification indices in the output reported a very low parameter estimate, as well as non-significance of perceived ease of use on intention to teach. Therefore, PEU was removed from intention yielding the following model fit, $\chi^2(483) = 1045.547$, $p < .0001$, CFI = .886, TLI = .875, SRMR = .094, RMSEA = .077 (90% CI .071 - .084) (see Table 14). Previous literature supported TAM2 and intention to use in mandatory settings (Venkatesh & Davis, 2000). Additionally, the modification indices in the output indicated Chair (or Supervisor) influences should be moved to the intention construct. This decision improved model fit, $\chi^2(483) = 1035.631$, $p < .0001$, CFI = .888, TLI = .877, SRMR = .091, RMSEA = .077 (90% CI .070- .083) (see Table 14).

The final blended structural model revealed 194 observations with good factor determinacy scores on the six constructs: Student Influence (5 items) = .981; Colleague Influence (7 items) = .962; Chair or Supervisor Influence (7 items) = .971; Perceived Usefulness (5 items) = .955; Perceived Ease of Use (4 items) = .914; and Intention to Teach an Online Course (3 items) = .944 (see Figure 17).

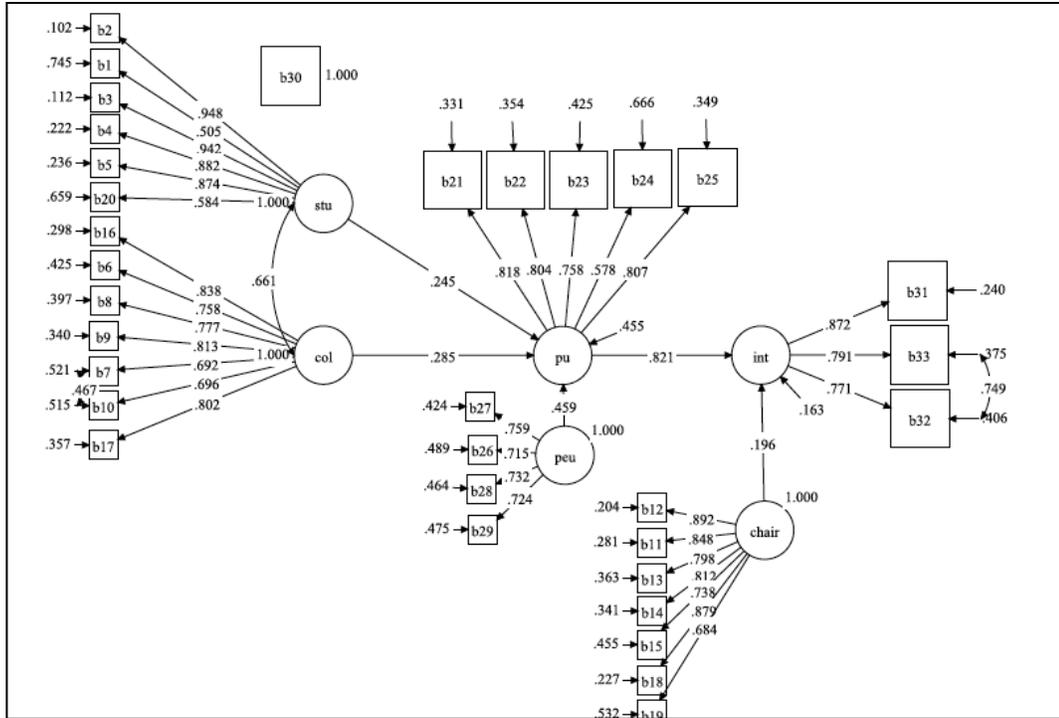


Figure 17. Final structural model of TAM2 for blended course delivery in hospitality management higher education (Venkatesh & Davis, 2000; Ajjan & Harshorn, 2008).

5.5.3 Full online model results.

5.5.3.1 The full online measurement model (CFA). Re-specification of

several items was needed after the hypothesized model was run. Modification indices suggested improved model fit of one item (O20-I think it's important to my students that I teach online) was moved from student influences to perceived usefulness.

Several items (O10 with O7, O8 with O9, and O33 with O32) presented a correlation of errors, and based on the modification indices in the output, when these errors were correlated, model fit greatly improved (see Table 16). Similar to the correlation of errors for the blended model, the items themselves were highly correlated in the initial data screening for multicollinearity; therefore a justification could be made to correlate the errors (Byrne, 2012). Good model fit was achieved for the full online

measurement model: $\chi^2 (477) = 983.788, p < .0001, CFI = .918, TLI = .909, SRMR = .085, RMSEA = .072$ (90% CI .065 - .078) (see Table 16).

Table 16. *Full Online Model Modification Decisions Based on Fit Indices, Faculty Quantitative Study.*

#	Step	Reason for Modification	χ^2 (df) <i>p</i>	CFI	TLI	SRMR	RMSEA (90% CI)
1	Hypothesized Measurement Model	33 items, 6 scales	1289.861 (480) $p < .0001$	.869	.856	.101	.091 (.085, .096)
2	student by O3 colleague by O9 chair by O18 pu by O22 (add O20) peu by O28 int by O32	Respecify (Modification indices)	1164.926 (479) $p < .0001$	.889	.878	.089	.083 (.077, .089)
3	O10 with O7	Modification indices	1052.608 (479) $p < .0001$	.907	.898	.088	.076 (.070, .082)
4	O8 with O9 O33 with O32	Modification indices	983.788 (477) $p < .0001$	.918	.909	.085	.072 (.065, .078)
5	Structural Model	33 items, 6 scales	999.866 (480) $p < .0001$	.916	.907	.089	.073 (.066, .079)
6	Remove peu from int	Non-significant	999.891 (481) $p < .0001$	.916	.908	.089	.072 (.066, .079)
7	int on chair	206 observations	988.873 (481) $p < .0001$	.918	.910	.086	.072 (.065, .078)

Factor determinacy scores for the confirmatory full online model indicated all 6 factors were well measured: Student Influence (5 items) = .986; Colleague Influence (7 items) = .962; Chair or Supervisor Influence (7 items) = .979; Perceived Usefulness (6 items) = .964; Perceived Ease of Use (5 items) = .933; and Intention to Teach an Online Course (3 items) = .953 (see Figure 18).

Table 17. *Model Fit Summary for the Full Online Measurement and Final Structural Models, Faculty Quantitative Study.*

Fit Index	Measurement Model (CFA)	Structural Model (SEM)
χ^2	983.788	988.873
Degrees of Freedom (df)	(477)	(481)
p	< .0001	< .0001
Comparative Fit Index (CFI)	.918	.918
Tucker-Lewis Index (TLI)	.909	.910
Standardized Root Mean Square Residual (SRMR)	.085	.086
Root Mean Square Error of Approximation (RMSEA)	.072	.072
(90% CI)	(.065, .078)	(.065, .078)

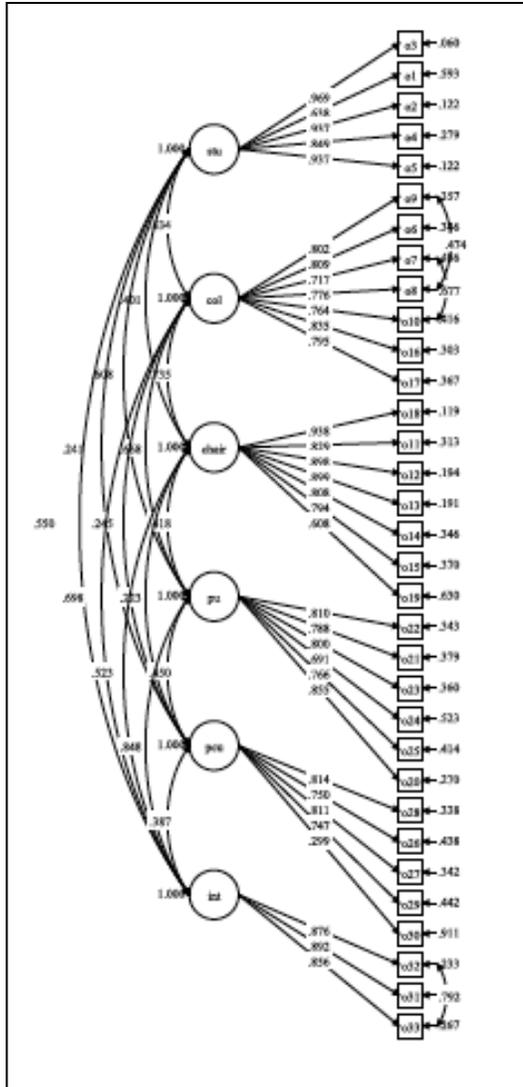


Figure 18. Measurement model of TAM2 for full online learning in hospitality management higher education. (Venkatesh & Davis, 2000; Ajjan & Harshorn, 2008).

5.5.3.2 The full online structural model (SEM). The structural model was estimated with 33 items on 6 constructs. The initial solution required modifications, as good model fit was not achieved in the first run, $\chi^2(480) = 999.866, p < .0001$, CFI = .916, TLI = .907, SRMR = .089, RMSEA = .073 (90% CI .066 - .079) (see Table 16). Modification indices in the output reported a very low parameter estimate and non-significance of perceived ease of use on intention to teach. Therefore, PEU was removed from intention yielding the following model fit, $\chi^2(481) = 999.891, p < .0001$, CFI = .916, TLI = .908, SRMR = .089, RMSEA = .072 (90% CI .066 - .079) (see Table 16). Previous literature supported TAM2 and intention to use in mandatory settings (Venkatesh & Davis, 2000). In addition, the modification indices in the output indicated Chair (or Supervisor) influences should be moved to the intention construct. This decision improved model fit, $\chi^2(481) = 988.873, p < .0001$, CFI = .918, TLI = .910, SRMR = .086, RMSEA = .072 (90% CI .065- .078) (see Table 17).

The final structural model revealed 206 observations with good factor determinacy scores on the six constructs: Student Influence (5 items) = .986; Colleague Influence (7 items) = .961; Chair or Supervisor Influence (7 items) = .979; Perceived Usefulness (6 items) = .964; Perceived Ease of Use (5 items) = .933; and Intention to Teach an Online Course (3 items) = .953 (see Figure 19).

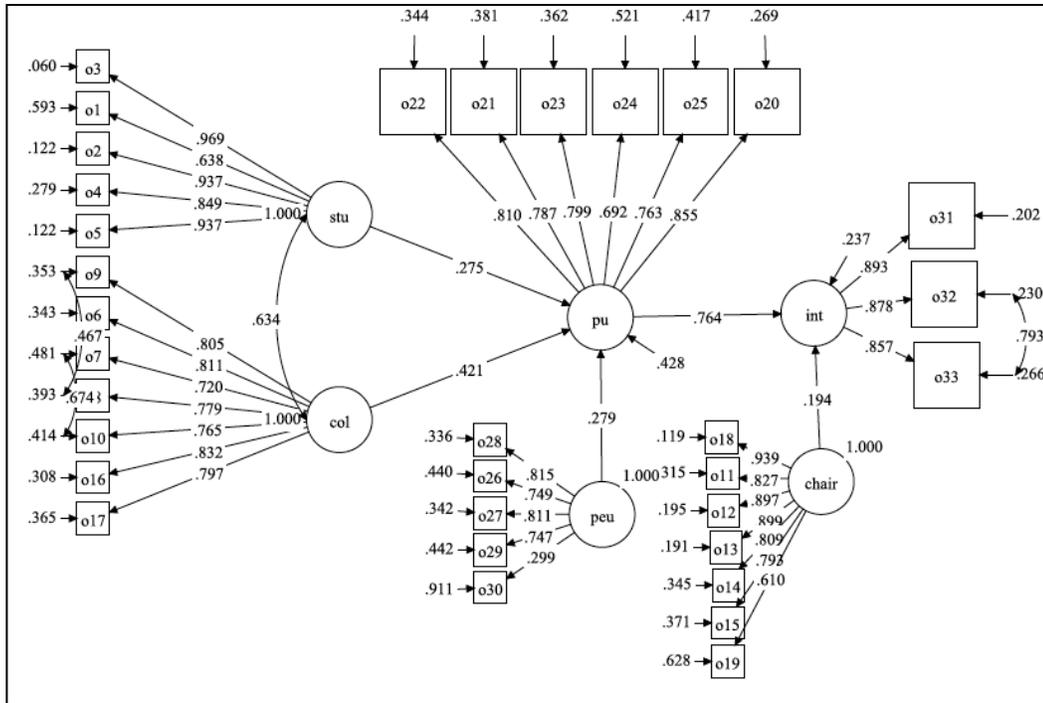


Figure 19. Final structural model of TAM2 for full online course delivery in hospitality management higher education (Venkatesh & Davis, 2000; Ajjan & Harshorn, 2008).

5.6 Discussion

5.6.1 Blended model. All paths hypothesized in the blended model were highly significant at the two-tailed level (see Table 18). The variance accounted for in the blended model in PU was 54.5%: Student Influence → PU ($\beta = .245$); Colleague Influence → PU ($\beta = .285$); and PEU → PU ($\beta = .459$), supporting hypotheses one (H1), two (H2) and four (H4). These findings were consistent with previous research in a path analysis determination of faculty intentions to adopt Web 2.0 technologies in the classroom (Ajjan & Hartshorne, 2008), although hypothesis three (H3), chair or supervisor influence on PU, was not supported in this model, contrary to the findings in the same study. A possible explanation for the difference in the findings of Chair

influences→Intention in this study compared to those of Ajjan & Hartshorne (2008) is that in this study, the subjective norm construct was “deconstructed,” or replaced by student, colleague, and chair influences. In the Ajjan & Hartshorne (2008) study, subjective norm was left in the model and mediated the relationship between the deconstructed second-order constructs and PU.

The variance explained by the model in determining intention to teach a blended course was 83.7%: PU→Intention ($\beta = .821$), which supported hypothesis six (H6), and Chair (Supervisor)→Intention ($\beta = .196$) (see Table 18). Hypothesis five (H5), PEU on Intention, was not supported in this blended model. In the development of the model, the path from Chair (Supervisor)→Intention was not hypothesized; however, this finding is not surprising, as mandatory effects are well validated in previous TAM research (Taylor & Todd, 1995; Venkatesh & Davis, 2000). The emergence of this Chair (Supervisor)→Intention path is one which contributes new information to the literature and will need to be further tested in future studies to determine its validity and establish how this impacts the model as a whole.

Table 18. *Standardized Parameter Estimates of Hospitality Instructors' Intentions to Teach a Blended Online Course*

Hypothesis	Path	β	Sig.	R^2
H1	Student Influence→PU	.245	.002*	.545
H2	Colleague Influence→PU	.285	.001*	
H3	Chair (Supervisor)→PU	-	-	
H4	PEU→PU	.459	< .001*	
H5	PEU→Intention	-	-	
H6	PU→Intention	.821	< .001*	.837
	Chair (Supervisor)→Intention	.196	< .001*	

* *two-tailed*

The parameter estimates for students and colleagues on hospitality instructors' intentions to teach a blended course were similar ($\beta = .245$ and $\beta = .285$, respectively), indicating these two groups produce the same normative effect on instructors' intentions. A little over half the variance for perceived usefulness (54.5%) was explained by student influences, colleague influences, and perceived ease of use (PEU). To improve the fit of the data to the blended model, PEU was removed from intention to teach a blended course. A plausible explanation for this could be a high percentage of hospitality instructors' self-reported intermediate and advanced levels of computer expertise (91.7%), thus indicating PEU was not a significant predictor to use the technology to teach an online course. If hospitality instructors with high levels of mastery over a computer intend to teach an online course, the more likely predictor according to this study, is perceived usefulness (PU).

A very high percentage of variance in "intention to teach a blended course" was explained (83.7%) by PU and Chair or Supervisor influences, $\beta = .821$ and $\beta = .196$, respectively, indicating the strength of the mandatory effect of chair influences on hospitality instructors' intentions to teach a blended course. Intention on perceived usefulness had a high parameter estimate ($\beta = .821$) and suggests hospitality instructors are driven to teach a blended course based on how useful this method of delivery is for students and instructors.

5.6.2 Full online model. All paths within the final full online model were highly significant ($p < .001$) at the two-tailed level (see Figure 19). The variance accounted for in PU was 57.2%: Student Influence \rightarrow PU ($\beta = .275$); Colleague

Influence→PU ($\beta = .421$); and PEU→PU ($\beta = .279$); therefore hypotheses one (H1), two (H2) and four (H4) were supported. Hypothesis three (H3), chair or supervisor influence on PU, was not supported, which is inconsistent with previous findings as discussed in the blended model (Ajjan & Hartshorne, 2008).

The variance explained by the model in determining intention to teach an online course was 76.3%: PU→Intention ($\beta = .764$) and Chair (Supervisor)→Intention ($\beta = .194$) (see Table 19) supporting hypothesis six (H6). Hypothesis five (H5), PEU on intention, was not supported in this model. Similar to findings in the blended model, although not part of the original hypotheses, the path of Chair (Supervisor)→Intention materialized as a result of the mandatory effect consistent with previous TAM research (Taylor & Todd, 1995; Venkatesh & Davis, 2000).

Table 19. *Standardized Parameter Estimates of Hospitality Instructors' Intentions to Teach a Full Online Course*

Hypothesis	Path	β	Sig.	R^2
H1	Student Influence→PU	.275	< .001*	.572
H2	Colleague Influence→PU	.421	< .001*	
H3	Chair (Supervisor)→PU	-	-	
H4	PEU→PU	.279	< .001*	
H5	PEU→Intention	-	-	
H6	PU→Intention	.764	< .001*	.763
	Chair (Supervisor)→Intention	.194	< .001*	

* *two-tailed*

The influences of students and colleagues on hospitality instructors' intentions to teach a full online course were estimated at $\beta = .275$ and $\beta = .421$, respectively. Over half the variance for perceived usefulness (57.2%) was explained by student

influences, colleague influences, and perceived ease of use (PEU). PEU was removed from intention to teach an online course after it was found to improve model fit.

Similar to the blended model, hospitality instructors' self-reported intermediate and advanced levels of computer expertise (91.7%) indicated perhaps PEU was not a significant predictor to use the technology to teach an online course.

