BLENDED LEARNING: MOVING BEYOND THE THREAD QUALITY OF BLENDED LEARNING AND INSTRUCTOR EXPERIENCES

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ABSTRACT

In higher education, teaching and learning is undergoing a variety of innovations that involve the use of technology through blended learning. This pedagogical approach has been popular and expanding quickly in institutions internationally with a shift in focus from the technological aspects of learning management systems to theoretical frameworks to enhance practices in a move from traditional to blended learning. This study explores the benefits, barriers, and professional development practices utilized in higher education settings to implement blended learning classes. This quantitative research analyzed the practices of blended learning as an approach to teaching and learning in higher education through survey research. This study includes additional insight and understanding of the current and future trends regarding how to surpass these barriers and enhance the overall practices of blended learning. Higher education institutions can utilize this blended learning research to develop comprehensive guidelines and increase collaboration and innovation to improve practices and move beyond the threaded discussions. This study concluded that instructors rate the quality of the educational experience in their blended learning courses as superior or very superior compared to the traditional face-to-face format of instruction and that a lack of professional development is impacting the growth and effectiveness of the blended learning environment in higher education.

Keywords: Blended Learning, Higher Education, Professional Development, Teaching, Learning

INTRODUCTION

In higher education, teaching and learning is undergoing a variety of innovations that involve the use of technology through blended learning. This pedagogical approach has been popular and has expanded quickly in higher education institutions. However, establishing blended learning, which combines face-to-face teaching with online learning, is an area of continued development. While it is a challenging process to transition and develop the necessary pedagogy to implement these courses, this approach to teaching is growing and transforming instructional platforms in higher education. This shift is moving the focus and barriers beyond the learning management systems and discovering how to transition from traditional teaching to a blended format by establishing increased collaboration, communication, and connectedness of learners through enhanced practices.

This approach allows immediate access to learning and information through technology. Using connected mobile tools such as smartphones, tablets, and laptops, the learning process is naturally blended to create the most favorable experiences. Further, blended learning offers:

> *… a formal education program in which a student learns: at least in part through*

online learning, with some element of student control over time, place, path, and/or pace; at least in part in a supervised brick-and-mortar location away from home; and the modalities along each student's learning path within a course or subject are connected to provide an integrated learning experience. (Arney, 2015, p. 1)

By allowing immediate access to information without delayed gratification, utilizing technology to create a community of learning is often complex. This approach to teaching aligns with the fact that most learners cannot fathom what it was like before smartphones or other smart devices. Learners growing up in the technology-infused environment are sometimes referred to as "digital natives" (Prensky, 2001, p. 1), "the net generation," or "the millennials" (Margaryan & Littlejohn, 2008, p. 1). They are defined as a generation of learners who are well skilled in the use of technology but who also live with the expectation that technology is available in all aspects of their lives, anytime and anywhere (Margaryan & Littlejohn, 2008; Prensky, 2001; Thomas & Brown, 2011). This generation has called attention to an important and fundamental shift in learners' expectations. With this new category of learners' abilities, there has been an underlying change in learning and teaching in higher education settings.

This study examines the effectiveness of blended learning, which has been investigated in previous studies in the context of grades, course evaluations, and student perspectives. There are few studies on a national level that examine different aspects through the instructors' lenses. As instructional leaders and educators undertake steps to improve pedagogical approaches and instructional practices, this researcher examined instructor beliefs about blended learning and identified barriers to this practice. To gain a deeper understanding, this study examined these factors, along with professional development approaches and practices utilized in higher education, to build capacity effectively to teach blended learning courses. Data on the instructor's perspective were collected through an adapted version of The Blended Learning Best Practice Survey (The e-Learning Guild, 2003) and from Going the Distance: Online Education in the United States (Allen & Seaman, 2011).

LITERATURE REVIEW

An examination of the literature on blended learning in higher education revealed advantages, barriers, and other considerations for students and faculty. These considerations will be discussed throughout the literature review to gain insight into current practices, research, and gaps in what is known about blended learning practices. Online learning is one of the fastest growing trends in educational uses of technology (Stein & Graham, 2014). Over the past decade, technology has been at the center of educational planning and is utilized frequently in education. Due to this shift, technology has allowed higher education institutions to offer blended learning opportunities. For the purpose of this study, blended learning is defined as a combination of face-to-face instruction with online learning that utilizes different instructional modalities to enhance the engagement and learning of the students. In working toward a deeper understanding of blended learning, this research questions how to achieve the "thoughtful fusion of face-to-face and online learning experiences" (Garrison & Vaughan, 2008, p. 5) in order to integrate "the best of both worlds" (Young, 2002, p. A33).

Though there is no single definition of blended. These courses are most easily understood as a combination of on-site or face-to-face learning with online experiences, which allows for effective, accessible, and flexible learning (Stein & Graham, 2014). Blending a course requires more than replicating classroom teaching activities in online versions of those same lessons. Blending a course should be thought of as transformative, and the result should be more advanced and meaningful learning than achieved via previous modes of delivery.

Theoretical Framework

In education, there are many schools of thought on the learning process through different applications of pedagogy and learning theories. However, there is not one exclusive theory used to apply to designing and implementing blended learning practices. Therefore, different combinations of theories can be employed to enhance these practices. The literature identified different theories that provided an underlying framework for blended learning. These theories center around the principles of andragogy. For this study, the theoretical framework includes constructivism, conversationalism, and community of inquiry. In a review of the current research, there

is a gap that combines practice and theoretical concepts for blended learning. There is also a need for a theoretical understanding of blended learning as related to practice in education. Figure 1 depicts the interlocking theories that support the design, implementation, and practices of blended learning. The theoretical framework, along with a focus on community, communication, and knowledge, provides a model to frame instructional practices in higher education. The theory of constructivism, conversationalism, and community of inquiry are applied to enhance a deeper level of community and build integrated communication through reflection and discussions while leading to an increased connectedness of the content.
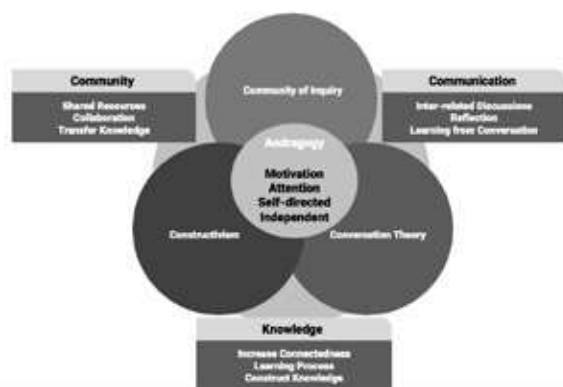

Figure 1. Theoretical framework with interlocking themes

Benefits of Blended Learning

There is existing research on the effectiveness of blended learning that suggests this learning platform can provide a favorable approach to establishing learning environments that allow learners to adjust the process of learning to meet their personal preferences, schedules, and interests. According to Bianco, Collis, Cooke, and Margaryan, (2002), supporters and advocates for this approach believe that blended learning can enhance learning in both the classroom setting and the online component. Singh and Reed (2001) suggest that blended learning allows for a cost-effective environment that can enhance learning experiences and increase overall outcomes. Oliver and Trigwell (2005) have further synthesized research about blended learning by drawing from both the corporate sector and academia. Through this research, they concluded that the blended learning approach must be grounded in learning theory and that a shift must occur from teacher centered to student centered. The

U.S. Department of Education (2010) discovered in a review of research that "on average, students in online learning conditions performed better than those receiving face-to-face instruction" (p. ix). The same study found that this may be due to blended learning including "additional learning time and instructional elements not received by students in control groups" (U.S. Department of Education, 2010, p. ix). These studies reveal the benefits of blended learning in educational outcomes, higher enrollment rates, increased autonomy, and a variety of accessibility features and enhancements that allow for individualized learning.

Barriers to Blended Learning

According to research by Osguthorpe and Graham (2003), blended learning practices can be considered a pathway to improve pedagogy, increase access to knowledge, and facilitate more opportunities for social engagement in higher education courses. Different factors about blended learning have resulted from research that focuses on a variety of variables, factors, and different instructional approaches in an attempt to gain knowledge about the usefulness of blended learning. As a result of this somewhat complex process to design and transition to the blended learning platform, additional research is needed to gain further insight into the principles for the development, integration, and application of blended learning in academia (Bliuc, Goodyear, & Ellis, 2007). The effective implementation of blended learning courses in higher education is a complicated process, especially when supplementing traditional teaching in an effort to achieve educational change.

This shift requires the instructors teaching a blended learning course to invest more time to become familiar with the available technology, create activities to complete in-class, and reflect on and adapt the overall course structure (Edginton & Holbrook, 2010). Additionally, ongoing classroom assessment should be done frequently throughout the course. Due to these factors, faculty may require additional support and resources when teaching blended learning courses (Ocak, 2011). Research by Smith, Dekhane, and Napier (2010) identified different themes of challenges for instructors of blended learning courses. These areas included being able to create a balanced blend, creative management of class time, engagement of students, and ensuring students were keeping up with online

expectations. Additionally, through this research the faculty identified several factors for successfully teaching and designing blended learning.

Although the overall student rating for blended courses has been positive, the reduced traditional teaching and communication format and the required self-discipline, autonomy, and time-management skills may be challenging for some students. According to Smith, Dekhane, and Napier (2011), increased success can occur when faculty allow for face-to-face office hours or consultation time in which students can get additional assistance. This requires the instructor to be proactive in reaching students who require additional support or assistance. According to Bliuc, Goodyear, and Ellis (2007), challenges have also been identified by instructors teaching blended courses in the process of balancing the blend.

There continues to be limited research that addresses institutional adoption of blended learning. This research would benefit higher education institutions in moving towards systematic and strategic adoption and implementation of blended learning. Graham, Woodfield, and Harrison (2013) proposed a framework for institutional adoption of blended learning by identifying three stages: increased awareness and exploration, adoption and early implementation, and mature implementation and continued growth. The framework also identified essential strategies, structures, and barriers in the supports provided by universities that they may utilize at each stage of the process (Graham et al., 2013).

Due to these changes and needs and based on past practices of professional development, instructor education and training may not be sufficient. There is an imminent and constant need for growth through professional development that will provide instructors with the knowledge and skills to keep up with the demands of the changing and interconnected world. According to Theodosiadou, Konstantinidis, Pappos, Papadopoulos, and Marna (2017), the required professional development and ongoing training is not being met. According to a Education at a Glance distributed by Organization for Economic Cooperation and Development (OECD) (2009), instructors feel they have not received a sufficient amount of training, and more than half of the respondents wanted more training than received in the past 18 months. This article will reveal the barriers that prevent instructors from obtaining the necessary professional development.

PURPOSE OF THE STUDY

As the blended delivery continues to be implemented as a hallmark approach in higher education, professional development, course design, shared beliefs, and effective practices need further review. Articulated theories, processes, and principles aligned to blended learning will need further exploration as practices in higher education coursework are implemented. Additionally, technology is developing at a rapid pace, and the blended model requires continuous teaching enhancement through the integration of technology. Professors are learning a new way of teaching as they transition from traditional teaching to blended learning models. The challenge is determining how to take the solid teaching of the past and infuse it in a way to bring life to teaching in the online setting. Specifically, blended learning is changing the way students interact and interface with professors and each other (U.S. Department of Education, 2010). As this is a developing approach to teaching higher education classes in the United States, institutions and instructors are investigating ways to enhance practices and implement these courses. However, with the blended learning approach and its pedagogy and innovation, a better understanding of best practices needs to be explored and developed to enhance these practices.