A high percentage of the variance accounted for in "intention to teach" (76.3%) was explained by PU and Chair or Supervisor influences ($\beta = .764$ and $\beta = .194$, respectively), demonstrating the strength of the mandatory effect well documented in TAM research (Taylor & Todd, 1995; Venkatesh & Davis, 2000). Similar to the blended model, the high parameter estimate of perceived usefulness on intention ($\beta = .764$) posits hospitality instructors are motivated to teach online based on how useful this method of delivery is for students and instructors.

5.6.3 Comparison of the final structural models. The finding in both models that mandatory situations drive intention to use in the Technology Acceptance Model (Venkatesh & Davis, 2000) is not surprising. Long established as a major theme in TAM, mandatory work environments directly predict intention to use. Online learning and teaching have not been fully realized in hospitality academia, therefore chair and supervisor influences over hospitality instructors is still unclear. Hospitality instructors encounter multiple subjective influences in their determination to teach online. Of those presented in this study (student, colleague, and chair influences), the effect of mandatory chair and supervisor influences has revealed there is a shift in instructors' perspectives, indicating a change of perspective ahead within

the discipline regarding online teaching. According to the results of this study, the effects of a department chair or supervisor on a hospitality instructor are parallel to the mandatory effect of user intention within business settings (Venkatesh & Davis, 2000). Therefore, regardless of how hospitality faculty may feel about online teaching, if mandated by the chair or supervisor, instructors will teach a blended or full online course. The challenge for the chair or supervisor then becomes one of intrinsic versus extrinsic motivation in working with the faculty member.

The final structural models representing the data collected for the intention to teach both blended and full online courses revealed hospitality instructors view the normative effects of student, colleague, and chair influences in a similar manner. Both models indicated the mandatory effect of the chair or supervisor's influence on instructors' intentions to teach blended or full online courses. In addition, both models dismissed the path from PEU to intention. Another difference between the models is model fit, evidenced by the full online model being a better fit than the blended data (see Table 20). Model fit for the full online data was superior over the blended data in the CFI, the TLI, and the SRMR, indicating the theoretical model proposed for the full online data was a better fit to the baseline model (Crockett, 2012). The absolute fit indices used in this study, Chi-square and RMSEA, were both acceptable and within range.

Table 20. *Comparison of Blended and Full Online Model Fit Indices, Faculty Quantitative Study.*

Fit Index	Criteria	Blended Model	Full Online Model
χ^2		1035.631	988.873
Degrees of Freedom (df)		(483)	(481)
p		< .0001	< .0001
Comparative Fit Index (CFI)	$\geq .90 - .95$	.888	.918
Tucker-Lewis Index (TLI)	$\geq .95$; $0 > TLI > 1$ acceptable	.877	.910
Standardized Root Mean Square Residual (SRMR)	$\leq .08$	.091	.086
Root Mean Square Error of Approximation (RMSEA) (90% CI)	< .06 to .08	.077 (.070, .083)	.072 (.065, .078)

5.7 Conclusion

A single cumulative measure of subject norm in a hypothesized technology acceptance model has been criticized by social psychology researchers as being too naïve (Eckhardt, Laumer, & Weitzel, 2009). Consistent with previous TAM findings (Venkatesh & Davis, 1996; Venkatesh et al., 2003), the strongest predictor of user adoption was from superiors, as was the case with this study. However, other less important referent groups have an impact on an individual's decision to adopt a technology (Eckhardt et al., 2009).

Since the inception of TAM, and later TAM2 and UTAUT, researchers have mostly examined subject norm as a single construct (Lee, et al., 2003). Kate, Haverkamp, Mahmood, and Feldberg (2010) recognized that because TAM was a

model designed to measure an *individual's* intention to use, and social networks were at the *group* level, a mediating variable must exist through subjective norm. In the initial model development for this research, subjective norm was retained as a construct mediating student, colleague, and chair influences and perceived usefulness. Preliminary analysis of that model revealed a cumulative measure of subjective norm measured by three additional constructs (student, colleague, and chair influences) only served to weaken the model, as evidenced by the poor fit indices. Once the cumulative subjective norm construct was removed, model fit greatly improved, signifying the final constructs chosen for the proposed model could potentially explain a significant amount of variance.

5.7.1 Student influences. The findings of this research present opportunities for hospitality management program administrators who seek to develop a new, or strengthen an existing, online program. Beginning with student influences, hospitality instructors can be influenced to teach a blended or full online course from students who are important to them. This provides an argument for ensuring consistent and continuous student satisfaction with online learning. When students have good online education experiences, whether blended or full online, they provide positive feedback to their peers as well as their instructors.

The experiential learning component required in most undergraduate hospitality management degrees requires time spent away from campus to participate in industry internships or work over summer breaks. Many students choose to maximize use of this time by enrolling in coursework toward degree completion

simultaneously. Blended or full online course offerings would be a good fit for those students seeking to make rapid progress in their program of study.

Nontraditional hospitality students, including adult learners, those with families, and those who work, also would benefit from the flexibility offered by online learning. Their vested interest in taking an online course might provide the impetus for an instructor to be convinced to teach online, particularly if the student already had positive online learning experiences.

5.7.2 Colleague influences. Colleague influences on an instructor were also shown to predict intention to teach a blended or full online course in this study. Hospitality program administrators should seek those faculty members who are proponents of teaching online and enlist those individuals to support online program offerings. For example, if there was a course in the department that had never been taught in a blended or full online format but was needed as part of the program offerings, the primary instructor of that course could be encouraged by a seasoned online instructor and provided with guidance to successfully move to a blended or full online format. Proponents of online teaching within the department could be called upon to train, help with course development, or consult when a novice instructor develops an online course.

5.7.3 Department Chair or supervisor influences. Regardless of the mandatory setting inferred in this study by hospitality department chairs, it would benefit department supervisors to harness the influences of students and colleagues if online program development is a goal. Intrinsic motivation to complete a task is

preferred over extrinsic motivation (Latham, 2007). Although in a mandatory setting, hospitality management chairs are perceived as extrinsic motivators, savvy chairs and supervisors should understand the benefits in using other referent influences to intrinsically motivate an instructor to teach online in order to accomplish program or institutional objectives.

A practical method hospitality administrators can employ is to support instructors in a blended model of teaching prior to promoting full online course delivery. For those instructors apprehensive about teaching a full online course, blended teaching provides the benefits of online teaching with the preferred method of instruction (i.e. face-to-face) for teaching in the service industries. According to Mejia (2013, Dissertation Article 1), prior qualitative research in this area has demonstrated hospitality faculty's preference for blended over full online course delivery. Adequately supported by students, colleagues, and chairs, hospitality administrators could implement blended course training as a way to transition faculty into full online course delivery since this study demonstrates the positive normative effects of these referent groups.

An anomaly found in this research was the removal of the path from perceived ease of use (PEU) to intention to teach online, supporting similar findings in the Gibson et al. study (2008). This finding suggests two possibilities: either hospitality faculty are already proficient with course management software, or they do not find it very difficult to use. The majority of hospitality faculty in this sample (91.7%) reported intermediate or advanced levels of computer skills across several age

demographics, thus revealing confidence with computers and software at various life stages. The ubiquitous nature of computers and technology no longer poses insurmountable obstacles towards technology adoption.

5.7.4 Online learning and increased flexibility. No longer perceived as merely a trend in course delivery in higher education, the adoption of online teaching is supported for a variety of reasons. Greater flexibility for students and faculty allow nontraditional students to enroll in online courses and programs to complete post secondary degrees. Online courses permit tenure-track faculty to teach from more convenient locations while conducting research. Additionally, full online courses enable students to complete mandatory internships while advancing toward their degree. The blended online learning format is particularly suited for the hospitality discipline, as it offers the flexibility of being online, while satisfying the face-to-face requirement pertinent to service industry learning objectives.

5.7.5 Meeting institutional objectives. Strategic institutional objectives, such as enrolling more students with less funding, continue to be a concern to hospitality program administrators. Blended and full online courses present an opportunity for large classes to be broken into smaller and more manageable sections that could be taught by fewer instructors, thereby supporting enrollment with fewer resources.

Not all hospitality management program administrators and faculty agree with offering full online courses in every subject of the curriculum, but those who have taught online agree that basic survey courses lend themselves well to a full online format (Mejia, 2013, Dissertation Article 1). Online course offerings are a viable

option for all stakeholders of hospitality higher education, however it is paramount that instructors are supported and intrinsically motivated to deliver a high quality online course that ensures program success and student satisfaction.

5.8 Limitations and Future Research

The most commonly cited limitation of any TAM-based research is self-reported usage versus measuring actual usage (Lee et al., 2003). Self-reported usage is criticized as distorting and exaggerating the relationship between independent and dependent variables in a hypothesized model (Agarwal & Karahanna, 2000; Podsakof & Organ, 1986). Additionally, generalizability is problematic in studies when researching one technology with one homogeneous group at a specific point in time (Lee et al., 2003). Venkatesh and Davis (1996; 2000) avoided this limitation by conducting longitudinal studies in most of their research. Due to the fact individuals' perceptions of technology use change over time, therefore affecting intention to use, it is important to measure these variables longitudinally (Lee et al., 2003). Future research in this area should test this model longitudinally to detect changes in intention. As self-reported studies pose threats to reliability, these effects could be diminished (Venkatesh & Davis, 2000) in studies where hospitality faculty intentions are measured after six months, 1-year, and perhaps a 3-year mark.

The lack of clarity in the mandatory component of this research was a limitation in that this research proposed chair or supervisor influences as determinants to perceived usefulness. The findings in this study supported previous TAM research in that mandatory IT settings predict intention to use a technology. Future research

should clarify the non-mandatory effects of chair and supervisor influences, such as when chairs are in advisory roles instead of roles of authority. Department chairs and supervisors not only serve authoritarian positions, but they also mentor faculty members in choosing viable career options toward tenure and promotion. These roles are vague and in this study, validity would have been improved had these roles been clarified.

The research design in this study was a threat to validity in that two models (blended and full online) were presented consecutively, perhaps creating “response fatigue.” Of the 305 respondents who opened the survey, a total of 211 completed the survey to the very end, yielding a 69.2% completion rate for the survey overall. The completion rate of an instrument is measured in terms of the number of individuals who began and completed the survey (Basson, 2008). For the blended model survey, the completion rate was 70.8%. Also, these respondents may have experienced confusion between the two models: blended and full online, thereby threatening the validity of the constructs (Shadish, Cook, & Campbell, 2002). Future research testing these models should be conducted separately with two distinct groups of respondents to increase generalizability. Self-selection bias (Zikmund, 2003) may have also played a role, potentially skewing the data collected in that those who opened the survey link might have had a greater propensity toward the topic of online learning in general.

CHAPTER VI - ARTICLE 3

NORMATIVE FACTORS INFLUENCING HOSPITALITY STUDENTS TO ENROLL IN AN ONLINE COURSE

6.1 Abstract

The rapid growth of hospitality management programs has prompted administrators to investigate alternative instructional methods. Online learning has emerged as the frontrunner. In an effort to provide greater scheduling flexibility, accommodate an ever-growing population of non-traditional students, and resist the constraints of physical space limitations, online learning has become an increasingly popular mode of course delivery. This study utilized TAM2 to determine the subjective influences on hospitality students' intentions to take an online course in order to identify ways to support students in choosing this option. Findings revealed possible subjective influences that could be leveraged to encourage students to enroll in online courses and facilitate a positive learning experience.

6.2 Introduction

A recent survey conducted regarding online learning in higher education reported enrollments increased by one million students in 2009, a significant jump over 2008 figures (Allen & Seaman, 2010). Not only are students more interested in online learning but so too are universities. The same study found 63% of participating institutions deemed online learning a major component to long-term strategic growth plans (Allen & Seaman, 2010). While there apprehension exists among faculty regarding the effectiveness of teaching online, this mode of instruction offers

countless possibilities for stakeholders. The advantages of eLearning represent considerable convenience to both students and faculty (Sigala, 2001), increased access to more diverse student populations, and generation of new revenue streams (Sigala & Baum, 2003).

Researchers have investigated students' perceptions of online learning from several perspectives, including the intention to use online technologies (Chang & Tung, 2008; Liaw, 2008), student satisfaction (Summers, Waigandt, & Whittaker, 2005), retention (Fisher & Baird, 2005), repeated use of the system (Song, 2011), and the effects of instructor involvement on student satisfaction (Lee et al., 2011). Song (2011) reported perceived usefulness of a system and course satisfaction were both predictors of student loyalty to an online program. Therefore, a hospitality program that included opportunities for eLearning must ensure student satisfaction in order to remain viable and contribute to the reputation of the institution (Song, 2011). Krentler and Willis-Flurry (2005) determined the use of technology was beneficial to student learning, which was supported by similar previous studies (Clarke, Flaherty, & Mottner, 2001; Sivin-Kachala, 1998; Kulick, 1994).

As eLearning developed into a widely implemented mode of course delivery, the majority of early research focused on predictors of success or failure in online courses (Behnke, 2012). However, effectiveness of online course delivery seems to no longer be a focal point. Instead, research in this area has experienced a shift into more nuanced studies (Behnke, 2012; Tamim, Bernard, Borokhovski, Abrami, & Schmid, 2011). Behnke (2012) found other factors such as personal aptitude, motivations, and

emotional intelligence also played a significant role in hospitality students' attitudes toward online learning. Specifically, research revealed as students' emotional-social intelligence increased, their overall attitude toward computer-based instruction also improved (Behnke, 2012).

Hospitality management programs have been slow to adopt new teaching formats (Sigala & Baum, 2003) and online learning represents a new challenge. As more hospitality programs implement eLearning as part of the curriculum offerings, it is incumbent upon administrators to maximize the effectiveness of this mode of instruction in order to meet the needs of students and faculty. Additionally, the number of hospitality management programs has grown five-fold within the last 25 years (Stoller, 2008). This rapid expansion calls for new and updated course delivery methods, of which online learning is paramount.

Regardless of student satisfaction and other predictors of success in online learning, the focus of most empirical literature is on students who were currently or previously enrolled in online courses. While numerous studies in eLearning research has been conducted on a relatively experienced sample of students, there are no studies which focus on hospitality students' intentions to take an online course if they have had little to no experience with this medium. Since hospitality programs are currently assessing the need for online course development based on rapid growth of programs and increased flexibility for students and faculty, this study aims to bridge this gap in the literature and provide an investigation into the subjective norm influences on a student's intention to take an online course.

6.3 Literature Review

6.3.1 Student perspectives. In 2001, Marc Prensky coined the phrase “digital natives” to describe individuals born between 1980 and 1994 (Prensky, 2001a). Digital natives were the first generation to grow up with the latest technologies, including the Internet (Prensky, 2001a). Researchers also labeled this age group the “millennial generation;” a cohort with distinct characteristics, particularly related to education, distinguishing them from preceding generations (Howe & Strauss, 2003). Millennials were unique due to their ability to be active experiential learners, good at multitasking, and highly dependent on communication technologies for social interaction (Oblinger & Oblinger, 2005). Critics of higher education, such as Prensky, generated controversy over whether contemporary institutions of higher education would be able to effectively meet the needs of this new generation (Bennet, Maton, & Kervin, 2008).

The significance in understanding and classifying contemporary college students concerns their pedagogical needs and how these changed as the digital age matured. To illustrate this point, Prensky (2001a) stated, “Today’s students think and process information fundamentally differently from their predecessors” (p. 1). Furthermore, “Today’s students are no longer the people our educational system was designed to teach” (Prensky, 2001a, p. 1). With concerns for the future of digital learning and as an instructor himself, Prensky (2001a) created simulation games for learning in order to reach his students and recommended all disciplines develop similar strategies to connect with digital natives.

Prensky (2001a) went on to assign the term, “digital immigrants” to describe anyone born prior to 1980 and characterized these individuals as persons who had to adapt to the new technologies, similar to any other immigrant who would have to adapt to a new environment, but who always would have a foot in the past. Digital immigrants also included instructors in higher education, thereby illustrating the gap between the advanced technological skills and pedagogical demands of new, incoming Millennials and the proposed rudimentary IT abilities of their professors (Prensky, 2005; Bennett et al., 2008).

6.3.1.1 Student perceptions of online learning. From a student’s perspective, the flexibility of learning anytime and anywhere via networking technologies is reported as one of the primary benefits to taking online courses (Liaw, 2008), as nearly 30% of current undergraduate students take at least one online course during their studies (Allen & Seaman, 2010). Some of the most common motivations for online learning include the ability of students to manage their schedules, less dependence on instructor imposed time constraints, and the freedom to express themselves and ask questions (Bouhnik and Marcus, 2006). In addition to the convenience of time and place factors supported in prior research (Capper, 2001), other findings demonstrated discussions were more likely to stay on track due to asynchronous discussion, increased group collaboration, and new tools for learning.

However, students in prior studies reported dissatisfaction with their online courses as evidenced by high dropout rates (Dutton and Perry, 2002). Common complaints cited by students were a lack of pedagogical structure for learning, low or

non-existing levels of self-discipline required to complete online courses, deficiency of a learning environment, the lack of interpersonal interaction among students and teachers, and less efficient time utilization with online learning formats (Bouhnik & Marcus, 2006). In a study of adult distance learners' decisions to drop out of an online course, several factors were reported, including lack of family support, poor organizational structure, low student satisfaction, and an absence in course relevance (Park and Choi, 2009).

6.3.1.2 Quality. Student perceptions of course quality relates directly to effective teaching in higher education (Marsh, 1987) and has long been held as a measure of student satisfaction (Ramsden, 1991). The notion that students are in the best position to evaluate effective teaching and comment on teaching quality is justified because students experience a great deal of teaching over the course of their academic careers (Ramsden, 1991).

Research shows a link between perceived course quality and online interaction from the perspectives of both the student-student and student-teacher relationship (Trentin, 2000). The importance of instructor facilitation of interaction among students was determined to be a pivotal indicator of high quality perceptions in distance education (Trentin, 2000). Research also indicates students have a tendency to judge an online course based on their perception of the instructor's interactivity (Flottemesch, 2000). These notions support multiple studies (Murphy, Smith & Stacey, 2002; Wilson & Stacey, 2004) regarding the importance of instructor training

for online course delivery, with special consideration for instructor interaction and perceived course quality.

6.3.1.3 Learning environment. Compared to a face-to-face course, in online learning the use of time is dictated by the student which allows for increased time to participate in course discussions (Frazee, 2003). Additionally, non-threatening learning environments enable greater student participation and increased opportunities, both public and private, to ask questions (Frazee, 2003).

Virtual classrooms produced greater success when students were actively involved as participants (Edelstein & Edwards, 2002). Studies have shown when students expanded their interactions to include both fellow students and the instructor it advanced their own knowledge, building based on social constructions and understandings (Liaw, Huang, & Chen, 2007). Interactive environments were found to be critical to the success of student online learning as well as learner self-efficacy and the implementation of multimedia formats (Liaw, 2008).

6.3.2 Theoretical framework. The theoretical basis for this study was the Technology Acceptance Model 2 (TAM2) (Venkatesh & Davis, 2000). Based on the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975) and the Theory of Planned Behavior (TPB) (Ajzen, 1991), TAM predicts an individual's intention to use a technology based on the technology's usefulness and ease of use (Davis, 1989). TAM has been widely tested across many disciplines and is recognized as a robust and parsimonious model for predicting user intention of technology (Taylor & Todd, 1995). The second iteration of TAM (TAM2) was the ideal model for this research

due to the inclusion of the subjective norm construct, which is the belief that a person's behavior will be influenced by the way they believe others will view them after having used the technology in question (Venkatesh, Morris, Davis, & Davis, 2003).

6.3.2.1 Deconstructed subjective norm. New to the literature is the analysis of TAM using a deconstructed subjective norm. A study of students' decisions to adopt Web 2.0 technology as a supplemental activity in class was conducted using the Decomposed Theory of Planned Behavior (DTPB) (Hartshorne & Ajjan, 2009). Subjective norm was separated into superior and peer influences, both of which had significant positive influences on subjective norm (Hartshorne & Ajjan, 2009). In a related study which investigated faculty intentions to adopt Web 2.0 technologies, DTPB was the theoretical foundation to predict intention. Divided into three second-order constructs, subjective norm was predicted by student, peer, and superior influences (Ajjan & Harshorne, 2008). While all three influences had a significant effect on subject norm, subjective norm failed to predict intention to use (Ajjan & Harshorne, 2008).

Previous studies have confirmed when an individual user is not properly informed about a technology in a mandatory environment (Hartwick & Barki, 1994), subjective norm becomes significant. As the user gains experience with the technology over time, the individual will rely more on his or her own experience, thereby decreasing reliance on social influences (Hartwick & Barki, 1994; Venkatesh et al., 2003).

6.3.3 Combining TAM and Diffusion of Innovations Theory. The

Technology Acceptance Model is an adoption theory used to determine whether or not an *individual* will adopt or reject a particular innovation or technology (Straub, 2009). As such, adoption theories offer a narrow perspective, focusing not on the change-process of an entire population, but rather a microscopic perspective on change at the individual level (Straub, 2009). Diffusion of Innovations Theory (DOI) takes a broader perspective and examines how innovations spread throughout populations (Rogers, 1962), taking into account the variables of time and social pressure to explain how a segment of a population adopts, adapts to, or rejects a particular innovation (Straub, 2009).

Technology adoption is a complex social developmental process based on the perceptions of an individual and influenced by referent others (Straub, 2009). Research models combining Diffusion of Innovations Theory with TAM have been used to predict technology user intentions by retaining the evolutionary component of technology adoption within the model. Prior research combining the models have examined user intentions (Morre & Benbasat, 1996), online learning in a university setting (Keller, 2005), and students' intentions to use online course websites (Chang & Tung, 2008). This study relied on Diffusion of Innovations Theory to authenticate the social effect of technology adoption.

6.3.4 Purpose of the study. The majority of the extant literature regarding students' attitudes toward online learning surveyed students currently enrolled in an online course, or those students who had already completed an online course (Liaw,

Huang, & Chen, 2007; Hartshorne & Ajjan, 2009; Samarawichrema & Stacey, 2007; Song, 2010; Liu, et al., 2010). In addition, most research on undergraduates with respect to online learning revolved around students' satisfaction with the course or with online learning in general (Liaw, Huang, & Chen, 2007; Song, 2010).

There are no studies to date which have investigated students' attitudes toward online learning within the discipline of hospitality management; this research was designed to fill that gap. As the theoretical foundation for the study, TAM2 was tested to predict students' intentions to take an online course, specifically addressing the decomposed subjective norm constructs.

6.4 Methodology

6.4.1 Model development. The model for this study was developed based on an extensive literature review of online learning in higher education using the Technology Acceptance Model 2 (Venkatesh & Davis, 2000). The following model was proposed to determine hospitality students' intentions to take a full online course (see Figure 20).

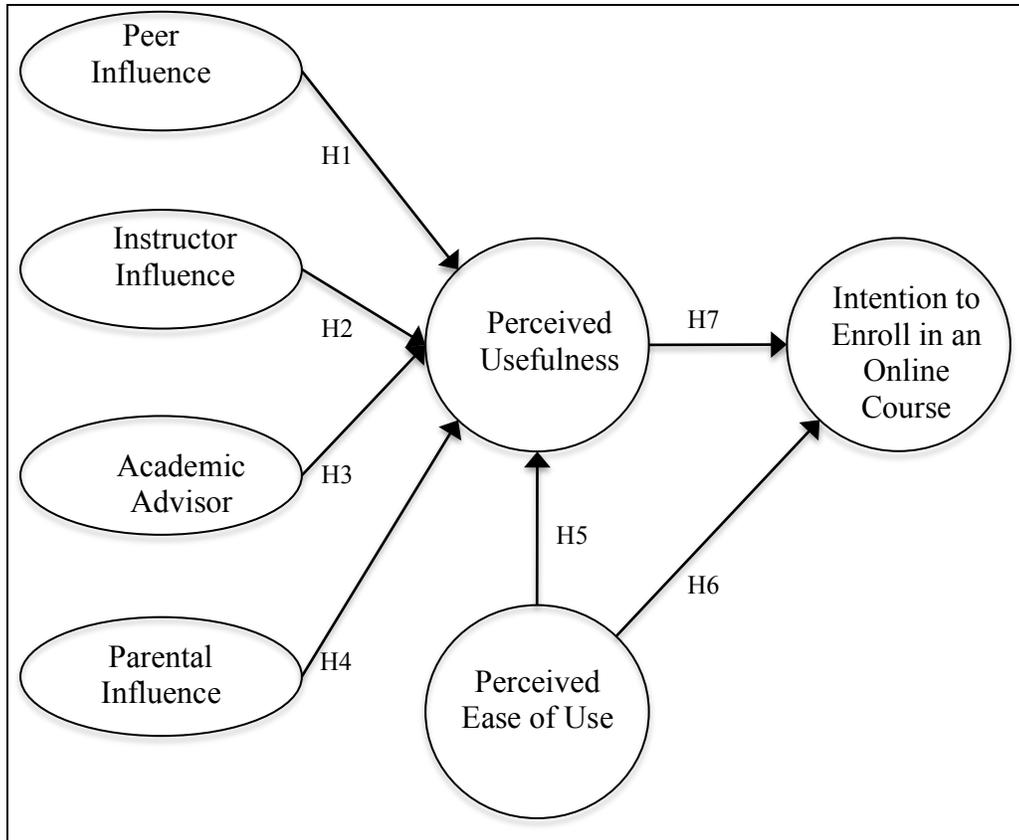


Figure 20. Hospitality students’ intentions to take an online course model, based on TAM2 (Venkatesh & Davis, 2000; Ajjan & Hartshorn, 2008).

6.4.2.1 Subjective norm. Taylor and Todd (1995) defined subjective norm as the influence of important referent groups on a person’s behavior. In prior research, subjective norms both influenced and encouraged student use of technology (Harshorne & Ajjan, 2009). The majority of TAM based research consolidated the various normative factors into one subjective norm construct. For the purpose of this study, the proposed model deconstructed the various elements of subjective norm into peer, instructor, academic advisor, and parental influences. Based on the works of Hartshorne and Ajjan (2009), in a TAM study conducted to determine students’

decisions to adopt Web 2.0 technologies, second order constructs as determinants to subjective norm (SN) were peer ($\beta = 0.205, p < .01$) and superior influences ($\beta = 0.719, p < .01$). In a related study which examined faculty intentions to adopt Web 2.0 technologies, peer (or colleague) influence had a significant effect on subjective norm ($\beta = 0.205, p < .05$), as did superior ($\beta = 0.396, p < .001$) and student influences ($\beta = 0.356, p < .001$) (Ajjan & Hartshorne, 2008). In these two studies (Ajjan & Hartshorne, 2008; Hartshorne & Ajjan, 2009), similar constructs were validated: peer, superior, and student influences.

Prior research has demonstrated a significant normative effect of parents, peers, academic advisors, and faculty on college students in a variety of learning environments. In a study measuring faculty, peer, and parents' influences on an undergraduate's intention to stay in school, faculty influences on students' intention to remain enrolled were significant, but not nearly as influential as peers and parents (Bank, Slavings, & Biddle, 1990). A TAM study investigating faculty encouragement of college students' use of a computer-based encrypted examination found faculty influences significantly affected students' attitudes and perceived performance on the examination (Baker-Eveleth, Eveleth, O'Neill, & Stone, 2006). The role of academic advisors has also been prevalent in the literature related to student retention and satisfaction. Research exploring the impact of academic advising on student attrition found high-interaction from advisors, as well as faculty and peers, enhanced students' self-directed learning experiences (Ludwig-Hardman & Dunlap, 2003).

Perceived usefulness (PU) is the degree to which a person subjectively believes the use of a technology will enhance performance (Davis, 1989). Based upon these findings, this study proposed peer, instructor, academic advisor, and parental influences as determinants to perceived usefulness (PU) (see Figure 20):

- H1.** Peer influence on hospitality students positively affects PU.
- H2.** Instructor influence on hospitality students positively affects PU.
- H3.** Academic advisor influence on hospitality students positively affects PU.
- H4.** Parental influence on hospitality students positively affects PU.

6.4.2.2 Perceived ease of use. Perceived ease of use (PEU), as defined by Davis (1989), is the degree to which a person believes using a particular technology system would be free from effort. In the Technology Acceptance Model PEU is the antecedent to perceived usefulness (PU), which in turn is the determinant to intention. Previous information system researchers confirmed PEU had a positive effect on the behavioral intention and perceived usefulness of a system (Chin & Todd, 1995; Venkatesh & Davis, 2000), thus hypotheses five and six are presented (see Figure 20):

- H5.** Perceived ease of use positively affects PU.
- H6.** Perceived ease of use positively affects hospitality students' intention to take an online course.

6.4.2.3 Perceived usefulness. Perceived usefulness was initially theorized in the context of an employee's job performance, but the definition has expanded to include many ordinary tasks in non-organizational settings (Yousafzai et al., 2010). Previous investigation of TAM revealed PU had a positive effect on the behavioral

intention to use the technology system (Chin & Todd, 1995), therefore it is hypothesized (see Figure 20):

H7. Perceived usefulness positively affects hospitality students' intention to take an online course.

6.4.3 Sample. Three hundred and twenty-four (324) surveys were distributed in hard copy to hospitality undergraduate students in a Southwestern university in the United States during December 2012. The decision to disseminate hard copies as opposed to distribution online was made due to the poor rate of return of online surveys (Sax, Gilmartin, & Bryant, 2003). Three hundred and twenty-three (323) surveys were returned, of which all were usable.

In order to attract more participants, a raffle for a \$100 gift card was offered as an incentive. Included in the paper survey was a separate form in which the students could fill in contact information if they wished to participate in the drawing. The purpose of the additional form was to generate a separate list for personal information to award the gift card so that these responses could not be matched to original survey responses. The odds of winning the gift card were approximately 1 in 400 and the drawing was held on December 31, 2012.

6.4.4 Instrument development. Based on previous validated scales and support from the TAM2 literature, the survey instrument was designed to test the Technology Acceptance Model 2 with deconstructed items in subjective norm. Three of the main TAM2 constructs borrowed scales from the literature: perceived usefulness (Ajjan & Hartshorne, 2008; Liaw, 2008; Liu et al., 2010); perceived ease of

use (Davis, 1989; Jung et al., 2008; Liu et al., 2010); and intention to use (Davis, 1989; Davis, 1993; Venkatesh & Davis, 1996; Venkatesh, 2001; Liaw, 2007; Liaw, 2008; Liu et al., 2010). The remaining four constructs were adapted from the literature and examined subjective norms more precisely: peer influences; instructor influences; academic advisor influences; and parent and/or guardian influences (Ajjan & Hartshorne, 2008; Harshorne & Ajjan, 2009).

The original survey was comprised of 91 questions; 60 based on the TAM2 model to predict intention to enroll in a blended (30 questions) and a full online (30 questions) course. The 60 TAM2 questions utilized a 5-point Likert scale of measurement (1 = strongly disagree to 5 = strongly agree). Twenty-eight (28) questions referred to blended and online learning in general, and the remaining three questions were demographic in nature. For the purpose of this study, only the items related to full online courses were utilized due to the sample having very limited experience with blended instructional methods.

6.4.5 Analysis. Descriptive statistics were used to establish the demographic characteristics of the student participants. Structural equation modeling (SEM) was chosen as the method of analysis to test the hypothesized TAM2 with empirical data. The constructs were measured in SPSS v. 20 to assess Cronbach's alpha to ensure internal consistency of the instrument. The measurement model was then analyzed using confirmatory factor analysis (CFA) and modifications were made on the estimated model until goodness-of-fit was satisfactory. The structural model was then

estimated until good model fit was achieved according to the indices. Statistical analysis for the CFA and SEM were conducted using Mplus v.7 software.

Mplus software was chosen as the structural equation modeling package due to its ability to process missing data values. The default for estimation of data missing at random (MAR) in Mplus is the use of maximum likelihood to estimate the model (Rubin, 1976). Biased estimates and loss of statistical power result when using other statistical packages that generate missing values with imputation (Muthén & Muthén, 2012). In Mplus, parameters are estimated directly without first imputing values for those that are missing, whereas in other statistical programs listwise or pairwise deletion of missing data is the default procedure (Muthén & Muthén, 2012).

6.4.5.1 Data screening. Prior to the confirmatory and structural analyses for the model, the data was screened for univariate and multivariate violations of normality using SPSS v.20. A total of 323 surveys were collected, of which 23 cases were deleted. Deletion was determined based on cases with multiple instances of missing data or multivariate outliers, such as where participants answered all questions with the same response (i.e. all 1's). No univariate outliers were detected within the model due to the use of a 5-point Likert scale of measurement. Twenty-five (25) multivariate outliers were detected in the data screening in the combined analysis of the standardized residuals, the Mahalanobis distances, Cook's distance, and the centered leverage values (Tabachnick & Fidell, 2001). After these cases were deleted, the sample size was $n = 275$. This sample size was deemed adequate according to

criteria set by Bentler and Chou (1987) of 5 cases per free parameter. In the model, there were 30 items and so the minimum of $n = 150$ cases was met.

Prior to the measurement of validity, items 17 and 27 were dropped from the model due to issues with multicollinearity. Internal consistency of the instrument was measured with Cronbach's alpha (see Table 21). The hypothesized model measured seven constructs with 28 items, all indicating good levels of reliability (Schmitt, 1996).

Table 21. *Reliability Analysis of the Constructs, Student Quantitative Study.*

Construct	Item	α Value
<i>Peer Influence</i>		.896
O1	My peers have influenced my intentions to take an online course.	
O2	Peers who are important to me want me to take an online course.	
O3	Peers whom I trust value that I take an online course.	
O12	My friends think I will benefit from taking an online course.	
<i>Instructor Influence</i>		.846
O4	Instructors whose opinions I value have suggested that I take an online course.	
O5	Instructors whom I admire have indicated that I should take an online course.	
O6	Instructors have influenced my decision to take an online course.	
O7	I am likely to take an online course based on the opinions of an important instructor.	
O11	Based on the views of respected instructors, it is important for me to take an online course.	
<i>Academic Advisor Influence</i>		.880
O8	My academic advisor has indicated that I should take an online course.	
O9	My academic advisor would prefer that I take an online course.	

Table 21. (Continued).

Construct	Item	α Value
O10	My academic advisor has told me to take an online course.	
<i>Parental Influence</i>		.859
O13	It is important to my parent(s) or guardian that I take an online course.	
O14	My parent(s) or guardian confirms my ability to take an online course.	
O15	My parent(s) or guardian has told me to take an online course.	
O16	My parents expect me to take an online course.	
<i>Perceived Usefulness</i>		.932
O18	I believe taking an online course is useful to students.	
O19	Taking an online course could improve my learning effectiveness.	
O20	Taking an online course could increase my learning productivity.	
O21	I think taking an online course will help my academic experience in college.	
O22	I think taking an online course will improve my understanding of course material.	
<i>Perceived Ease of Use</i>		.820
O23	Taking an online course is easy.	
O24	It is easy to become skillful at taking an online course.	
O25	It is easy to interact with the technology used to take an online course.	
O26	It is easy to handle a problem when enrolled in an online course.	
<i>Intention to Take an Online Course</i>		.911
O28	It is important to me that I take an online course in the near future.	
O29	I plan on taking an online course.	
O30	I intend to take an online course.	

6.4.5.2 Structural equation modeling. Structural equation modeling (SEM) is a series of techniques used in multivariate analysis to determine the relationships

between one or more independent variables against one or more dependent variables (Ullman, 2001). The benefit to using SEM is that it has the ability to predict multiple relationships between the latent constructs in a hypothesized model (Ullman, 2001). The steps in SEM include: model specification, model identification, model estimation, model testing, and model modification (Bollen & Long, 1993). Model specification provides the theoretical model along with all of the variables hypothesized in the study (Cooley, 1978). A path diagram specifies the relationships in the model to visually represent the phenomenon (Crockett, 2012). Model identification is the confirmatory step that determines a unique solution for each parameter (Crockett, 2012). Model estimation is an iterative process using a statistical software package that serves as a fitting function (Crockett, 2012). Model testing in SEM is a process that simultaneously analyzes the measurement and structural models (Crockett, 2012). This step produces fit indices for the model as well as the individual parameter estimates.