The purpose of this study was to explore how instructors rate the quality of the educational experience for students in their blended courses compared to the traditional teaching (i.e., face-to-face) formats and identify the barriers to the growth and effectiveness of blended learning environments in higher education. The study analyzed how instructors acquired skills and the knowledge needed to design and implement blended learning courses. Further, this study contributed to the body of knowledge about teaching blended learning in higher education courses through an analysis of the practices being utilized, the development of a theoretical framework, and a strategic planning cycle model. Given that instructors continually seek ways to enhance practices, this research provided some additional explanations and connections to improve practices. With this knowledge, further development can be made to provide recommendations about the

most successful practices and suggestions for future research to enhance current practices further.

The central focus of this study was on blended learning in higher education. This research was conducted on a national level through an online survey. To analyze the purpose of this quantitative study the following research questions were addressed:

RQ1: How do instructors rate the quality of the educational experience in their blended courses compared to the face-to-face format?

RQ 2: What do instructors consider barriers to the growth and effectiveness of the blended learning environment in higher education?

RQ 3: How are instructors acquiring the knowledge and skills they need to develop and implement blended learning courses to enhance the quality of the educational experience?

METHODS

Based on an extensive review of the research on blended learning, Bliuc et al. (2007) proposed that the current research should be more comprehensive in nature than previous research. This research took into account the benefits of the learning experience and its potential, and it identified barriers and professional development needs to enhance blended learning practices.

To investigate the research questions, this study utilized a purposive sampling using an Internet-based survey to focus on instructor ratings of blended learning and different barriers in this learning format and professional development to enhance this pedagogy. This study used a quantitative, nonexperimental correlational design to examine how professors rate blended learning compared to traditional (face-to-face) teaching formats and to identify potential barriers to the design and implementation of blended learning. The study analyzed how instructors acquire the skills and knowledge needed to design and implement blended learning courses.

The study design was consistent with Creswell's (2012) explanation that quantitative research is the process of collecting data, analyzing the information collected, interpreting the results, and writing the findings of a study. Specific to this study, the researcher did not attempt to control or manipulate the variables in the experiment. Instead, the descriptive research approach allows the researcher to examine the data collected. According to Leedy and Ormrod (2001), this type of research involves identifying the attributes of a particular phenomenon (blended learning) based on an analysis of the data. This analysis was utilized to compile the data in an organized way and to determine patterns in the overall outcome. This study provided a summary of the data and numerically described the features of each set of data collected using descriptive statistics.

Survey research was utilized in this quantitative study to describe trends, determine patterns of opinions, and help identify important practices and ratings of individuals (Creswell, 2012). Surveying allowed for a systematic, standardized approach to collecting information consisting of sampling, inference, measurement, and analysis (Marsden & Wright, 2010). According to Fink (2003), the best surveys have the following features: specific objectives, straightforward questions, sound choice of sample, and a reliable and valid survey instrument.

Participants

The participants in this research were instructors from a national purposive sampling. The initial intent was to focus on a national sampling; however, because the sampling was anonymous, the geographical demographics were not monitored. The higher education instructors were included in the study if they taught a minimum of one blended learning course. The study received 65 (n = 65) anonymous instructors' responses to the survey. Incomplete responses (n = 4) were not utilized in the findings and removed. Therefore, this study was completed by analyzing the data from 61 responses (n = 61).

For this study, descriptive statistics for number of years taught and number of courses taught was collected. Based on the data collected in the survey about the size of the organization, the mean distribution was between 5,001 and 10,000 students. The standard deviation of 1.83 indicated that the highest response rate included institutions with students between 2,501 and 50,000 students. The highest rate of respondents was from institutions with 10,001–50,000 students. The lowest rate of respondents was from institutions of more than 50,000 students.

Table 1. Demographic Data

Variable	N	Mean	Min	Max	Std. Dev
Number of Years Teaching Higher Education (Years)	61	10.11	0.5	45.0	8.49
Number of Courses Taught Per Year	61	05.82	1.0	12.0	3.20

Table 1 represents the descriptive statistics for number of years taught and number of courses taught. The average number of years teaching higher education was 10.11. The respondent with the lowest number of years teaching was 0.5 years, and the highest rate was 45 years. Data reflected a standard deviation of 8.49. Based on the results from the survey, the average number of courses taught per year was 5.82. The minimum number of courses taught was one, and the maximum was 12. There was a 3.20 standard deviation. The table above provides an overview of the data collected with descriptive categories identified.

Based on the results, there was not a high rate of difference in respondents' level taught and focus area for survey in undergraduate and postgraduate levels. There was a slight increase in focus for graduate levels and a slight decline in technical/other.

Table 2. Comparison of Level Taught and Focus Level for Survey

Level	Taught	Focus
	%	%
1	35.59%	35.00%
2	49.15%	51.67%
3	8.47%	8.33%
4	6.78%	5.00%

Note: The participants' demographic information was transformed into numerical values: 1 = Undergraduate, 2 = Graduate, 3 = PostGraduate, 4 = Technical/Other

Instruments

The participants were asked a variety of questions to gain further insight about their overall experiences with blended learning to identify potential benefits, barriers, and professional development for instructors (Appendix A). These questions ranged in format from Likert scale to multiple choice questions and rating scales and were included to obtain basic demographic information. An online survey method was considered best suited for the purpose of collecting data on the different approaches to teaching blended learning classes and the effectiveness of these models with technology integration. A survey allowed for the exploration and investigation of the teaching experiences of professors implementing blended learning classes. The questions in the survey were formatted with preselected responses using binary, multiple choice, and checklist formats. The survey asked several questions about the instructor's experience and rating of blended teaching and solicited data that supported the research questions.

Data collection sources for the study included a 15-question survey (Appendix A) meant to answer the three research questions and investigate instructor ratings about the effectiveness of blended learning, instructor training, and current and potential barriers. The survey questions included demographic information such as the number of years they have been teaching, the number of courses taught per year, the size of their organization, and the level of courses currently teaching. The questions in the survey focused on instructor training and exposure to blended learning formats, identification of advantages and effectiveness of blended learning from the perspective of the professor, areas of need for further development, and professor rating of both the face-to-face and online format. Instructors were asked which modality they prefer to utilize in a blended learning course. To gather data to support and help answer the research questions of this study, the survey questions were created to yield the most insight into the different barriers and strengths of blended learning. Ultimately, the survey was developed and available to potential participants through a Web-based survey tool. No identifying information from participants was collected.

Procedure

Survey response rates in this national study were an unknown variable, which increased the importance of using efficient recruitment strategies. Therefore, the researcher utilized recruitment procedures through different organizations instead of directly to individuals. Links to the survey were distributed and posted on national websites, social media, and email distributions. The researcher utilized various connections to disseminate a Web-based survey. Additionally, participants were collected through the cooperation of national organizations that provided a link to distribute the survey to professors willing to participate in the

study. Further, the researcher increased the number of connections through social media (Twitter, Facebook, and LinkedIn) with higher education organizations and institutions through search fields. The survey was posted on Twitter, Facebook, and LinkedIn because these social media avenues were a way to connect and build resources with professionals in the field on a national level.

A Web-based survey tool was utilized for this study. This tool allowed the researcher to collect strictly anonymous responses. By default, the social media messengers (Facebook, Twitter, and LinkedIn) survey collector in the survey tool recorded the respondent's first and last name in responses. To maintain anonymity, the researcher turned on Anonymous Responses to prevent sites from tracking the names. Additionally, by default, most collectors record the IP addresses of respondents in survey results. The researcher turned on Anonymous Responses to prevent IP tracking. The projected number of participants expected was 30–100. There were 61 (n = 61) eligible responses to the survey.

The data collected were organized under different categorization approaches to analyze ratings, barriers, and professional development practices to enhance blended learning design, implementation, and instruction. In the opening introduction to the survey, the researcher defined a blended course as an instructional model that includes a schedule in which some of the sessions during the semester are within a traditional classroom and other sessions are delivered online. After receiving this email or information on the websites, professors read a message requesting their consent and participation in the study. The invitation relayed the purpose and goals of the study, its intent, and its importance in the advancement of research on blended learning in higher education settings. The email and the link directed each participant to the online survey via a link to a Web-based survey. The survey (Appendix A) included questions seeking primarily to learn about the instructor ratings, professional development, and barriers to blended courses.

Data Analysis

The quantitative data were designed to detect data entry errors and allow for the validity of the data collected. A data analysis included the use of categorizing the questions to correlate to research questions. This was established through a triangulation of data prior to distribution. By aligning the survey questions to the research questions, a data analysis was specific to the research questions and subquestions of this study. Responses were analyzed during the data collection through the survey by closed and open question formats. Some questions allowed a response of "other" with a write-in section. The researcher looked for common themes in an attempt to gain further insight into and explanation of the research questions. The responses led to the discovery of key concepts needing more investigation. This will allow the researcher to connect themes and areas of discovery into the current study as extension questions.

Based on Miles and Huberman (1994), the researcher used three strategies to analyze the data collected in this quantitative study: data reduction, data display, and conclusion drawing and verification. Data reduction was an activity where the researcher was able to select, focus, abstract, and transform the data to draw conclusions that would be verified. Additionally, the data were displayed after being collected, which allowed conclusions to be drawn, and the researcher was able to analyze and conclude data (Miles & Huberman, 1994). Conclusion drawing and verification required the "researcher to begin deciding what data may mean by noting the patterns, regularities, causal flows, explanations, propositions, and possible configurations" (Miles & Huberman, 1994, p. 11).

This study included a cross-sectional survey, which involved collecting data at a single point in time from a sample drawn from a purposive sample. Cross-sectional surveys offer the opportunity to assess relations between variables and differences between subgroups in a population. This was a Web survey and had a number of advantages over other modes of interview (Granello & Wheaton, 2004). Web surveys are considered convenient for respondents to take on their own time. Since there is no systematic way to collect a traditional probability sample of the general population using the Internet, the researcher used two strategies for surveying the general population using the Internet. One communication strategy was to randomly sample and contact instructors at different universities via email. Another strategy was to utilize social media contacts to post a link to the survey.

FINDINGS

Based on this research, the following conclusions were drawn:

- Instructors rate the quality of the educational experience in their blended learning courses as superior or very superior compared to traditional face-to-face instruction.
- Instructors identified a lack of professional development and training as the primary barrier to the growth and effectiveness of the blended learning environment in higher education.
- Instructors develop the skills and knowledge to implement blended learning courses primarily through informal learning situations (either intentional or accidental) comprised of interactions with peers or the management of subject matter experts or observations and/or personal investigations into the subject, such as reading, free webinars, or attending conferences.

Research Question 1

Research Question 1 asks, "How do instructors rate the quality of the educational experience in their blended courses compared to the face-to-face format?" To answer this question, the null hypothesis, which stated that instructors do not rate the quality of the educational experience in their blended learning courses as somewhat superior or superior compared to the traditional face-to-face format of instruction, was tested.

Table 3. Rate Educational Experience with Cumulative Sums

Variable	Frequency	Percent	Cumulative Sums
Inferior	1	1.6	Inferior and Somewhat Inferior
Somewhat Inferior	7	11.5	13.1
Same	18	29.5	
Somewhat Superior	30	49.2	Somewhat Superior and Superior
Superior	5	8.2	57.4
Total	61	100.0	

Based on the preliminary review of the data, 57.4% of instructors rated blended learning as superior or somewhat superior to traditional instruction. Of the respondents, 29.5% rated

blended learning as the same as traditional methods. Blended learning was rated as somewhat inferior or inferior by 13.1% of the respondents. The most commonly occurring value of the data set (Mode) was 4 (somewhat superior). The mean was 3.46, which was midway between a rating of same and somewhat superior.