Model fit indices are characterized into three categories: absolute, comparative, and parsimonious (Crockett, 2012). The fit indices used for this research included Chi-square absolute fit index, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the standardized root mean square residual (SRMR), and the root mean square error of approximation (RMSEA). Cutoff criteria for these indices, as recommended by Schreiber, Stage, King, Nora, and Barlow (2006), are noted below in Table 22.

Table 22. *Criteria for indices determining good model fit in this study (Schreiber et al., 2006.)*

Index	Abbreviated	Criteria
Chi-square	χ^2	Decreasing value with each iteration
Comparative fit index	CFI	$\geq .90 - .95$
Tucker-Lewis index	TLI	$\geq .95$; $0 > TLI > 1$ acceptable
Standardized root mean square residual	SRMR	$\leq .08$
Root mean square error of approximation	RMSEA	$< .06$ to $.08$ (Reported with confidence interval)

The final step in SEM is model modification, an iterative process involving the addition or deletion of parameters to improve goodness-of-fit (Crockett, 2012). Based on the standardized parameter estimates and the modification indices in the output, the goal in SEM is to improve model fit without abandoning knowledge of the guiding theory (Kline, 2005).

6.5 Results

6.5.1 Description of the sample. The majority of students (85.8%) were between the ages of 19 and 23, with a comprehensive range of 18 to 54. Approximately 62% of students surveyed were female, which was consistent with the demographics of the hospitality management program studied. According to self-reported classification, 6.9% of students were freshmen, 18.8% sophomores, 29.5% juniors, and 44.8% seniors. Regarding previous experiences with online courses, 42.2% of respondents had never taken an online course (see Table 23).

Table 23. *Demographics of Hospitality Undergraduate Student Sample*

Variable	Freq	%
Undergraduate Students (<i>n</i> = 275)		
Age		
18	15	5.5
19	33	12.0
20	60	21.9
21	68	24.8
22	48	17.5
23	27	9.9
24	9	3.3
> 25	14	5.1
Gender		
Male	104	38.0
Female	169	61.7
Classification		
Freshman	18	6.9
Sophomore	49	18.8
Junior	77	29.5
Senior	117	44.8
Previously Taken a Full Online Course		
Yes	159	57.8
No	116	42.2

6.5.2 The measurement model (CFA). The initial confirmatory factor analysis (CFA) was run using the hypothesized TAM2 model with deconstructed subjective norms (see Figure 1). Although the initial model revealed good fit, several items were re-specified according to the parameter estimates in the output (see Table 24). Modification indices in the output revealed a correlation of errors on items O30 with O29. This correlation was justified based on the item correlation in the data screening for multicollinearity (Byrne, 2012). After the model was modified and re-

specified, goodness-of-fit of the measurement model was achieved (see Table 25)

(Schreiber et al., 2006), χ^2 (385) = 986.321, $p < .0001$, CFI = .902, TLI = .890, SRMR = .113, RMSEA = .075 (90% CI .070 - .081).

Table 24. *Measurement and Structural Modification Decisions Based on Fit Indices, Student Quantitative Study.*

#	Step	Reason for Modification	χ^2 (df) <i>p</i>	CFI	TLI	SRMR	RMSEA (90% CI)
1	Hypothesized Measurement Model	28 items, 7 scales	1051.140 (386) $p < .0001$	.892	.878	.118	.079 (.073, .085)
2	peer by O3 parent by O15 PU by O19 PEU by O24	Respecify	1051.140 (386) $p < .0001$	.892	.878	.118	.079 (.073, .085)
3	peer by O2 int by O30 O30 with O29	Respecify Modification indices	986.321 (385) $p < .0001$	.902	.890	.113	.075 (.070, .081)
4	Structural Model	28 items, 7 scales	1034.650 (389) $p < .0001$	.895	.883	.122	.078 (.072, .083)
5	int on advisor	Nonsignificant	1004.518 (389) $p < .0001$	.900	.888	.114	.076 (.070, .082)
6	int on peer	Nonsignificant	997.568 (389) $p < .0001$	.901	.889	.113	.075 (.070, .081)
7	int on parent	Nonsignificant	992.796 (389) $p < .0001$	.902	.890	.114	.075 (.069, .081)
8	peer on pu & int	275 observations	989.969 (388) $p < .0001$	.902	.890	.113	.075 (.069, .081)

Factor determinacy scores for the measurement model indicated all 7 factors were well measured: Peer Influence (4 items) = .960; Instructor Influence (5 items) = .969; Academic Advisor Influence (3 items) = .946; Parental Influence (4 items) = .947; Perceived Usefulness (5 items) = .975; Perceived Ease of Use (4 items) = .934; and Intention to Take an Online Course (3 items) = .933 (see Figure 21).

Table 25. *Model Fit Summary for the Measurement and Final Structural Models, Student Quantitative Study.*

Fit Index	Criteria	Measurement Model (CFA)	Structural Model (SEM)
χ^2		986.321	989.969
Degrees of Freedom (df)		385	388
p		< .0001	< .0001
Comparative Fit Index (CFI)	$\geq .90 - .95$	.902	.902
Tucker-Lewis Index (TLI)	$\geq .95$ $0 > \text{TLI} > 1$ acceptable	.890	.890
Standardized Root Mean Square Residual (SRMR)	< .08	.113	.113
Root Mean Square Error of Approximation (RMSEA) (90% CI)	< .06 to .08	.075 (.070, .081)	.075 (.069, .081)

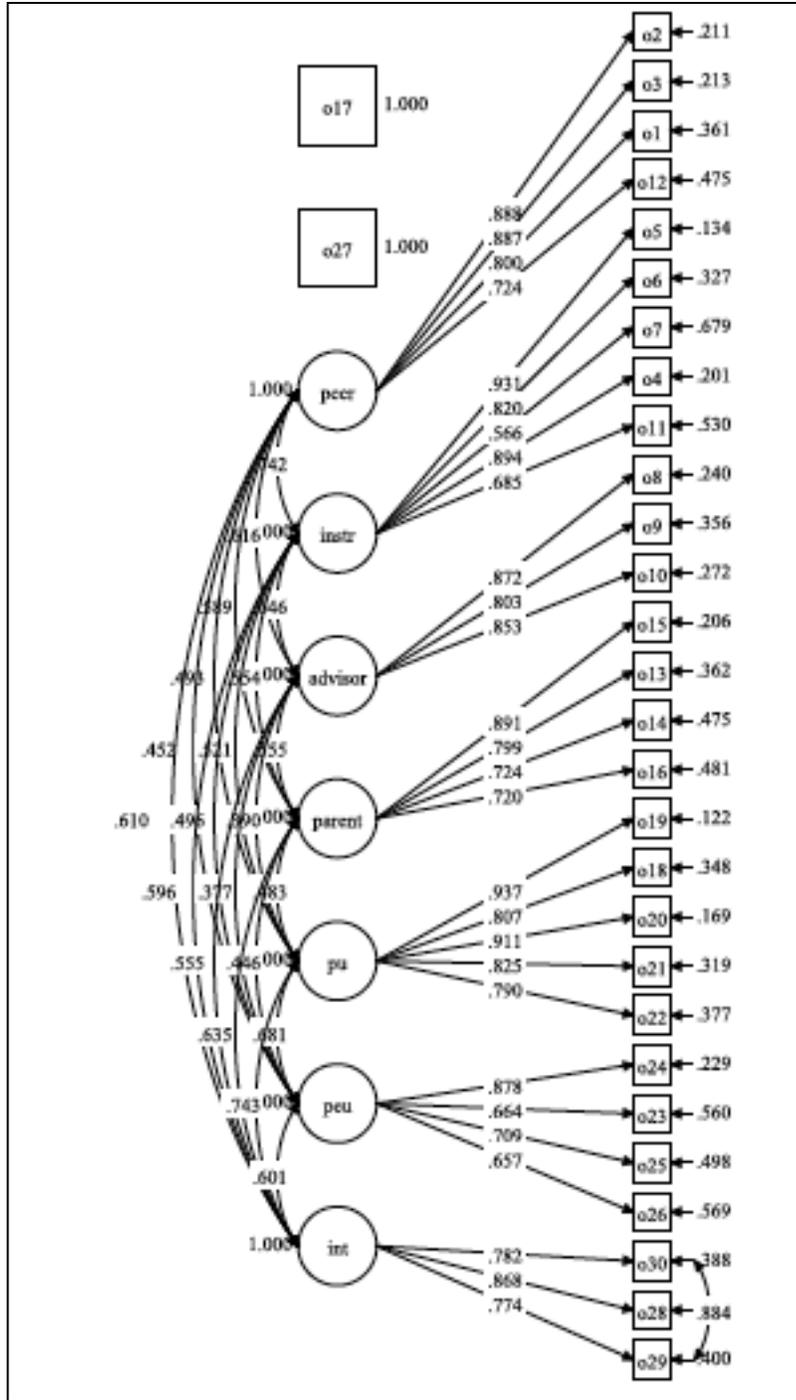


Figure 21. Measurement model of hospitality students' intentions to take an online course model, based on TAM2 (Venkatesh & Davis, 2000; Ajjan & Hartshorn, 2008).

6.5.3 The structural model (SEM). The structural model was estimated with 28 items on seven constructs. The structural model was estimated with 33 items on 6 constructs. The initial solution required modifications, as good model fit was not achieved in the first run, $\chi^2(389) = 1034.650, p < .0001$, CFI = .895, TLI = .883, SRMR = .122, RMSEA = .078 (90% CI .072 - .083) (see Table 24). Modification indices in the output reported a very low parameter estimate and non-significance of PU on advisor influences. Therefore, advisor influences were moved from PU to intention yielding an improvement in model fit, $\chi^2(389) = 1004.518, p < .0001$, CFI = .900, TLI = .888, SRMR = .114, RMSEA = .076 (90% CI .070 - .081) (see Table 24). In the next iteration, peer influences were treated in the same manner, as advisor influences improved model fit, $\chi^2(389) = 997.568, p < .0001$, CFI = .901, TLI = .889, SRMR = .113, RMSEA = .075 (90% CI .070 - .081).

Previous literature supported TAM2 and intention to use in mandatory settings (Venkatesh & Davis, 2000). However, the modification indices from the output indicated parental influences should be moved to the intention construct. Although parents and guardians of hospitality students are not likely to impact most students on a daily basis, as in a work setting, an argument could be made that students view parental influences as a mandatory effect. The decision to move parent influences from PU to intention improved model fit, $\chi^2(389) = 992.796, p < .0001$, CFI = .902, TLI = .890, SRMR = .114, RMSEA = .075 (90% CI .069 - .081) (see Table 24). Finally, the standardized parameter estimates for intention on peer influences were

very low, as well as being non-significant. Therefore, a decision was made to put peer influences back on PU while maintaining the path of intention on peer. This modification slightly improved model fit and significance of the parameter estimates, $\chi^2(388) = 989.969, p < .0001, CFI = .902, TLI = .890, SRMR = .113, RMSEA = .075$ (90% CI .069 - .081). In the final structural model (see Figure 22) three constructs were moved according to the improvement of the fit indices; however, only four pathways were significant (see Table 26).

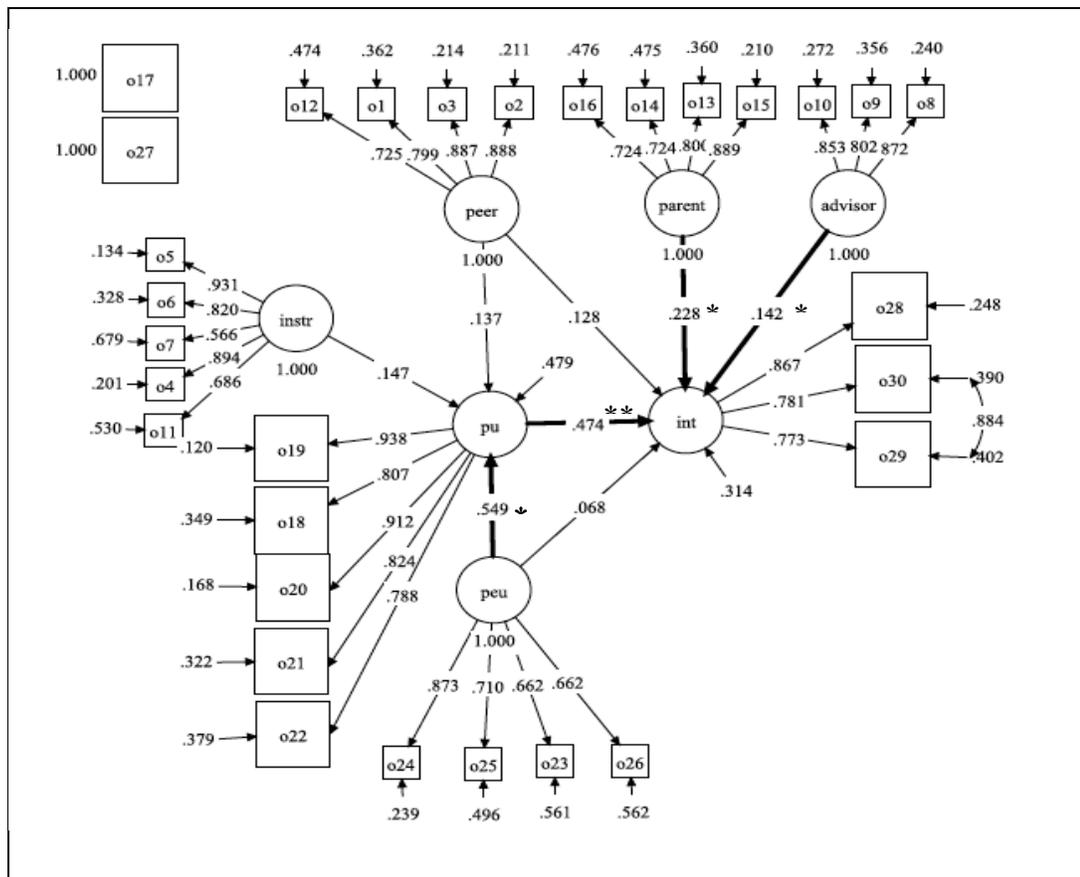


Figure 22. Complete final structural model with all pathways, both significant and non-significant (* $p < .05$, ** $p < .001$, two-tailed).

Table 26. *Parameter Estimates for the Final Structural Model, Student Quantitative Study*

Path	β	Sig.	R²
Peer Influence→PU	.137	.091	.521**
Instructor Influence→PU	.147	.075	
PEU→PU	.549	.001**	
Peer Influence→Intention	.128	.078	.686**
PEU→Intention	.068	.369	
Parental Influence→Intention	.228	.001**	
Academic Advisor Influence→Intention	.142	.036*	
PU→Intention	.474	.001**	

* $p < .05$; ** $p < .001$ - two-tailed

The final structural model revealed 275 observations with good factor determinacy scores on the seven constructs: Peer Influence (4 items) = .960; Instructor Influence (5 items) = .969; Academic Advisor Influence (3 items) = .946; Parental Influence (4 items) = .946; Perceived Usefulness (5 items) = .975; Perceived Ease of Use (4 items) = .933; and Intention to Take an Online Course (3 items) = .932. The final structural model with only relevant significant pathways is presented below (see Figure 23).

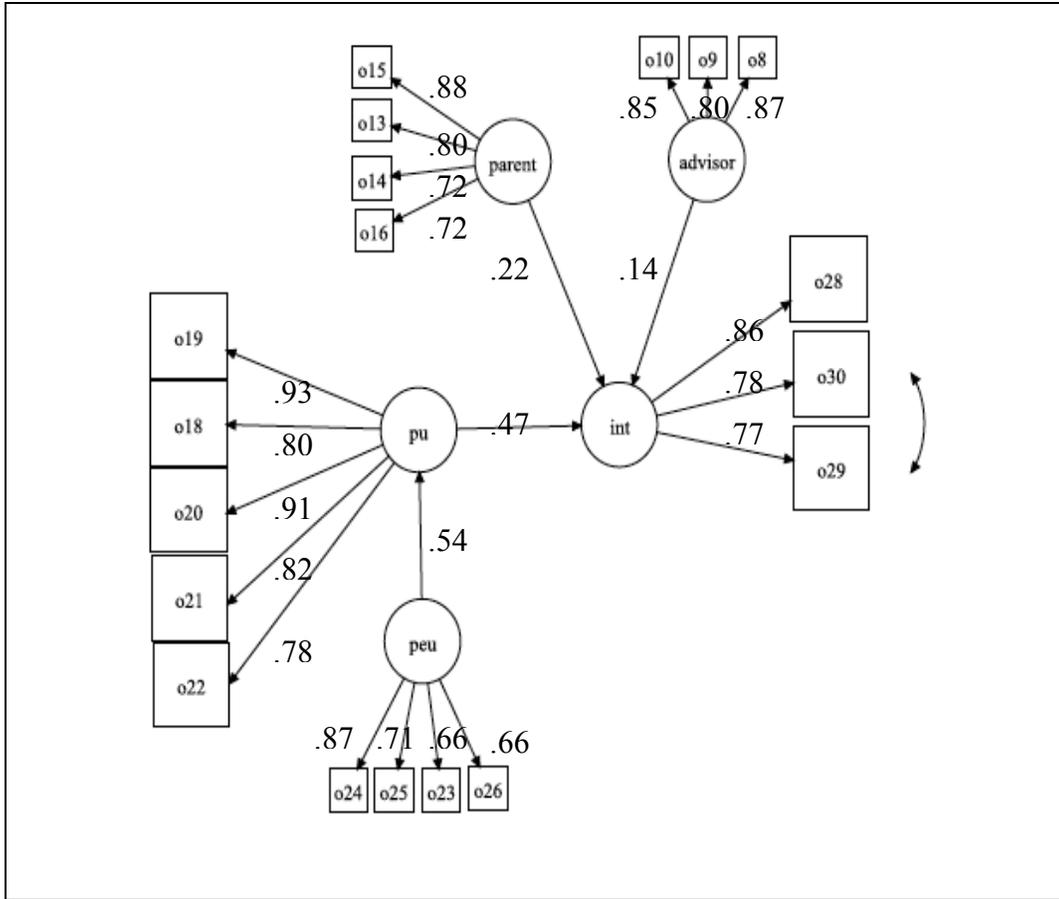


Figure 23. Final structural model with only significant pathways of hospitality students' intentions to take an online course (* $p < .05$, ** $p < .001$, two-tailed).