For higher education institutions to make decisions about the strategic design of blended learning, the instructors' beliefs about this learning format needs further exploration. This research reviewed instructor ratings about interactions with students in a blended learning course. Instructor beliefs about blended learning provided additional insight that could help guide institutions in the process of developing the necessary implementation strategies and improve pedagogy. Instructors rated the interactions with students using a Likert scale. Based on the preliminary review of the data, 49.1% of instructors rated interaction with students as more or much more compared to traditional class format. Of the respondents, 18.0% rated the interaction with students as less or much less compared to interactions within a traditional class.

Table 4. Instructor Beliefs about Blended Learning

Variable	N	%
More effective than traditional classroom instruction	22	48.9
Less effective than traditional classroom instruction	3	6.7
Learners like it	46	80.0
Learners don't like it	3	6.7
Learners aren't even aware they are participating in Blended Learning	8	17.8
Takes less time to develop than a nonblended program	3	6.7
Takes longer to develop than a nonblended program	28	62.2
It's more difficult to administer a Blended Learning program	12	26.7
Sum	125	255.6

As demonstrated in the table above, the instructors selected a total of 125 different responses (n = 125) to respond to this survey question. Of the responses, 80.0% revealed that instructors believed that learners like blended learning courses, 62.2% reported that blended learning takes longer to develop, and 48.9% felt that this format is more effective than traditional classrooms. Only 6.7% felt

that learners do not like blended learning formats and that blended learning is less effective than traditional formats of instruction.

The respondents were asked to identify one of the criteria provided that was used to measure effectiveness of blended learning courses. Table 5 shows that 50.8% of instructors use the course objectives to determine the effectiveness of blended learning. Of the responses, 23.0% measured the benefits of the course by how learners expanded their learning in response to the instruction received. Of these instructors, 18.0% measured how students transferred new learning to determine course efficacy. Course evaluations were the least identified way that instructors measured the success of the course (3.3%, n = 2).

Table 5. Effectiveness Rating

Variable	Frequency	Percent
Positive Learning Experience	3	4.9
Met Course Objectives	31	50.8
Transferred New Learning	11	18.0
Expanded Learning	14	23.0
Course Evaluations	2	3.3
	61	100.0

In response to Research Question 1, 57.4% of instructors rated the quality of the educational experience in their blended courses compared to the face-to-face format as superior or more than superior. Similarly, 49.1% of Instructions feel they have more or much more interaction with students in blended learning courses. Additional confirmation was provided in the instructors' beliefs about blended learning. Of the responses, 80.0% selected reported that "learners like (blended learning)" and 48.9% of the responses indicated that it is "more effective than traditional learning." Instructors rated the effectiveness of the blended learning course through course objectives (50.8%, n = 31). In response to Research Question 1, instructors rate the quality of the educational experience in their blended courses as superior or very superior to traditional face-to-face instruction.

Overall, the initial question revealed that instructors rate blended learning courses as somewhat superior or superior compared to traditional courses. There was a connection to instructor rating of the interactions with students in blended learning as being more or much more in blended learning courses. The results were interesting to the researcher to find that instructors felt that students interacted more in blended learning courses in which their face-to-face time was somewhat replaced with virtual learning. The findings supported that although traditional teaching allows for teaching within the same physical space, the online portion of blended learning allows for more student interaction and a higher level of engagement. These findings were found consistent with Garrison and Vaughan (2008), and it was concluded that teaching presence is the connection that helps sustain a community of inquiry when students are shifting between traditional learning and computer mediated communication (blended learning). The means of the instructors' ratings of their educational experience and interactions with students in blended learning are consistent without significant variance. Therefore, it is concluded that instructors rate blended learning as a better platform of teaching that allows for higher levels of interaction with students.

To provide further insight into instructor beliefs about blended learning, the instructors were asked to select three responses that applied to their beliefs about blended learning. Of the responses, a majority of instructors believed that learners like blended learning courses. It was also revealed that a majority of instructors reported that blended learning takes longer to develop, and almost half of the respondents felt that this format is more effective than traditional classrooms.

Research Question 2

Research Question 2 asks, "What do instructors consider barriers to the growth and effectiveness of the blended learning environment in higher education?" Based on a preliminary review of the data, 60.7% of the respondents identified lack of training to be a barrier in the implementation of blended learning courses. Of the respondents, 41% identified quality of technology to be a barrier and 39.3% selected time needed to develop blended learning courses as a challenge. Barriers that involved the student learner were consistently the least frequently selected with percentage ranges from 3.3% to 6.6%.

Based on the data collected, barriers in blended learning were categorized into three themes by the researcher: technology, students, and

implementation (see Table 6). Technology included quality and the learning management system. Students included low student retention, student discipline, and student motivation. Implementation included the time needed, lack of faculty acceptance, lack of training, lack of strategic plan, lack of collaboration, and lack of shared resources.

Table 6. Barriers by Theme

Theme	N	Average %	Total %
Technology	32	16.3	19.9%
Student	9	3.1	5.6%
Implementation	120	20.4	74.5%
Total	161	13.3	100%

It was hypothesized that technology would be seen as a barrier to blended learning. However, as technology was identified by fewer of the respondents, instructors expressed more concern and challenges with the implementation process. Less than 12% of the instructors identified the learning management system as a barrier. Of the three themes identified in this research, implementation continues to be the greatest challenge and barrier. With the advanced technology systems available, there can be increased focus on the development and creation of an online environment that is integrated, innovative, and community based. The challenge is reaching the full potential of the added value of online learning environments in light of the different learning theories aligned to blended learning.

To gain more insight into how the respondents blend their courses, a survey question asked the instructors to select the format used in these classes (see Table 7).

Table 7. Format of Blended Instruction

Variable	Frequency	Percent	Cumulative Percent
Face-to-Face	1	1.6	3.3
Equal Mix	34	55.7	60.7
Supplemented	19	31.1	91.8
Seek Instruction	3	4.9	96.7
Entirely Digital	2	3.3	100.0
Total	61	100.0	100.0

Instructors (n = 34, 55.7%) design blended learning courses with an equal mix of online and face-to-face instruction. Of the instructors 31.1% (n = 19) supplement face-to-face instruction with online resources. With 95% confidence, instructors consider implementation of blended learning to be a barrier to the growth and effectiveness of the blended learning environment in higher education. The underlying factors identified were the amount of time it takes to implement blended learning courses and a lack of shared resources and collaboration at the institution level. Additionally, institutions are implementing blended learning without sufficient training and strategic planning. These factors all affect the implementation and create barriers to blended learning.

For the purpose of this study, the implementation theme included the amount of time it takes to develop and design blended learning courses. Instructors also identified that there is an overall lack of shared resources and collaboration at the institution level. Additionally, institutions are implementing blended learning without sufficient training and strategic planning. These factors all affect the implementation of, and create barriers to, blended learning. These findings are in alignment with literature. It was assumed that technology would be seen as a barrier. However, as technology was identified by fewer of the respondents, instructors expressed more concern and challenges with the implementation process. Less than 12% of the instructors identified the learning management system as a barrier. About 40% of the respondents identified the quality of the technology as a barrier. However, over 60% of the instructors identified a lack of professional development as a challenge to successful implementation and delivery of blended learning courses.

This study revealed that instructors identified barriers that exist because of the lack of shared resources, lack of collaboration, and undeveloped strategic plan to implement these courses. As per Ocak (2011), the research supports the findings of this study, and it states that instructors need additional support and resources. Collaborative learning principles have provided decades of understanding to enhance teaching in higher education (Garrison, Cleveland-Innes, & Fung, 2010). However, these guiding principles need to be further examined to align with blended learning approaches and implementation. Additional findings and research have reviewed the instructional format and the

benefits of creating a blended learning course that is enhanced through the online components.

Research Question 3

Research Question 3 asks, "How are instructors acquiring the knowledge and skills they need to develop and implement blended learning courses to enhance the quality of the educational experience?"

Table 8. Knowledge of Blended Learning

Variable	Frequency	Percent
Informal Learning Situations	36	59.0
Learning by Performing	18	29.5
Formal Education Programs	7	11.5
Total	61	100.0

Based on a descriptive analysis (see Table 8), to develop the skills and knowledge of blended learning, 59.0% of instructors engaged in informal learning situations (either intentional or accidental) that comprise of interactions with peers, management, or subject matter experts, or observations and/or personal investigation into the subject, such as reading or free webinars or attending conferences. Of the instructors, 29.5% learned by performing the knowledge or skills or attitudes and/or behaviors in on-the-job situations with the potential of real performance consequences. Of the respondents, 11.5% learned about blended learning through formal education programs and/or systems where learning objectives have been established and published and in which knowledge or skill is acquired in activities or exercises.

Based on the interpretation of this data, a majority of the population learn through informal opportunities. To gain further insight into professional development needs, instructors were asked to identify different areas of focus needed to learn about blended learning. Based on this descriptive analysis, 42.6% of the respondents felt that learning about designing and developing blended learning courses would be beneficial. Of the respondents, 19.7% felt it would be essential to learn more about deploying and using technology tools to teach blended learning courses. Of the population, 14.8% felt it would be beneficial to learn about blended learning theories.

Over 50% of the instructors responded that they engage in informal learning situations (either intentional or accidental) comprising of interactions

with peers, management of subject matter experts, or observations and personal investigation into the subject, such as reading, free webinars, or attending conferences. Less than 30% of the instructors learn by performing the knowledge or skills or attitudes and/or behaviors in on-the-job situations with the potential of real performance consequences. Only 11.5% of the respondents reported that they learn about blended learning through formal education programs. Based on the interpretation of this data, a majority of the population learn through informal opportunities. Additional insight into specific professional development needs was explored. Less than 50% of the respondents felt learning about designing and developing blended learning courses would be beneficial. There is an imminent and constant need for growth through professional development that will provide instructors with the knowledge and skills to keep up with the demands of the changing and interconnected world.

RECOMMENDATIONS

As blended learning becomes universal, opportunities are also expanding in the field of research. This research is able to be utilized in higher education to gain further knowledge about the benefits of blended learning and the barrier due to lack of professional development. Additionally, the review of literature reveals that there is much information about blended learning, but there is also a lack of cohesive definition and practices, leaving many questions left unanswered. This field will benefit from additional research to provide a clear definition, guidelines, and professional development in key areas of theoretical framework and practices. Additionally, the acknowledgment of the limitations of the study is important for proper interpretation of the findings and for preventing other researchers replicating them.

The study was limited to the number of instructors who teach blended learning courses and were willing to participate. The second limitation was the participants' ability and willingness to respond openly and honestly to the survey questions. The third limitation was the participants' selection bias, since there was no guarantee that the participants who completed the survey had the same characteristics as the ones that did not participate, despite their qualifications to be included in the study. This was also a purposive

sampling, which inherently has limitations. In future research, it would be beneficial to expand efforts and opportunities to increase the number of participants. With these preliminary findings, the researcher will be able to share these findings and increase interest and awareness of the importance of this study to gain more participation.