6.6 Discussion

Two out of the seven hypotheses presented in this study were supported by the empirical data (Davis, 1989; Venkatesh & Davis, 2000) (see Table 27): Hypothesis 5, PEU → PU ($\beta = .549, p < .001$), and Hypothesis 7 PU → Intention ($\beta = .474, p < .001$), were highly significant. Although the remaining hypotheses (H1-H4 and H6) were not supported in this study, two unintended significant pathways on intention emerged (see Table 27).

Parental Influence→Intention ($\beta = .228, p < .001$) was more statistically significant than Academic Advisor Influence→Intention ($\beta = .142, p = .036$); however, both new pathways implied a mandatory effect on a hospitality student's intention to take a full online course. The Parental Influence→Intention pathway was supported by prior research measuring the influence of parents on a college student's intention to stay in school (Bank, Slavings, & Biddle, 1990). Academic Advisor→Intention confirmed previous findings where academic advisors were found to contribute to decreasing the attrition of college students in online programs (Baker-Eveleth, Eveleth, O'Neill, & Stone, 2006).

While parent and academic advisor influences were found to be significant on Intention, subjective influences have not been significant in mandatory settings employing TAM (Taylor & Todd, 1995; Venkatesh & Davis, 2000). In the model with only significant pathways (see Figure 23), subjective influences on a student's intention to enroll in an online course included non-significant instructor influences on PU, non-significant peer influences on PU and intention, and significant influences of parents and advisors directly on intention. This range of influences and the variation in terms of significance demonstrates that while students may be influenced by their peers and instructors of an online course's usefulness, it is primarily parents and advisors who will affect the likelihood of a student to enroll in an online course.

Table 27. *Student Quantitative Study Hypotheses Results*

Hypothesis	Path	Supported	β	Sig.
H1	Peer→PU	No	.137	.091
H2	Instructor→PU	No	.147	.075
H3	Academic Advisor→PU	No	-	-
H4	Parent→PU	No	-	-
H5	PEU→PU	Yes	.549	.001**
H6	PEU→Intention	No	.068	.369
H7	PU→Intention	Yes	.474	.001**

** $p < .001$, two-tailed

The variance accounted for in the model by PU was 52.1%: Peer Influence→PU ($\beta = .137, p = .091$); Instructor Influence→PU ($\beta = .147, p = .075$); and PEU→PU ($\beta = .549, p < .001$) (see Table 27). Although peer and instructor influences on PU for these paths were not statistically significant, they did contribute to overall model goodness-of-fit. Additionally, Peer Influences mediated both PU and Intention in the model; however, both were statistically non-significant with low parameter estimates. This is a new contribution to the literature, suggesting peers play a dual role in a student's intention to enroll in an online course.

The variance explained in the model by Intention was 68.6%: Peer Influence→Intention ($\beta = .128, p = .078$); PEU→Intention ($\beta = .068, p = .369$); Parental Influence→Intention ($\beta = .228, p < .001$); Academic Advisor Influence→Intention ($\beta = .142, p = .036$); and PU→Intention ($\beta = .474, p < .001$). Peer Influence and PEU, while not statistically significant predictors of user intention

in this study, did improve model fit. The failure of PEU to predict students' intention to enroll in an online course has been reported in other TAM-based research. For instance, one study about faculty apprehension toward online instruction resulted in the lack of predictive power of PEU on Intention (Gibson, Harris, & Colaric, 2008), a finding echoed in this current research.

It should be noted PEU had the highest parameter estimate in the model as a predictor of PU ($\beta = .549, p < .001$) followed by PU ($\beta = .474, p < .001$) as a predictor of user Intention. These statistics indicate if hospitality students perceive an online course to be both easy to use and useful, then they will enroll in an online course.

6.7 Conclusion

The purpose of this research was to examine the normative factors influencing hospitality students' intentions to take an online course. Social psychology researchers have criticized a single cumulative measure of subject norm, citing other less important referent groups could also have an impact on an individual's intention to adopt a technology (Eckhardt, Laumer, & Weitzel, 2009), hence the decision to utilize a deconstructed subjective norm in this study.

6.7.1 Parental influences. By deconstructing the generalized subjective norm into four separate and distinct second-order constructs, this study revealed parents have the strongest influence on hospitality students' intentions to take a full online course, followed by academic advisors. Parental influence in this study was interpreted as a mandatory effect, which has consistently been supported in the

literature as the primary driver of intention to use a technology (Venkatesh & Davis, 2000).

Research on undergraduate student attrition has been criticized for measuring the educational and social status of parents; instead of measuring the amount of contact parents have with the student (Bank, Slavings, & Biddle, 1990). Typical measures include mother and father's education and occupations, family background, social status, age, and gender (Bank, Slavings, & Biddle, 1990). The problem with these measures is that they do not have immediate relevance for undergraduates. Familial influences from the past have been criticized as inaccurate predictors of current behavior. Furthermore, other historical assessments from a student's early and adolescent years, including the benefits of early socialization, good high school grades, and high achievement may be an inaccurate assessment of undergraduates' current choices (Bank, Slavings, & Biddle, 1990). What is more likely, and was confirmed in this study, is that parents continue to be actively involved in the lives of their college-aged children, helping them to make decisions about school (Bank, Slavings, & Biddle, 1990).

6.7.2 Academic advisor influences. Similar to the parental influence, academic advisors were also found to have a statistically significant influence on a student's intention to enroll in an online course ($\beta = .142, p = .036$). In this study, the student sample surveyed had access to an extensive academic advising department. For those institutions without this type of support, academic advising may be provided by instructors within the department. Regardless, any advisor in a learner-support

role has the potential to impact students' enrollment decisions, as confirmed in this research. Specifically designed to reduce attrition in online programs, learner support services help students cope with feelings of isolation which may accompany distance learning, manage time more efficiently to complete online assignments, and serve to motivate students (Ludwig-Hardman & Dunlap, 2003).

Previous literature lends credence to the need for scaffolding in the curriculum of an undergraduate program (Ludwig-Hardman & Dunlap, 2003). Scaffolding refers to an instructional process where a student requires support on an as-needed basis until proficiency is demonstrated (Pressley, 1996). Academic advisors are in key positions to identify students' strengths and weaknesses while determining the best paths toward the completion of a degree. Based on a diagnostic pre-assessment, orientation, and one-on-one advising, academic advisors are in a position to recommend in favor of or against online courses as per the needs and abilities of their students (Ludwig-Hardman & Dunlap, 2003). In this study, while academic advisors' influence was not as strong, nor as statistically significant as parental influences, they were still strong enough in the determination of the final model while other referent groups diminished. The finding that the influence of academic advisors was strong enough to predict hospitality students' intention to enroll in an online course speaks well to this particular academic program, especially in the absence of a well-established online curriculum.

6.7.3 Peer influences. In the final structural model, although statistically non-significant, peer influences on a hospitality student's intention to enroll in an online

course mediated perceived usefulness and intention to enroll. This finding revealed a hospitality student would intend to enroll in an online course if their peers convinced them of the usefulness of the online course. Additionally, peer influences serve as a direct mediator of intention. In this model, peer influences reveal the dual nature of less important referent others, confirmed in previous research (Eckhardt, Laumer, & Weitzel, 2009). Administrators wishing to exploit the influence of peers regarding the promotion of an online learning curriculum should ensure current online offerings are of the highest quality (Ramsden, 1991) and build student satisfaction (Green, Alejandro, & Brown, 2009) to ensure the promotion of online learning through this channel.

6.7.4 Instructor influences. Studies have demonstrated faculty acceptance and attitudes of online learning are the primary drivers for online course success (Wilson & Stacey, 2004; Green, Alejandro, & Brown, 2009; Sloan Consortium Survey Report, 2009). This current study revealed the impact hospitality faculty have on an undergraduate's intention to enroll in an online course. The Instructor Influences→Perceived Usefulness path was not statistically significant in the final model, but critical to the model's goodness-of-fit. One possible explanation for this finding might be that hospitality faculty are reluctant to commit to full online course delivery (Mejia, 2013, Dissertation Article 1). Hospitality instructors' propensity for blended learning as opposed to full online course delivery demonstrates this contentious relationship faculty possess with online learning. This position is subsequently reflected in hospitality students' views about the impact their instructors

have on their intention to enroll in an online course. Administrators who seek to market online hospitality courses should work first to secure faculty “buy-in” by promoting the benefits of online learning and slowly developing online courses in an effort to gain faculty commitment. This strategy would prove beneficial long-term in that as successful online hospitality courses become better known within a program, students would be more likely to be persuaded by faculty who show enthusiasm and excitement for teaching their online course.

The hospitality program surveyed in this study did not have a well-established online learning platform and this was reflected in the statistical non-significance of the pathways for both instructor and peer influences on a student’s intention to take an online course. As hospitality management programs continue to expand and reach untapped populations while offering increased flexibility to students and faculty, administrators will continue to explore the possibility of expanding online offerings to accommodate students. In terms of nascent online hospitality course offerings, this research pinpoints a path toward positively influencing hospitality students to enroll in an online course by exploiting the influences of their parents and academic advisors.

While the pathways of peer and instructor influences were not significant, they still suggest that initiatives could be manifested through training and educating interested hospitality instructors on the importance of developing an online curriculum to better serve students. This, in turn, could foster better student experiences that would positively impact prospective students who had never participated in online learning or an online class within the particular program.

6.8 Limitations and Future Research

Researchers have criticized student samples in TAM studies due to the fact students have a stronger propensity to comply with authority (Sears, 1986; Schepers & Wetzels, 2007). In addition, students tend to be early adopters of new technologies and as such, are a problematic population when estimating effect size (Rogers, 1983; Schepers & Wetzels, 2007). The purpose of this study was to examine the subjective influences on students' behavioral intention to take an online course, so there was no escaping the sampling of students.

Another limitation to the study was that the survey was completed by a student sample from a hospitality program where online learning is a relatively new mode of course delivery. Although 42.2% of students reported never having enrolled in an online course, questions about peer, instructor, and academic advisor influences on intention could be problematic in that this group of students may have had limited exposure to these groups' influences. In addition, a major limitation of the study is the data was collected from only one institution, limiting the ability to generalize the findings.

Future research in this area should test this model longitudinally to detect changes in intention once online courses are completed. As self-reported studies pose threats to reliability, these effects could be diminished (Venkatesh & Davis, 2000) in studies of hospitality students' intentions to take online courses over the course of their four-year programs. Also suggested for future research is the inclusion of several

hospitality management programs with varying degrees of online course offerings, which would improve the generalizability of the findings.

CHAPTER VII - CONCLUSION

The purpose of this dissertation was to investigate subjective factors influencing hospitality faculty intentions to teach online using the Technology Acceptance Model 2 (TAM2) as the theoretical framework. Following a series of steps, the research employed convergent parallel design, implementing qualitative and quantitative methods simultaneously throughout the project. The first step consisted of qualitative interviews with hospitality faculty, utilizing TAM2 constructs for question creation. The second step was a quantitative survey of hospitality faculty using structural equation modeling to determine instructors' intentions to teach an online course. The third and final step employed a student quantitative survey, based on the same methodology as the faculty survey.

While this research project was designed as independent steps, early results from the qualitative study necessitated alterations to the subsequent quantitative data collections. Originally, the intent of this research was to examine only a full online course delivery model; however, immediately following the qualitative interviews, the primary emergent theme became hospitality faculty's propensity for a blended learning model. Concerned with generating relevant and sufficient data for the full online model after the early qualitative findings, changes were made to the quantitative surveys to include mirrored questions to the TAM2 model related to blended learning. The addition of 33 items to the quantitative faculty survey and 30 items to the quantitative student survey increased the length of the surveys, but

measures were taken in the design to ensure the survey was not a burden on respondents.

The individual results within each step supported findings from previous research as well as introduced new findings to the literature. As a whole, the three steps revealed not only the current state of affairs of online learning in hospitality education, but also directions program administrators may find useful in the implementation of an online curriculum. This chapter summarizes the major findings within each step and provides managerial implications for implementation. Finally, limitations to this current project as well as recommendations for future research are provided.

7.1 Step 1: Qualitative Faculty Study Summary

The dominating emergent theme within the qualitative hospitality faculty study was the preference for teaching blended courses, regardless of the previous online teaching experience faculty possessed. Several factors contributed to this preference, and none were consistent across genders, rank, age, or experience. The most convincing argument in support of blended learning was the personal interaction hospitality faculty wanted with students. Instructors in this study believed person-to-person interactions were an important element associated with the discipline, which is characterized by delivering quality customer service.

This study was built around the constructs of the TAM2 model, with a specific focus on deconstructed subjective norms predicting instructors' intention to teach online. TAM2 predicts an individual's intention to use a technology based on

perceived ease of use (PEU) and perceived usefulness (PU). Subjective norms are predictors of PU; however in this qualitative study, other themes emerged as predictors and mediators of the constructs in the model. Perceived ease of use was influenced by training, online benefits cited for both faculty and students, the CMS and tech support. Usually, PEU predicts PU, but in this model online teaching challenges (i.e. protecting the integrity of the course) were a mediator of PEU and PU. A new finding as a result of this study suggests that although an instructor may find a system easy to use, he or she may not find it useful if it compromises the integrity of the subject matter of the course.

Apprehensions about whether online course credit would count toward tenure were a predictor of perceived usefulness (PU) in the model and a concern shared by many respondents in the study. Additionally, the path $PU \rightarrow \text{Intention}$ was mediated by teaching challenges and considerations, where normally PU is a direct predictor of intention. "Teaching challenges" referred to the variety of concerns instructors had about the many ways online students could cheat. These findings contributed to the literature the notion that when a hospitality instructor found a system useful, but was concerned about cheating, intention to teach an online course was mediated to the extent of the concern.

Other considerations, such as course development and the call for increased academic discussion about online learning predicted the relationship between instructors' PU and their intention to teach online. If an instructor new to online teaching became overwhelmed by these considerations and discouraged with the

challenges of controlling cheating, it would be unlikely the instructor would intend to teach an online course.

The path from PEU to intention was mediated in this model by challenges associated with cheating and problems with software. Therefore, if an instructor thought a system was easy to use, but was not trained in the safeguards to prevent cheating within the system, the instructor may not intend to teach online.

Finally, the intention to use construct was characterized by blended or hybrid courses, meaning instructors spoke of a clear preference for teaching blended courses over full online courses. This finding was expected given the personal service orientation in the hospitality discipline, and was discussed by novice as well as experienced online instructors. This is a critical finding because although there is a perception hospitality faculty are generally disinterested in full online course delivery; they are still open to a blended format. Eighty percent (80%) of hospitality faculty in a recent study regarding perceptions of online learning believed within 5 years the majority of all higher education students will be taking at least one online course (Sciarini, Beck, & Seaman, 2012). Therefore, hospitality instructors know change is inevitable and may feel more comfortable adopting a blended model as a way to transition into full online course delivery in the future. This finding is not surprising as it supports prior research about the tentative adoption of new technology by hospitality faculty (Sigala, 2002).

The intent of this qualitative study was to examine deconstructed subjective norm constructs within TAM2. When asked about influence from students,

colleagues, and chairs on their intention to teach an online course, respondents were mixed in their opinions. The majority of instructors influenced by students were faculty who had significant online teaching experiences and who were known for quality online instruction. This finding suggests students will gravitate toward experienced online faculty to discuss and recommend online course implementation.

Those respondents influenced by colleagues discussed the convenience of online learning and how they valued the ability to teach from any geographic location, even while abroad conducting research. This influence was not enough to provoke some of the respondents to develop an online course, but for others, it was enticing enough to contemplate a future blended model based on a current face-to-face course.

Supporting prior TAM research, chair or supervisor influences had a mandatory effect (Taylor & Todd, 1995; Venkatesh & Davis, 2000) on the respondents, even for those who had no interest in online teaching. This finding did not diminish the significance of other less important referent groups who still were able to influence hospitality instructors to teach online.

7.2 Step 2: Quantitative Faculty Study Summary

Social psychology researchers have found fault with a single cumulative measure of subject norm in a hypothesized technology acceptance model, claiming other less important referent groups can still have an impact on an individual's decision to adopt a technology (Eckhardt, Laumer, & Weitzel, 2009). Since the inception of TAM, and later TAM2 and UTAUT, researchers have mostly examined subject norm as a single construct (Lee, et al., 2003). The challenge using TAM in

social settings is that it is a model designed to measure an *individual's* intention to use, and social networks are at the *group* level; therefore, a variable must mediate subjective norm (Kate, Haverkamp, Mahmood, & Feldberg, 2010).

In the initial model development for this research, subjective norm was retained as a cumulative construct measured by student, colleague, and chair influences and perceived usefulness. Preliminary analysis of the initial model revealed a poor fit to the data, evidenced by the fit indices. Once the cumulative subjective norm measure was deconstructed, model fit greatly improved, signifying the constructs chosen for the final proposed model could potentially explain a significant amount of variance.

The propensity for faculty to gravitate toward a blended learning model in the qualitative study resulted in the modification of the quantitative faculty study; thus intentions to teach both blended and full online courses were examined. The results comparing the two hypothesized models, blended and full online course delivery, revealed the same final model with identical paths predicting hospitality faculty intentions to teach online.

7.2.1 Student influences. Findings from this research present strategies for hospitality management program administrators who seek to develop a new, or strengthen an existing, online program. As students are considered a less important referent group on instructors in this study, administrators still need to understand the effect students have on faculty in terms of teaching online. Chairs should ensure consistent and continuous student satisfaction with online courses already in place.

Students will share their online experiences with others, including faculty, and could potentially become more influential in the future on faculty intentions to teach online due to the presence of the path, albeit statistically non-significant.

Experiential learning is a required component in most undergraduate hospitality management degrees which necessitates time spent away from campus to participate in industry internships or work over summer breaks. Many students opt to enroll in coursework toward degree completion while on internship. Online courses offer these students the flexibility to benefit from these experiences without disrupting progress toward their degree. Nontraditional hospitality students, including adult learners, those with families, and individuals who work, also benefit from the flexibility offered by online learning. These nontraditional students provide very convincing arguments for online course instruction, due to their busy schedules which prevent them from enrolling in face-to-face courses. Institutional initiatives to grow online programs aim to attract nontraditional students; thus hospitality program administrators should seek to educate faculty on the importance of recruiting this population.

7.2.2 Colleague influences. Colleague influences on an instructor were also shown to predict intention to teach a blended or full online course in this study. Hospitality program administrators should solicit those faculty members who are proponents of teaching online and enlist those individuals to expand course offerings. For example, new online courses could be designed by more experienced online faculty and taught by those instructors new to this mode of instruction. Advocates for

online teaching within the department could be called upon to train, design courses, and consult novice online instructors.

7.2.3 Department chair or supervisor influences. The results of this study confirmed previous mandatory findings in the TAM literature related to supervisor influences (Taylor & Todd, 1999; Venkatesh & Davis, 2000). Regardless of the mandatory effect of hospitality department chairs inferred in this study, it would be beneficial to program administrators to exploit the influences of students and colleagues if online program development is a goal. Intrinsic motivation is preferred over extrinsic motivations, particularly in long-term strategic initiatives (Latham, 2007). In a mandatory setting, while program administrators are perceived as extrinsic motivators, astute chairs and supervisors should mobilize other referent influences to motivate an instructor to teach online in order to accomplish institutional objectives.

A finding in this research was the removal of the path from perceived ease of use (PEU) to intention to teach online, which was substantiated in previous literature (Gibson et al., 2008). Two explanations for this finding could be (1) either the respondents in this study were already proficient with course management software, or (2) they did not find it challenging to use. The majority of hospitality faculty in this sample (91.7%) reported intermediate or advanced levels of computer skills across several age demographics, thus revealing confidence with computers and software at various life stages. This finding demonstrates the pervasive nature of technology and how it no longer possesses obstacles towards adoption.

7.3 Step 3: Quantitative Student Study Summary

The purpose of this step was to bring balance to the quantitative faculty study by examining normative factors influencing hospitality students' intentions to take an online course. To ensure consistency in the comparison of the student results to those of the quantitative faculty study, the hypothesized model was designed utilizing deconstructed subjective norms: parental, academic advisor, peer, and instructor influences.

7.3.1 Parental influences. The results of this study revealed parents have the strongest influence on hospitality students' intentions to enroll in a full online course, followed by the influence of academic advisors. Parental influence was interpreted as a mandatory effect, which has consistently been demonstrated in the TAM literature as the primary driver of intention to use a technology (Venkatesh & Davis, 2000).

Familial influences from a student's past have been criticized as an inaccurate predictor of current behavior (Bank, Slavings, & Biddle, 1990). Many other historical assessments from a student's early and adolescent years, such as the benefits of early socialization, good high school grades, and high achievement, may also be an inaccurate assessment of undergraduates' current choices (Bank, Slavings, & Biddle, 1990). Confirmed in this study and a new finding for the literature is that parents continue to be actively involved in the lives of their college-aged children, helping them to make decisions about school (Bank, Slavings, & Biddle, 1990).

7.3.2 Academic advisor influences. A new contribution as a result of this research is the statistically significant influence of academic advisors on students'

intentions to enroll in an online course. The students sampled in this study had access to an extensive academic advising department. Institutions without this service may depend upon instructors to carry out advising responsibilities; however any advisor in a learner-support role has the potential to impact students' enrollment decisions. Specifically designed to reduce attrition in online programs, learner support services such as advising departments strive to help students cope with feelings of isolation which may accompany distance learning, manage time more efficiently to complete online assignments and motivate students to succeed (Ludwig-Hardman & Dunlap, 2003).

Research has shown the need for scaffolding, a process where an instructor provides instructional guidance on an as-needed basis until proficiency is demonstrated (Pressley, 1996), in an undergraduate curriculum (Ludwig-Hardman & Dunlap, 2003). Academic advisors also serve to guide students in their program of study by utilizing the scaffolding process to help students make appropriate course enrollment decisions. Additionally, academic advisors are essential in determining students' strengths and weaknesses while ascertaining best paths toward degree completion. In this study, academic advisors' influence was not as strong, nor as statistically significant as parental influences, but they were influential in the determination of the final model, while the effect of other referent groups waned.

7.3.3 Peer influences. In the final structural model of the student quantitative study, peer influences on a hospitality student's intention to enroll in an online course were statistically non-significant, but they mediated perceived usefulness and intention

to enroll. This was interpreted to mean a student might enroll in an online course if their peers convinced them of the usefulness of the online course. Peer influences were also a non-significant predictor of intention to use. This reflects the dual nature of less important referent others, confirmed in previous research (Eckhardt, Laumer, & Weitzel, 2009). Hospitality department administrators could make use of this finding by ensuring current online offerings are of the highest quality (Ramsden, 1991) to build student satisfaction (Green, Alejandro, & Brown, 2009) and secure buy-in through this channel.

7.3.4 Instructor influences. The principal determinants of a successful online course are faculty acceptance and attitudes toward online learning (Wilson & Stacey, 2004; Green, Alejandro, & Brown, 2009; Sloan Consortium Survey Report, 2009). In this study, the Instructor Influences→Perceived Usefulness path was not statistically significant in the final model, but did improve the model's goodness-of-fit. An explanation for this finding could be found in hospitality faculty reluctance toward a full online course delivery model (Mejia, 2013, Dissertation Article 1). Hospitality instructors' preference for blended learning might be reflected in students' views about the impact their instructors have on their intention to enroll in a course. Administrators who want to promote online courses should instill in faculty the importance of adopting this type of instruction for the betterment of the department. This strategy, over time, would assist with the long-term viability of an online program because instructors could potentially influence students' intentions to enroll in an online course.

The sample of hospitality undergraduate students in this study was not exposed to a great deal of online learning opportunities within their department, as the program did not have a well-established online learning platform. This situation may have been reflected in the statistical non-significance of the pathways for both instructor and peer influences on a student's intention to take an online course.

The pathways of peer and instructor influences were not significant, but as part of the final model, they reveal the potential for these groups in terms of instructor training for building an online curriculum. This, in turn, will enhance student experiences that could favorably impact students who had not been exposed to this form of instruction.

7.4 Triangulation of Three Steps

Online learning is not a foreign concept in hospitality management higher education, however anecdotally there still exists apprehension regarding the adoption of this mode of course delivery. Meanwhile, the majority of hospitality management instructors have acknowledged the importance of online learning, and the expectation of future significance (Sciarini, Beck, & Seaman, 2012). This ambivalence among hospitality faculty presents an obstacle for administrators and chairs who have received institutional mandates for program growth. Institutional pressures to expand programs with limited funding and physical space make online learning an especially attractive strategy to increase enrollments. Faculty motivation and education should be the key aims administrators employ to facilitate online program acceptance among instructors. Potential plans for action could include designated online mentorship

within the department, special class sessions from the institution's faculty development program with an online teaching focus, improved communications regarding tenure and online teaching policies and training to ameliorate challenges associated with student cheating.

The results of the faculty qualitative survey demonstrate the willingness of hospitality instructors to teach or consider teaching a blended course, even for those who are undecided about full online course delivery. This finding, together with the normative influences revealed in the quantitative faculty study, suggest blended learning could be a viable method for transitioning to full online course delivery.

The implications for hospitality program administrators include the promotion of blended courses in the curriculum. The general consensus of the quantitative faculty study is the impression of a mandatory component existing between faculty and department chairs. This relationship, however, is detrimental to the growth of an online program, as hospitality faculty should feel excited and motivated by other intrinsic factors to teach online in order to deliver a high quality course. Knowing a blended teaching model is preferred among hospitality faculty should influence chairs and administrators to use this information to cultivate an online program.

Recently in higher education, there has been a growing trend in the blended learning format, known as a "flipped course." In a flipped course, students review content on their own time, mostly online, and spend class time participating in active learning techniques (Bergmann & Sams, 2012). This mode of instruction has generated a fair amount of excitement in that it is perceived as a new form of teaching

and learning. As an emerging model of teaching, it could be attractive to those faculty members who are open to the blended teaching environment. Hospitality chairs should capitalize on the “newness” of flipped courses and encourage faculty to develop and teach pilot flipped hospitality courses.

As hospitality management programs expand and institutions continue to exert pressure to meet enrollment objectives, online learning will become less of an option and more of a mandate for meeting growth aspirations. Reaching untapped nontraditional student populations while offering increased flexibility to students and faculty, hospitality program administrators should continue to explore the possibility of expanding online offerings to accommodate students. This research presents blended teaching as a way to develop a full online course delivery program in hospitality management. In terms of additional motivators for faculty, aside from the mandatory finding of chair influences, colleagues play an important role in motivating each other to teach online. Finally, in the other part of this equation, hospitality students can be influenced to enroll in online courses by exploiting the influences of their parents and academic advisors. A comprehensive hospitality online program initiative for eventual full online course delivery would include the implementation of blended courses with training and clear objectives, and program marketing designed specifically for parents and guardians who influence students to enroll in online courses.

7.5 Limitations and Future Research

There were several limitations within the individual steps of this research project which will be described further in detail. As a whole, the major limitation of this study was in the focus of the samples: in the qualitative study, 10 hospitality faculty members from the United States were interviewed; the sample for the quantitative faculty portion was collected worldwide; and for the quantitative student study, the sample was collected from one single hospitality management program from which there was no established online program in place. The limitation in collecting data from three different types of populations is the generalizability of the findings. Future research should seek to be more focused in nature, collecting data for the three studies from similar populations in order to bring more consistent analysis to the triangulation of the studies.

Another limitation of the entire project was ambivalence in determining a blended or full online course model as a focal point for the research. Rather, what resulted was an alteration in the design after initial qualitative data collection. Based upon these findings the decision was made to include both models in the subsequent quantitative studies. The length of the quantitative surveys, as well as the similarities in question design may have created confusion or resulted in respondent fatigue, thus introducing bias. Future research should have a more unified focus exploring either blended or full online learning, but not both at the same time.

7.5.1 Qualitative faculty study. In the qualitative faculty study, self-selection bias was a limitation because potentially only those instructors who already had an

interest in online learning responded to the invitation to participate in the interviews. To address this limitation, future research should include a methodology for collecting data that is more random in nature. For example, random phone interviews with open-ended questions could be conducted, thereby accessing a larger and unbiased sample.

Interviewer bias was a limitation to the qualitative study due to the unintended interactions between the interviewer and the respondents (Zikmund, 2003). In face-to-face interviews, facial expressions, voice, and tone can impact the answers of a respondent, thus threatening the validity of the study. Future research should be conducted by phone to avoid inadvertent cues from body language. Also, more than one interviewer should collect the data in order to mitigate the effects one individual might have on the entirety of the data.

The subjective interpretation of the interviews conducted by the researcher is a limitation threatening the accuracy of the data. In this study, the transcripts were returned to the respondents to triangulate the data. Coding of the manuscripts, although following rigorous standards, was left to the interpretation of the primary researcher. Future research should include one to two other researchers to corroborate and triangulate the findings.

Generalizability of findings is a major limitation in qualitative research (Gall, Gall, & Borg, 2007). In this study, 10 respondents were interviewed which may not have been representative of the entire population of hospitality instructors. Future qualitative research in this area should be conducted with hospitality faculty from programs other than those represented by ICHRIE.

It should also be noted that qualitative research is a labor-intensive endeavor which requires an experienced researcher's command of the constructs and mastery over the language used to describe the meanings under investigation (Gall, Gall, & Borg, 2007). This was the first qualitative study conducted by the researcher, thus the naivety of the interviewer naturally introduces limitations. Future research of this type should involve persons who have substantial qualitative research experience, and who could expertly identify the emergent themes within the verbal data collected.

The purpose of the qualitative study was to examine hospitality instructors' perceptions of online learning as it pertained to the constructs within TAM2 and full online course delivery. In addition, this qualitative study served as an exploratory investigation for the quantitative component to follow. After the initial data collection, it became obvious hospitality instructors prefer blended teaching. Modifications were made to the faculty quantitative instrument, adding 30 additional items to the survey to test a blended learning model. Future research for this quantitative study should more narrowly focus on a blended learning model along with perceived barriers to teach using this mode of instruction. The service component of the hospitality industry mentioned throughout the qualitative interviews should be further explored quantitatively and not necessarily limited to the hospitality discipline. Other service disciplines, such as retailing, banking, and business, may also consider testing the TAM2 model.

7.5.2 Quantitative faculty study. Self-selection bias (Zikmund, 2003) was a limitation and potentially skewed the data collected in that those who opened the

survey link might have had a greater propensity toward the topic of online learning in general.

Self-reported intention to use is the prevailing limitation of TAM-based research (Lee et al., 2003). Self-reported usage distorts the relationships between the constructs (Agarwal & Karahanna, 2000; Podsakof & Organ, 1986), which could be diminished by measuring actual usage. In addition, generalizability of the findings cannot be made when researching one technology using a homogeneous group at a specific point in time (Lee et al., 2003). Therefore, in response to these two limitations, longitudinal studies are recommended for future research to measure both actual use and improve generalizability.

The inability to predict the mandatory effect of department chairs on hospitality faculty in the quantitative study was another limitation. Had this path been well-defined preceding data collection, other items could have been developed to examine the non-mandatory relationships between hospitality faculty and program chairs. Although the findings in this study supported previous TAM research regarding mandatory settings, future research should clarify the non-mandatory effects of chair and supervisor influences, such as when chairs are in advisory roles instead of roles of authority. Department chairs and supervisors, in addition to their authoritarian roles, also serve to mentor faculty members in choosing viable career options toward tenure and promotion. These roles were vague in this study and validity would have been improved had these roles been clarified.

The research design for the faculty quantitative study threatened the validity because two models with identical questions were presented consecutively, creating confusion and possible “response fatigue.” Of the 305 respondents who opened the survey, a total of 211 completed the survey to the very end, yielding a 69.2% completion rate for the survey overall. For the blended model survey, the completion rate was 70.8%. Future research testing these models should be conducted separately with two distinct groups of respondents to increase the validity of the constructs and the overall generalizability of the findings.

7.5.3 Quantitative student survey. Student samples in TAM-based research have been dismissed due to students’ propensity to comply with authority (Sears, 1986; Schepers & Wetzels, 2007). Students also tend to be among the first to adopt new technologies, and therefore are a complex population when determining effect size (Rogers, 1983; Schepers & Wetzels, 2007). The study was aimed specifically at this population, so this limitation could not be avoided.

Another limitation of the student study was that data was collected from a student sample in a hospitality program where online learning was only recently introduced. This may have skewed the findings because peer influences were not statistically significant and mediated two constructs: PU and intention. Had the data been collected for this study in a program with an established online component, there may have been more significant findings regarding peer and instructor influences. Future research should collect data from multiple hospitality programs with varied

histories of online offerings. This would enable researchers to compare the groups and their respective influences.

As with the quantitative faculty study, future research involving students should test TAM2 longitudinally to detect changes in intention once online courses are completed. Self-reported studies pose threats to reliability and these effects could be diminished (Venkatesh & Davis, 2000) in studies measuring students' intentions to take online courses in each of the years of their degree program.

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APPENDIX A

IRB APPROVAL LETTERS



July 5, 2012

Dr. Kelly Phelan
Nutrition, Hospitality and Retailing (NHR)
Mail Stop: 1162

Regarding: 503473 Factors Determining Hospitality Instructors' Intentions to Teach a Full Online Course

Dr. Kelly Phelan:

The Texas Tech University Protection of Human Subjects Committee approved your claim for an exemption for the proposal referenced above on July 5, 2012.

Exempt research is not subject to continuing review. However, any modifications that (a) change the research in a substantial way, (b) might change the basis for exemption, or (c) might introduce any additional risk to subjects must be reported to the IRB before they are implemented.

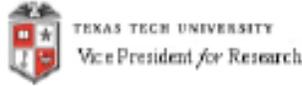
To report such changes, you must send a new claim for exemption or a proposal for expedited or full board review to the IRB. Extension of exempt status for exempt projects that have not changed is automatic.

The IRB will send annual reminders that ask you to update the status of your research project. Once you have completed your research, you must inform the Coordinator of the Committee either by responding to the annual reminder or by notifying the Coordinator by memo or e-mail (donna.peters@ttu.edu) so that the file for your project can be closed.

Sincerely,

A handwritten signature in black ink that reads "Rosemary Cogan".

Rosemary Cogan, Ph.D., ABPP
Protection of Human Subjects Committee



September 17, 2012

Dr. Kelly Phelan
Nutrition, Hospitality and Retailing (NHR)
Mail Stop: 1162

Regarding: 503473 Factors Determining Hospitality Instructors' Intentions to Teach a Full Online Course

Dr. Kelly Phelan:

The Texas Tech University Protection of Human Subjects Committee received the changes you reported in the memo of September 3, 2012 for this project. These changes are approved. The project is still classified as exempt.

Exempt research is not subject to continuing review. However, any modifications that (a) change the research in a substantial way, (b) might change the basis for exemption, or (c) might introduce any additional risk to subjects must be reported to the IRB before they are implemented.

To report such changes, you must send a new claim for exemption or a proposal for expedited or full board review to the IRB. Extension of exempt status for exempt projects that have not changed is automatic.

The IRB will send annual reminders that ask you to update the status of your research project. Once you have completed your research, you must inform the Coordinator of the Committee either by responding to the annual reminder or by notifying the Coordinator by memo or e-mail so that the file for you project can be closed.

Sincerely,

A handwritten signature in cursive script that reads "Rosemary Cogan".