Remove Barriers to Blended Learning

As a result of this research, different areas were identified that require further discussion and need additional research to enhance practices. The three research questions revealed that instructors rate blended learning as a superior learning platform. However, there are barriers that need to be further reviewed to determine ways to enhance practices. Specifically, professional development in higher education has been primarily available to instructors of blended learning courses through informal practices. The implementation process of blended learning is challenging, and institutions and instructors need to consider these implications to enhance practices. While blended learning is rated as an effective practice in higher education, instructors have identified areas that need focus and development, such as professional development, educational policy, and strategic planning in higher education. Figure 2 depicts the focus of future consideration and areas of needs for successfully implementing blended learning in higher education in a strategic planning cycle.
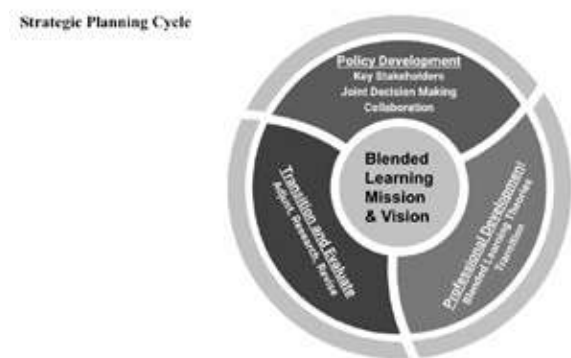

Figure 2. Strategic planning cycle

Develop a Strategic Plan

As future research focuses on blended learning in higher education, it is necessary to move beyond creating a positive learning environment that is flexible and fiscally beneficial to enhancing practices that allow the instructor to facilitate and design an optimal experience. This requires careful and analytical planning to create an optimal learning environment based on a framework of learning theories that encourage interactions, socialization, collaboration, and deeper levels of thinking. The strategic planning cycle will provide higher education institutions a guide and process to review and enhance practices in a systematic way. Creating a shared vision and mission statement about blended learning practices will provide these organizations with a reference point and guide.

Institutions need to develop a strategic plan that includes instructors of blended learning in the decision-making process, which will increase engagement and help build commitment to the end plan. The instructors of blended learning courses can provide insight into issues, challenges, concerns, and opportunities that may not have been fully understood by the institution. It is evident that a majority of the instructors surveyed felt that the learners enjoyed blended learning; therefore, this is a proven practice that will continue to be implemented and needs further focus on the development and implementational stages of this process. In order for blended learning to be effective and sustainable, the strategy and plan must be clearly defined and delineated. As part of this process, institutions can engage faculty in a professional community to be involved in course design while increasing overall collaboration. By creating a learning group of instructors with a shared professional mission, they can engage in the design and building of blended courses through a common vision.

Focus on Pedagogy

The existing research and review of trends indicates that blended learning is a growing practice and priority in higher education. Although learning management systems provide the foundation for the rapid increase in online learning enrollments during the past decade, they are but ways to organize assignments and learners through administrative tasks. There should be increased focus and research on pedagogy and how to promote engaging, interactive learning experiences aligned with the philosophy of andragogy. Further research is needed into the pedagogical techniques that are embedded within blended learning designs and how those techniques could have implications for the design and implementation of blended learning. Additional discussion is needed on active learning, problem-

solving, authentic learning, and collaboration in blended learning courses.

Emphasize Professional Development

The traditional approach to professional development in higher education may be considered outdated and less effective for blended learning. According to a report from the Learning Policy Institute (Darling-Hammond, Hyler, & Gardner, 2017), traditional professional development practices do not offer opportunities for instructors to connect the content to contexts in order to build understanding. Additionally, these approaches provide limited opportunities for participants to learn skills or strategies by actively engaging in this blended approach to teaching and learning.

Purposeful and exploratory research into instructor preparation is needed to identify practices that are at the forefront of innovation and that prepare professionals to instruct in blended environments. As evident in this research, most professional development is informal and does not appear to be a continuous expectation in higher education. However, instructors identified a need for a more cohesive plan for implementation, and professional development in blended learning is needed to enhance this area of instruction. Additionally, much professional development is focused on delivering instruction rather than creating a learning opportunity that simulates a blended learning format. This type of authentic learning may provide additional insight into the design and implementation of courses. Future research should focus on how blended learning professional development is delivered.

There are different models being adopted that can be researched to determine the most effective approaches and key concepts to be addressed. Many institutions are developing internal professional development cycles that focus on effective implementation and design of blended courses. Research is focusing on hands-on learning of blended instruction through professional development by offering professional development through a blended format. These opportunities provide active learning engagement of the instructors that helps to increase skills, theoretical knowledge, and transform the approaches in the blended classroom. Research must continue to evolve to improve and enhance professional development opportunities (Keengwe & Kang,

2012) and equip instructors with the tools and skills required in the 21st century learning environment.

The professional development topics also need to expand to cover the underlying theoretical concepts of this pedagogical approach to teaching and learning. Blended learning is an evolving practice in higher education, and instructors need to learn about its theoretical frameworks. At this time, the research and literature focus on different theories as the foundation of blended learning, but there is not one theory that is at the core of the foundation of this practice. Research can be used to explore further the educational and pedagogical foundations of blended learning to develop a framework for designing and implementing blended learning courses in higher education. Just as there is a transition from traditional courses to blended learning, there is also a simultaneous transition from a teacher-centered (behaviorist) to a learner-centered (constructivist) model. In order for this transition to be successful, instructors need to integrate technology to empower the learners in the different aspects of the teaching and learning process.

Enhance Educational Policy

Another consideration revealed in this study is the need for a more enhanced educational policy to support the professional development and enhancement of blended learning. The challenge may be that blended learning does not align with the current policy and procedures in place at an institution. In this study, instructors identified that blended learning courses take much more time to develop and implement. Institutions may consider teaching a blended learning course to be less demanding due to the online component of the course. However, teaching an online course can take more time and effort than teaching a traditional course. Institutions can review policies and develop recognition systems that instructors identify as having reasonable and fair practices. Furthermore, if higher education administrators and policy makers recognize that this learning format takes more time and effort, it would be in the best interest of the institutions to acknowledge these contributions. As blended learning continues to be in high demand in higher education, there is a need to continue to recognize these contributions to maintain the expanding development and enhancement of blended learning courses.