Rosemary Cogan, Ph.D., ABPP
Protection of Human Subjects Committee

_____ The above project is complete.

Signature of Principal Investigator

Date



November 15, 2012

Dr. Kelly Phelan
Nutrition, Hospitality and Retailing (NHR)
Mail Stop: 1162

Regarding: 503473 Factors Determining Hospitality Instructors' Intentions to Teach a Full Online Course

Dr. Kelly Phelan:

The Texas Tech University Protection of Human Subjects Committee received the changes you reported in the memo of November 9, 2012 for this protocol. These changes are approved. The protocol is still classified as exempt.

Exempt research is not subject to continuing review. However, any modifications that (a) change the research in a substantial way, (b) might change the basis for exemption, or (c) might introduce any additional risk to subjects must be reported to the Human Research Protection Program (HRPP) before they are implemented.

To report such changes, you must send a new claim for exemption or a proposal for expedited or full board review to the HRPP. Extension of exempt status for exempt protocols that have not changed is automatic.

The HRPP staff will send annual reminders that ask you to update the status of your research protocol. Once you have completed your research, you must inform the HRPP office by responding to the annual reminder so that the protocol file can be closed.

Sincerely,

Rosemary Cogan, Ph.D., ABPP
Protection of Human Subjects Committee

_____ The above project is complete.

Signature of Principal Investigator

Date

APPENDIX B

IRB PROPOSAL

PROPOSAL FOR RESEARCH USING HUMAN SUBJECTS

Primary Investigator: Kelly Virginia Phelan, Ph.D.
Co-Investigator: Cynthia Mejia
Proposal Title: Factors Determining Hospitality Instructors' Intentions to Teach a Full Online Course

I. Rationale

An abundance of studies have focused on student and faculty satisfaction of online programs, both prior to (Liaw, Huang, & Chen, 2007; Ajjan & Hartshorne, 2008; Lee & Zilal, 2010) and during online enrollment (Liaw et al., 2007; Samarawichrema & Stacey, 2007; Song, 2010; Liu, Chen, Sun, Wible, & Kuo, 2010). While student and faculty commitment impact the quality outcomes of online courses, it is primarily faculty acceptance and attitudes that remain the critical components to the overall online program's success (Wilson & Stacey, 2004; Green, Alejandro, & Brown, 2009; Sloan Consortium Survey Report, 2009).

Unfortunately, the rapid growth of eLearning technologies has not translated into higher education adoption, as many universities have not fully adapted nor harnessed the potential for online learning (Schneckenberg, 2010). Previous research has shown that a low level of competence in eLearning among faculty is one reason for slow adoption of eLearning in higher education (Allen & Seaman, 2007; Bates, 2000; Johnson, 2003). According to Schneckenberg (2010), two conditions must exist which will determine faculty involvement in online learning technologies: (1) faculty must become more aware of the change in educational technology and its potential in higher education, and (2) faculty must develop "eCompetence" to make use of these technologies in both their work routines and teaching (Euler & Seufert, 2004; Johnson, 2003). Currently, there are no studies specifically targeting faculty perceptions on full online course delivery in the hospitality context. The purpose of this research is to understand the perceptions of hospitality faculty from all levels of online experience along with their combined attitudes toward full online course delivery.

The Technology Acceptance Model will provide the guiding theoretical framework for this research project (Venkatesh & Davis, 2000). Few studies utilizing TAM have investigated higher education with an emphasis on student and instructor acceptance of online use. Chang and Tung (2008) investigated students' behavioral intentions to use online learning course websites. Park (2009) examined university students' behavioral intention to use e-Learning. Gibson, Harris, and Colaric (2008) studied business faculty attitudes towards online learning employing TAM as the theoretical framework. Al-alak and Alnawas (2011) measured the acceptance and adoption of e-Learning by academic staff. Only one researcher has tackled online hospitality education in a doctoral dissertation investigating student acceptance of online learning in the hospitality discipline (Song, 2010).

II. Subjects

a) Sample for Qualitative Interviews: The sample of human subjects involved in this research will be 10 to 12 hospitality faculty in higher education programs attending the International Council on Hotel, Restaurant, and Institutional Education (ICHRIE) conference held in Providence, Rhode Island in August 2012.

Recruitment Procedures for Qualitative Interviews: The hospitality faculty will be recruited via email and interview appointments will be scheduled at the ICHRIE conference with those faculty members who agree to participate (see Attachment A).

b) Sample for Hospitality Faculty Quantitative Survey: The sample of hospitality faculty will be taken from the public list of the ICHRIE 2012 conference attendees who furnish their email addresses, approximating 400. In addition, an announcement will be posted to a hospitality educator listserv with a link to participate in the online survey. Finally, 120 hospitality faculty will be recruited via their publicly posted email addresses, available from their public contact information on hospitality higher education websites. In total, it is expected that the entire sample will approximate 620 participants.

Recruitment Procedures for Hospitality Faculty Quantitative Survey: Hospitality faculty will be contacted via an email list derived from the ICHRIE 2012 list of conference attendees, where a link to the survey will be attached. Additionally, a general announcement will be posted to a hospitality educator listserv with a link to the online survey (see Attachment B). There are approximately 800 hospitality faculty members worldwide who may be targeted to participate in this research.

c) Sample for Hospitality Student Quantitative Survey: The sample of hospitality students will be taken from the Texas Tech University RHIM department. Hospitality faculty will be contacted ahead of time and asked permission to distribute a paper survey following their classes. A drop-box will be located in each classroom participating, and students will be able to submit completed surveys there. In total, it is expected that the entire sample will approximate 400 participants.

Recruitment Procedures for Hospitality Student Quantitative Survey: Hospitality students will be invited to participate in the survey directly following class time. A drop box will be located at the door on the way out to collect the surveys. The researcher will pick up the box prior to the next class.

III. Procedures

A. Qualitative Interviews

- a) Data will be collected during interviews at the International Council on Hotel, Restaurant and Institutional Education (ICHRIE) Annual Conference in Providence, Rhode Island August 1 – 4, 2012. Cynthia Mejia will conduct the scheduled interviews at the conference in private meeting rooms. The interviews will be audio recorded and each interview will consist of 24 questions (Attachment C). Cynthia Mejia will transcribe the audio recordings and analyze the data using ATLAS.ti, a qualitative software program. After the audio recordings have been transcribed, they will be deleted.
- b) Respondent information sheet (see Attachment D).
- c) Potential risks: This research presents no risks beyond those of everyday life.
- d) Benefits to participants: Participants will not be compensated for their participation in this research.

B. Hospitality Faculty Quantitative Survey

- a) Data will be collected using online survey software (i.e. Qualtrics).
- b) Each survey will consist of 41 questions (Attachment E).
- c) One 16GB Wi-Fi Apple iPad will be offered as incentive for survey participation. Odds of winning the iPad are dependent upon the number of respondents. As this survey is targeting 620 respondents, the odds of winning the iPad are approximately 1 in 600. The iPad drawing will take place on December 1, 2012. Participants who wish to be included in the drawing for the iPad will be asked to provide their email address and contact information at the end of the survey, which will be generated as a separate list. Once the main portion of the survey is complete, the participant will be redirected to a secondary survey that will collect their personal information to ensure that it is not matched to their original survey responses. The email list will be used strictly for the iPad drawing purposes.
- d) Potential risks: This research presents no risks beyond those of everyday life.
- e) Benefits to participants: Participants will not be compensated for their participation in this research.

C. Hospitality Student Quantitative Survey

- a) Data will be collected using paper surveys.
- b) Each survey will consist of 91 questions (Attachment F).
- c) One \$100 gift card will be offered as incentive for survey participation. Odds of winning the gift card are dependent upon the number of respondents. As this survey is targeting 400 respondents, the odds of winning the gift card are approximately 1 in 400. The gift card drawing will take place on December 31, 2012. Participants who wish to be included in the drawing for the gift card will be asked to provide their email address and contact information on a separate paper, which will be collected in a separate box from the survey instrument. This procedure will ensure that personal information collected cannot be matched to original survey responses. The personal information collected will be used strictly for the gift card drawing purposes (Attachment G).

- d) Potential risks: This research presents no risks beyond those of everyday life.
- e) Benefits to participants: Participants will not be compensated for their participation in this research.

IV. Adverse Events and Liability

- a) The proposed research does not involve risks exceeding the ordinary risks of everyday life and no specific liability plan is offered.

V. Consent Form

- a) Not applicable.

VI. Attachments

Attachment A: Recruitment Email for Qualitative Interviews

Dear Dr. _____,

My name is Cynthia Mejia and I am currently a doctoral student at Texas Tech University in Lubbock, TX. I am conducting qualitative research on the **Factors Determining Hospitality Instructors' Intentions to Teach Online**. This study is part of a larger research project for my dissertation, which will incorporate a quantitative component using the Technology Acceptance Model. I would like to know if you would be interested in being interviewed at the upcoming ICHRIE conference in Providence, Rhode Island this August 2012.

The interview will take approximately 30-40 minutes and I will accommodate your schedule. The interview is not designed to sell you anything, nor solicit money from you in any way. You will not be contacted at a later date for any sales or solicitations. Participation is voluntary and anonymous and all responses will be kept confidential. You do not have to answer all of the questions and you may quit at any time. I will ask your permission to record the interview and after transcription, I will delete the entire interview. The data will be used only for statistical analysis.

Please reply if you are willing and able to participate in this interview.

If you have any questions about this study, you may contact either Dr. Kelly Phelan at kelly.phelan@ttu.edu or Cynthia Mejia at cynthia.mejia@ttu.edu.

For questions about your rights as a subject, contact the Texas Tech University Institutional Review board for the Protection of Human Subjects, Office of Research Services, Texas Tech University, Lubbock, Texas 79409 (806-742-2064)

Thank you again for helping us with this research.

Attachment B: Recruitment Email for Hospitality Faculty Quantitative Survey

Dear Dr. _____,

My name is Cynthia Mejia and I am currently a doctoral student at Texas Tech University in Lubbock, TX. I am conducting qualitative research on the **Factors Determining Hospitality Instructors' Intentions to Teach Online**. I am asking for your participation in a brief online survey. The survey should take no longer than 5 minutes of your time.

The survey is not designed to sell you anything, nor solicit money from you in any way. You will not be contacted at a later date for any sales or solicitations. Participation is voluntary and anonymous and all responses will be kept confidential. You do not have to answer all of the questions and you may quit at any time. The data will be used only for statistical analysis and recorded in a manner that you cannot be identified.

Through a random drawing, one participant will receive a 16 GB Wi-Fi iPad at the end of the data collection period. The odds of winning the iPad are approximately 1 in 600. The drawing will take place on December 1, 2012. If you would like to enter, space will be provided at the end of the survey to submit your email and contact information. Your personal information will not be associated with your survey responses. Should you be selected, you will be contacted via email on how to claim your iPad. Participants must be at least 18 years of age to participate in the survey.

Please click the link below to participate.

If you have any questions about this study, you may contact either Dr. Kelly Phelan at kelly.phelan@ttu.edu or Cynthia Mejia at cynthia.mejia@ttu.edu.

For questions about your rights as a subject, contact the Texas Tech University Institutional Review board for the Protection of Human Subjects, Office of Research Services, Texas Tech University, Lubbock, Texas 79409 (806-742-2064)

Thank you again for helping with this research.

[LINK]

Attachment C: Qualitative Faculty Study

Factors Determining Hospitality Instructors' Intentions to Teach an Online Course

Oral Script for Qualitative Interview of Hospitality Faculty:

Hello Dr. _____. It is very nice to meet you. Thank you for responding to my email and agreeing to speak with me. As I mentioned in our previous correspondence, my name is Cynthia Mejia and I would like to ask you some questions about your intention to teach online hospitality courses. I am working on this study as part of my dissertation. This interview should take approximately 30-40 minutes of your time. Your participation is voluntary and you do not have to answer any questions if you prefer not to. You may also quit at any time. The study is conducted strictly for research purposes. There is no selling, nor will the participants be contacted at a later date for any sales or solicitation.

With your permission, I would like to record your responses during the interview. You will not be identified and after I transcribe the interview, I will delete the entire interview. You may keep the information sheet, which includes contact information of the researchers involved in the study.

Throughout this interview I will use the term "online course" frequently. For the purposes of this research, an "online course" refers to a distance or eLearning course taught 100% online using a course management system (such as Blackboard/WebCT, Moodle, EPIC Learning Management System, eCollege, etc.)

If you are ready, we will go ahead and get started.

1. Do I have your permission to record this interview?
2. How old are you?
3. If in the U.S. where is the general location of university or college where you teach? If international, which country do you teach?
4. How long have you been an instructor? Of hospitality?
5. How many hours per day do you use a computer?
6. Have you had previous experiences with online learning, (blended or full online delivery)?
7. Which do you prefer teaching, traditional face to face, blended courses, or full online courses? Why?
8. Have you received any training for teaching online?
9. Are you required to receive training before you teach online? If not, how did you obtain the skills to teach online?
10. What software have you used to teach online? (i.e. Moodle, Blackboard, etc.)
11. What challenges, if any, have you faced teaching online?

12. What, if anything, concerns you about teaching online?
13. What have been the benefits, if any, to teaching online (e.g., time saving, flexibility, meeting department chair's expectation, increase student satisfaction)
14. Have you utilized technical support for online teaching/learning at your institution?
15. Please describe your impression of technical support.
16. What do you think about the quality of online learning for hospitality undergraduates (such as ease to use or usefulness)?
17. Do your colleagues support online teaching? If yes, in what way? If no, why do think they do not support online teaching?
18. Do you think your students expect you to provide your courses online? If yes, does student expectation influence your decision to teach a course online instead of in a traditional format?
19. Has your department (chair) indicated that he/she would like for you to teach any/more online courses? If yes, do you think his/her expectation motivates you to teach more online courses?
20. Has your superior (department chair or administrator) indicated that he or she would like for you or anyone else in your department to teach online? If yes, do you think their encouragement would lead you to teach any or more online courses?
21. Currently, in your department, is there a choice of whether to deliver your courses in the traditional or online format? If yes, who made the decision? (Department chair, another administrator in charge of scheduling, or you?)
22. How does your department's tenure process impact your decision to teach in a traditional format (face-to-face) blended or full online course? For example, do you receive more (or same) credit by teaching a course online (i.e., full online delivery), compared to a traditional format? Or, are you required to teach online courses for your tenure?
23. Do you expect additional compensation for online course development?
24. If you are opposed to teaching online, what is your number one reason for this opposition?
25. If you enjoy teaching online, what advice do you have for other hospitality instructors who have not yet taught online?

Thank you again for helping us with this research.

Attachment D: Respondent Information Sheet for Qualitative Study

Factors Determining Hospitality Instructors' Intentions to Teach an Online Course

If you have any questions or if you would like to know the results of the study, please contact Dr. Kelly Phelan or Cynthia Mejia at 806-742-3068 ext. 270 or email at cynthia.mejia@ttu.edu.

For questions about your rights as a subject, contact the Texas Tech University Institutional Review board for the Protection of Human Subjects, Office of Research Services, Texas Tech University, Lubbock, Texas 79409 (806-742-2064)

Attachment E: Hospitality Faculty Quantitative Survey

Thank you for taking the time to complete this survey on “Factors Determining Hospitality Instructors’ Intentions to Teach Online.” There are no right or wrong answers and this survey should only take 5 minutes to complete. Your answers are strictly confidential and you will not be identified in any way. If you would prefer not to answer a question, you may leave it blank. Your participation is voluntary and you can stop at any time. The study is conducted strictly for research purposes. There is no selling, nor will the participants be contacted at a later date for any sales or solicitation.

If you have any questions about this study, you may contact either Dr. Kelly Phelan at kelly.phelan@ttu.edu or Cynthia Mejia at cynthia.mejia@ttu.edu.

For questions about your rights as a subject, contact the Texas Tech University Institutional Review board for the Protection of Human Subjects, Office of Research Services, Texas Tech University, Lubbock, Texas 79409 (806-742-2064)

Through a random drawing, one participant will receive a 16 GB Wi-Fi iPad at the end of the data collection period. The odds of winning the iPad are approximately 1 in 600. The drawing will take place on December 1, 2012. If you would like to enter the drawing, space will be provided at the end of the survey to enter your email and contact information. Your personal information will not be associated with your survey responses. Should you be selected, you will be contacted via email on how to claim your iPad. Participants must be at least 18 years of age to participate in the survey.

Please click the link below to participate.

[LINK]

Thank you again for helping us with this research.

Thank you for taking the time to complete this survey on “Factors Determining Hospitality Instructors’ Intentions to Teach Online.” There are no right or wrong answers and this survey should only take 5 minutes to complete. Your answers are strictly confidential and you will not be identified in any way. If you would prefer not to answer a question, you may leave it blank. Your participation is voluntary and you can stop at any time. If you have any questions about this study, you may contact either Dr. Kelly Phelan at kelly.phelan@ttu.edu or Cynthia Mejia at cynthia.mejia@ttu.edu.

Thank you again for helping us with this research.

The term “blended course” in this section refers to a course that combines traditional face-to-face learning with online experiences (i.e. asynchronous discussion, quizzes, tests, assignments) using a course management system (such as Blackboard/WebCT, Moodle, EPIC Learning Management System, eCollege, etc.) For the purpose of this survey, a blended course DOES NOT mean using a course management system to augment a face-to-face course only to post grades and instructional materials.

Please rate your level of agreement with the following statements about blended courses:							
		<i>1 = Strongly Disagree 5 = Strongly Agree</i>					
1	Students have an influence on my intentions to teach a blended course.	1	2	3	4	5	N/A
2	Students who are important to me want me to teach a blended course.	1	2	3	4	5	N/A
3	Students whom I trust value that I teach a blended course.	1	2	3	4	5	N/A
4	Students whose opinions I value prefer I teach a blended version of one of my face-to-face classes.	1	2	3	4	5	N/A
5	Students whom I admire have indicated that I should teach a blended course.	1	2	3	4	5	N/A
6	My colleagues have influenced my decision to teach a blended course.	1	2	3	4	5	N/A
7	I am likely to teach a blended course based on the opinions of an important colleague.	1	2	3	4	5	N/A
8	Colleagues have indicated that I should teach a blended course.	1	2	3	4	5	N/A
9	I have received encouragement from colleagues whom I respect to teach a blended course.	1	2	3	4	5	N/A
10	I am likely to teach a blended course based on the opinions of a colleague whom I trust.	1	2	3	4	5	N/A
11	My department chair (supervisor) has indicated that I should teach a blended course.	1	2	3	4	5	N/A
12	My department chair (supervisor) would prefer that I teach a blended course.	1	2	3	4	5	N/A

13	My department chair (supervisor) has told me to teach a blended course.	1	2	3	4	5	N/A
14	My department chair (supervisor) wants me to learn how to teach a blended course.	1	2	3	4	5	N/A
15	I feel pressure from my department chair (supervisor) to teach a blended course.	1	2	3	4	5	N/A
16	Based on the views of respected colleagues, it is important for me to teach a blended course.	1	2	3	4	5	N/A
17	My colleagues think I will benefit from teaching a blended course.	1	2	3	4	5	N/A
18	It is important to my department chair (supervisor) that I teach a blended course.	1	2	3	4	5	N/A
19	My department chair (supervisor) confirms my ability to teach a blended course.	1	2	3	4	5	N/A
20	I think it's important to my students that I teach a blended course.	1	2	3	4	5	N/A
21	I believe teaching a blended course is useful to students.	1	2	3	4	5	N/A
22	Teaching a blended course could improve my teaching effectiveness.	1	2	3	4	5	N/A
23	Teaching a blended course could increase my teaching productivity.	1	2	3	4	5	N/A
24	I think teaching a blended course will help my career in academia.	1	2	3	4	5	N/A
25	I think teaching a blended course will improve students' understanding of course material.	1	2	3	4	5	N/A
26	Teaching a blended course is easy.	1	2	3	4	5	N/A
27	It is easy to become skillful at teaching a blended course.	1	2	3	4	5	N/A
28	It is easy to interact with the technology used to teach a blended course.	1	2	3	4	5	N/A
29	It is easy to handle a problem when teaching a blended course.	1	2	3	4	5	N/A
30	Interacting with the technology to teach a blended course requires a lot of mental effort.	1	2	3	4	5	N/A
31	It is important to me that I teach a blended course in the near future.	1	2	3	4	5	N/A
32	I plan on teaching a blended online course.	1	2	3	4	5	N/A
33	I intend to teach a blended online course.	1	2	3	4	5	N/A

For the purposes of this next section, the term “online course” refers to a distance or eLearning course taught 100% online using a course management system (such as Blackboard/WebCT, Moodle, EPIC Learning Management System, eCollege, etc.)

Please rate your level of agreement with the following statements about 100% online course delivery:							
		<i>1 = Strongly Disagree 5 = Strongly Agree</i>					
34	Students have an influence on my intentions to teach online.	1	2	3	4	5	N/A
35	Students who are important to me want me to teach online.	1	2	3	4	5	N/A
36	Students whom I trust value that I teach an online course.	1	2	3	4	5	N/A
37	Students whose opinions I value prefer I teach an online version of one of my face-to-face classes.	1	2	3	4	5	N/A

38	Students whom I admire have indicated that I should teach an online course.	1	2	3	4	5	N/A
39	My colleagues have positively influenced my decision to teach an online course.	1	2	3	4	5	N/A
40	I am likely to teach an online course based on the opinions of an important colleague.	1	2	3	4	5	N/A
41	Colleagues have indicated that I should teach online.	1	2	3	4	5	N/A
42	I have received encouragement from colleagues whom I respect to teach an online course.	1	2	3	4	5	N/A
43	I am likely to teach an online course based on the opinions of a colleague whom I trust.	1	2	3	4	5	N/A
44	My department chair (supervisor) has indicated that I should teach an online course.	1	2	3	4	5	N/A
45	My department chair (supervisor) prefers that I teach an online course.	1	2	3	4	5	N/A
46	My department chair (supervisor) has told me to teach an online course.	1	2	3	4	5	N/A
47	My department chair (supervisor) wants me to learn how to teach online.	1	2	3	4	5	N/A
48	I feel pressure from my department chair (supervisor) to teach an online course.	1	2	3	4	5	N/A
49	Based on the views of respected colleagues, it is important for me to teach an online course.	1	2	3	4	5	N/A
50	My colleagues think I will benefit from teaching an online course.	1	2	3	4	5	N/A
51	It is important to my department chair (supervisor) that I teach online.	1	2	3	4	5	N/A
52	My department chair (supervisor) confirms my ability to teach online.	1	2	3	4	5	N/A
53	I think it's important to my students that I teach online.	1	2	3	4	5	N/A
54	I believe teaching an online course is useful to students.	1	2	3	4	5	N/A
55	Teaching a course online could improve my teaching effectiveness.	1	2	3	4	5	N/A
56	Teaching an online course could increase my teaching productivity.	1	2	3	4	5	N/A
57	I think teaching an online course will help my career in academia.	1	2	3	4	5	N/A
58	I think teaching an online course will improve students' understanding of course material.	1	2	3	4	5	N/A
59	Teaching a course delivered fully online is easy.	1	2	3	4	5	N/A
60	It is easy to become skillful at teaching an online course.	1	2	3	4	5	N/A
61	It is easy to interact with the technology used to teach an online course.	1	2	3	4	5	N/A
62	It is easy to handle a problem when teaching an online course.	1	2	3	4	5	N/A
63	Interacting with the technology to teach an online course requires a lot of mental effort.	1	2	3	4	5	N/A
64	It is important to me that I teach an online course in the near	1	2	3	4	5	N/A

	future.						
65	I plan on teaching an online course.	1	2	3	4	5	N/A
66	I intend to teach an online course.	1	2	3	4	5	N/A

67. What is your age group?

< 25

26-30

31-40

41-50

51-60

61-70

>71

68. What is your gender?

Male

Female

69. How many years have you taught in hospitality? _____

70. Do you teach (please choose one):

_____ in a two year college?

_____ in four year university?

71. What is your highest rank?

Graduate Student

Instructor

Assistant Professor

Associate Professor

Full Professor

72. How many courses have you taught 100% online? _____

73. How many blended courses have you taught? _____

74. To what extent have you taught online? (please check all that apply):

- Never taught online
- Taught face-to-face course(s) using a course management system to manage grades, disseminate course materials and/or assign online discussion
- Taught blended online course with partial course delivery face-to-face
- Taught 100% full online course

75. Is online learning encouraged in your department? _____yes _____no

76. Do you have institutional support to teach online courses? _____yes _____no

77. How many hours per day do you spend on the computer? _____

78. What level of expertise do you consider yourself when using a computer for teaching purposes?

Beginner

Intermediate

Advanced

Would you like to be entered into the drawing to win an iPad?

Yes

No (If selected, the survey will end.)

If “Yes” is selected, the participant will be redirected to another survey, which will ask for personal contact information. This second survey is designed in such a way that the respondent’s original survey responses *cannot* be linked to their personal information. The respondent will be asked the following information:

You have elected to be entered into a drawing to win an iPad. The odds of winning the iPad are approximately 1 in 600. The drawing will take place on December 1, 2012. Please enter your personal information, so that we may contact you in the event that you have been selected. This information is confidential and cannot be used to identify a respondent to their original responses from the survey.

Please enter your first and last name: _____

Please enter your email address: _____

Please enter your phone number with area code: _____

Thank you for your participation.

Attachment F: Hospitality Student Quantitative Survey

Thank you for taking the time to complete this survey on “Factors Determining Hospitality Students’ Intentions to Take Online Courses.” There are no right or wrong answers and this survey should only take 5 minutes to complete. Your answers are strictly confidential and you will not be identified in any way. If you would prefer not to answer a question, you may leave it blank. Your participation is voluntary and you can stop at any time. If you have any questions about this study, you may contact either Dr. Kelly Phelan at kelly.phelan@ttu.edu or Cynthia Mejia at cynthia.mejia@ttu.edu.

Through a random drawing, one participant will receive a \$100 gift card at the end of the data collection period. The odds of winning the gift card are approximately 1 in 400. The drawing will take place on December 31, 2012. If you would like to enter, a separate sheet will be provided at the end of the survey to submit your email and contact information. Your personal information will not be associated with your survey responses. Should you be selected, you will be contacted via email on how to claim your gift card. Participants must be at least 18 years of age to participate in the survey.

Thank you again for helping us with this research.

The term “blended course” in this section refers to a course that combines traditional face-to-face learning with online experiences (i.e. asynchronous discussion, quizzes, tests, assignments) using a course management system (such as Blackboard/WebCT, Moodle, EPIC Learning Management System, eCollege, etc.) For the purpose of this survey, a blended course DOES NOT mean using a course management system to augment a face-to-face course only to post grades and instructional materials.

Please rate your level of agreement with the following statements about blended courses:							
		<i>1 = Strongly Disagree 5 = Strongly Agree</i>					
1	My peers have influenced my intentions to take a blended course.	1	2	3	4	5	N/A
2	Peers who are important to me want me to take a blended course.	1	2	3	4	5	N/A
3	Peers whom I trust value that I take a blended course.	1	2	3	4	5	N/A
4	Instructors whose opinions I value have suggested that I take a blended course.	1	2	3	4	5	N/A
5	Instructors whom I admire have indicated that I should take a blended course.	1	2	3	4	5	N/A

6	Instructors have influenced my decision to take a blended course.	1	2	3	4	5	N/A
7	I am likely to take a blended course based on the opinions of an important instructor.	1	2	3	4	5	N/A
8	My academic advisor has indicated that I should take a blended course.	1	2	3	4	5	N/A
9	My academic advisor would prefer that I take a blended course.	1	2	3	4	5	N/A
10	My academic advisor has told me to take a blended course.	1	2	3	4	5	N/A
11	Based on the views of respected instructors, it is important for me to take a blended course.	1	2	3	4	5	N/A
12	My friends think I will benefit from taking a blended course.	1	2	3	4	5	N/A
13	It is important to my parent(s) or guardian that I take a blended course.	1	2	3	4	5	N/A
14	My parent(s) or guardian confirms my ability to take a blended course.	1	2	3	4	5	N/A
15	My parent(s) or guardian have told me to take a blended course.	1	2	3	4	5	N/A
16	My parents expect me to take a blended course.						
17	I am likely to take a blended course on the advice of my academic advisor.						
18	I believe taking a blended course is useful to students.	1	2	3	4	5	N/A
19	Taking a blended course could improve my learning effectiveness.	1	2	3	4	5	N/A
20	Taking a blended course could increase my learning productivity.	1	2	3	4	5	N/A
21	I think taking a blended course will help my academic experience in college.	1	2	3	4	5	N/A
22	I think taking a blended course will improve my understanding of course material.	1	2	3	4	5	N/A
23	Taking a blended course is easy.	1	2	3	4	5	N/A
24	It is easy to become skillful at taking a blended course.	1	2	3	4	5	N/A
25	It is easy to interact with the technology used to take a blended course.	1	2	3	4	5	N/A
26	It is easy to handle a problem when enrolled in a blended course.	1	2	3	4	5	N/A
27	Interacting with the technology to take a blended course requires a lot of mental effort.	1	2	3	4	5	N/A
28	It is important to me that I take a blended course in the near future.	1	2	3	4	5	N/A
29	I plan on taking a blended online course.	1	2	3	4	5	N/A
30	I intend to take a blended online course.	1	2	3	4	5	N/A

For the purposes of this next section, the term “online course” refers to a distance or eLearning course taught 100% online using a course management system (such as Blackboard/WebCT, Moodle, EPIC Learning Management System, eCollege, etc.)

Please rate your level of agreement with the following statements about online courses:						
		<i>1 = Strongly Disagree 5 = Strongly Agree</i>				
31	My peers have influenced my intentions to take an online course.	1	2	3	4	5 N/A
32	Peers who are important to me want me to take an online course.	1	2	3	4	5 N/A
33	Peers whom I trust value that I take an online course.	1	2	3	4	5 N/A
34	Instructors whose opinions I value have suggested that I take an online course.	1	2	3	4	5 N/A
35	Instructors whom I admire have indicated that I should take an online course.	1	2	3	4	5 N/A
36	Instructors have influenced my decision to take an online course.	1	2	3	4	5 N/A
37	I am likely to take an online course based on the opinions of an important instructor.	1	2	3	4	5 N/A
38	My academic advisor has indicated that I should take an online course.	1	2	3	4	5 N/A
39	My academic advisor would prefer that I take an online course.	1	2	3	4	5 N/A
40	My academic advisor has told me to take an online course.	1	2	3	4	5 N/A
41	Based on the views of respected instructors, it is important for me to take an online course.	1	2	3	4	5 N/A
42	My friends think I will benefit from taking an online course.	1	2	3	4	5 N/A
43	It is important to my parent(s) or guardian that I take an online course.	1	2	3	4	5 N/A
44	My parent(s) or guardian confirms my ability to take an online course.	1	2	3	4	5 N/A
45	My parent(s) or guardian have told me to take an online course.	1	2	3	4	5 N/A
46	My parents expect me to take an online course.					
47	I am likely to take an online course on the advice of my academic advisor.					
48	I believe taking an online course is useful to students.	1	2	3	4	5 N/A
49	Taking an online course could improve my learning effectiveness.	1	2	3	4	5 N/A
50	Taking an online course could increase my learning productivity.	1	2	3	4	5 N/A
51	I think taking an online course will help my academic experience in college.	1	2	3	4	5 N/A
52	I think taking an online course will improve my understanding of course material.	1	2	3	4	5 N/A

53	Taking an online course is easy.	1	2	3	4	5	N/A
54	It is easy to become skillful at taking an online course.	1	2	3	4	5	N/A
55	It is easy to interact with the technology used to take an online course.	1	2	3	4	5	N/A
56	It is easy to handle a problem when enrolled in an online course.	1	2	3	4	5	N/A
57	Interacting with the technology to take an online course requires a lot of mental effort.	1	2	3	4	5	N/A
58	It is important to me that I take an online course in the near future.	1	2	3	4	5	N/A
59	I plan on taking an online course.	1	2	3	4	5	N/A
60	I intend to take an online course.	1	2	3	4	5	N/A

61. Have you ever taken a full online course? Yes No
62. If so, in which discipline(s) (i.e. hospitality, nutrition, education, etc.)? _____
63. Have you ever taken a blended course (face-to-face with online components)?
 Yes No
64. If so, in which discipline(s)? _____
65. Which type of course do you prefer learning (choose one)?
 Face-to face
 Blended
 100% online
66. What is the main advantage to taking a 100% online course?
(Please choose only one)
 No advantages
 It's easier than taking a face to face course
 It's more convenient/flexible than a face to face course
 I prefer to learn on my own at my own pace
 Other (please specify) _____
67. What is the main disadvantage to taking a 100% online course?
(Please choose only one)
 No disadvantages
 Lack of support

- No self-motivation
- Fewer resources than face-to-face
- Other (please specify)_____

68. What is the main advantage to taking a blended course?

(Please choose only one)

- No advantages
- It's easier than taking a face to face course
- It's more convenient/flexible than a face to face course
- I prefer to learn on my own at my own pace
- Other (please specify)_____

69. What is the main disadvantage to taking a blended course?

(Please choose only one)

- No disadvantages
- Lack of support
- No self-motivation
- Fewer resources than face-to-face
- Other (please specify)_____

Please circle one answer per question:

70. Do you think your department has kept current with online learning technology?	Yes	No	N/A
71. Would you take more online courses if they were available?	Yes	No	N/A
72. Do your peers take online courses?	Yes	No	N/A
73. Would you take an online course if your peer suggested it?	Yes	No	N/A
74. Would you take an online course if your parent(s) suggested it?	Yes	No	N/A
75. Would you take an online course if your academic advisor suggested it?	Yes	No	N/A
76. Would you take an online course if it was offered by an instructor whom you trusted?	Yes	No	N/A
77. Do you think your department has kept current with blended learning technology?	Yes	No	N/A
78. Would you take more blended courses if they were available?	Yes	No	N/A
79. Do your peers take blended courses?	Yes	No	N/A
80. Would you take a blended course if your peer suggested it?	Yes	No	N/A
81. Would you take a blended course if your parent(s) suggested it?	Yes	No	N/A
82. Would you take a blended course if your academic advisor suggested it?	Yes	No	N/A
83. Would you take a blended course if it was offered by an	Yes	No	N/A

instructor whom you trusted?

84. Please rate your level of computer expertise:

- Beginner Intermediate Advanced

85. How many hours a day do you use the computer for:

- Homework/School work
 Leisure/personal
 Business related
 I don't use a computer
 Other (please specify)

86. Please rate your ability to self-motivate for course work (please choose only one):

- Low ability to self-motivate
 Average ability to self-motivate
 High ability to self-motivate

87. Please rate your level of satisfaction with the online courses you have already completed (please choose only one):

- Have never taken an online course
 Highly satisfied
 Average satisfaction
 Low satisfaction

88. Please rate your level of satisfaction with the blended courses you have already completed (please choose only one):

- Have never taken a blended course
 Highly satisfied
 Average satisfaction
 Low satisfaction

89. Age: _____

90. Gender: Male Female

91. Your undergraduate classification:

- | |
|---|
| <input type="checkbox"/> Freshman
<input type="checkbox"/> Sophomore
<input type="checkbox"/> Junior
<input type="checkbox"/> Senior |
|---|

If you have any questions, or if you would like to know the results of this study, please contact Dr. Kelly Phelan or Cynthia Mejia at 806.742-3068 ext. 270. (Email: cynthia.mejia@ttu.edu)

For questions about your rights as a subject, contact the Texas Tech University Institutional Review board for the Protection of Human Subjects, Office of Research Services, Texas Tech University, Lubbock, Texas 79409 (806-742-2064)

Attachment G: \$100 Gift Card Drawing

You have elected to be entered into a drawing to win a \$100 gift card. The odds of winning the gift card are approximately 1 in 400. The drawing will take place on December 31, 2012. Please enter your personal information, so that we may contact you in the event that you have been selected. This information is confidential and cannot be used to identify a respondent to their original responses from the survey.

Please enter your first and last name: _____

Please enter your email address: _____

Please enter your phone number with area code: _____

Thank you for your participation.

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