CONCLUSION

This quantitative research illustrates the complexity of educational change and the need for strategic planning for higher education institutions implementing blended learning teaching and learning. The findings added to the blended learning body of knowledge by investigating the instructors' beliefs about the benefits and barriers to blended learning. Additional insight was obtained about the professional development practices and needs for blended learning course development and implementation. The benefits are clear as blended learning provides flexibility for the institution, instructors, and learners. Integration of the virtual and face-to-face platforms allows both instructors and students to engage in active learning. However, this practice is most effective when there is institutional support for professional development and support to redesign the course for a blended format.

The research identified general themes that surrounded and affected the study's results and the benefits and continued development of blended learning practices. First, implementation of blended learning is a theme identified as a common barrier to blended learning. Additionally, professional development is not consistent in institutions, and most instructors rely on informal training. As instructors are working to enhance their practices, it is evident that there are informal steps being taken through these initiatives. However, there lacks a cohesive plan to transition from traditional teaching to the blended learning format. It is evident that this process requires more through planning than taking an existing syllabus and deciding which portions are online and which will be taught in person. Much of what is blended learning is more about how the class is arranged and scheduled for in-person versus online instruction rather than how careful planning, analysis, and the application of various theories can support blended learning. Finally, it is evident, based on this study, that blended learning is a highly preferred platform and rated as superior and very superior when compared to traditional teaching approaches. Therefore, this modality of teaching is a highly preferred approach to teaching and learning and further research and development is needed to enhance existing practices.

Based on the analysis, the valuable findings of this study contribute to blended learning practices.

Strong implications can be constructed to guide the instructors and the institutions implementing the blended learning approach. Consequently, meaningful reforms in higher education through strategic planning and professional development can change the future direction of these practices in higher education.

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APPENDIX A

BLENDED LEARNING COURSE INSTRUCTOR RESEARCH SURVEY

Please answer the following questions as clearly as you can.

1. How many years have you been teaching in a higher education setting? (write in)

2. How many courses per year on average do you teach? (write in)

3. What is the general academic discipline you teach? (write in)

4. Size of Organization:
    Number of Employees
    _____Under 100
    _____101–500
    _____501–2500
    _____2501–5000
    _____5001–10,000
    _____10,001–50,000
    _____50,001 or more

5. Level of courses you currently use blended instruction:
    _____Undergraduate
    _____Graduate
    _____Post Graduate
    _____Technical/Other

6. Indicate which level of courses you will focus on when answering survey:
    _____Undergraduate
    _____Graduate
    _____Post Graduate
    _____Technical/Other

7. When you think back on the past twelve months what was the primary way in which you acquired new knowledge and/or skills related to blended learning practices?
    _____Informal learning situations (either intentional or accidental) comprising interactions with peers or management or subject matter experts or observations and/ or personal investigation into the subject such as reading or free webinars or attending conferences.
    _____Learning by performing the knowledge or skills or attitudes and/or behaviors in on-the-job situations with the potential of real performance consequences.

_____Formal education programs and/ or systems where learning objectives have been established and published and in which knowledge or skill is acquired in activities or exercises.
_____Other (write in)

8. What are the barriers to the growth and effectiveness of blended learning courses? (Select three)
    _____Time needed up front to develop blended course
    _____Quality of technology/Technology issues
    _____Low student retention
    _____Lack of faculty acceptance
    _____Lack of instructor training on blended learning
    _____Lack of strategic plan
    _____Lack of collaboration between instructors
    _____Lack of shared resources
    _____Student discipline
    _____Student motivation
    _____Learning Management System
    _____Other (write in)

9. In your own experience as an instructor, what are the THREE biggest advantages or benefits of blended learning? (Select three)
    _____Immediate interaction with students
    _____Collaboration of learners in multiple locations
    _____Reduced travel costs for instructor and students
    _____Reduced time away from work or home for instructor and students
    _____Noticeable greater motivation to learn compared to asynchronous
    _____Events/communication are retrievable/ recordable/archivable
    _____Other (write in)

10. How do you measure the effectiveness of your blended learning courses?
    _____By determining whether the learner(s):
    _____Had a positive learning experience
    _____Met the objectives of course and retained the learning
    _____Transferred the new learning to the environment
    _____Students expanded their learning beyond the course requirements
    _____Other (write in)

11. For blended learning to be successful in your organization, which professional development learning activity will need the most focus and attention? (Select only one)

_____Designing and developing blended learning content

_____Developing a blended learning strategy

_____Deploying and using blended learning tools and technologies

_____Addressing learner requirements and preferences

_____Managing and measuring blended learning initiatives

_____Increasing the technology capability to support blended learning

_____Collaboration on design with colleagues

_____Shared resources between instructors

_____Understanding about blended learning theories

_____Other (write in)

12. How would you rate the quality of the educational experience for students in your blended courses compared to the face-to-face format?

_____Inferior

_____Somewhat Inferior

_____Same

_____Somewhat Superior

_____Superior

13. Would you rate your interactions with students in a blended class as much more, more, less, much less, or about the same amount as you interact with students in a face-to-face setting?

_____Much more

_____More

_____The same amount

_____Less

_____Much less

_____Other (please specify)

14. When you use Blended Learning, which of the following apply to your experience with it? (Select all that apply)

_____More effective than traditional classroom instruction

_____Less effective than traditional classroom instruction

_____Learners like it

_____Learners don't like it

_____Learners aren't even aware they are participating in Blended Learning

_____Takes less time to develop than a nonblended program

_____Takes longer to develop than a nonblended program

_____It's more difficult to administer a Blended Learning program

_____Other (please specify)

15. How do you prefer to provide instruction in a Blended Learning Course?

_____Instruction is always delivered face-to-face by the teacher

_____An equal mix of face-to-face instruction and Web-based instruction

_____Most instruction is delivered by the teacher and supplemented with digital lessons

_____The student may seek instruction from the teacher according to his/her needs

_____Instruction is provided entirely in a digital format