



BLENDED TEACHING IN TERTIARY EDUCATION: FRAMEWORK FOR BUILDING THE CAPACITY OF HEI FOR PARADIGM SHIFT

COLLIN CASAS CENEIRO

<https://orcid.org/0000-0001-7258-3071>

cceneiro@zcspc.edu.ph

Zamboanga Peninsula Polytechnic State University

Zamboanga City, Philippines

ABSTRACT

The study determined the learners' preparedness and acceptability of blended learning in the higher education educational landscape. The study was quantitative in nature and used a survey that was delivered by a purposive sampling of respondents. The findings demonstrated a high level of satisfaction among learners in the overall characteristics of blended learning. The results also revealed a very high approval rate for the adoption of blended teaching pedagogy. The findings provide a better understanding of the importance of technology in the classroom will aid educators and policymakers in formulating methods to expand the quality assurance framework to include blended learning approaches as well as improve the government's mobilization in the procurement of ICT resources for every classroom.

Keywords: Blended Teaching-Learning, Education 4.0, Fourth Industrial Revolution

INTRODUCTION

The Philippine Education system faces a new landscape of education in the era of digitization. The Fourth Industrial Revolution (IR 4.0) vis-à-vis the third wave of education reform paints a new landscape in the education system in higher education – the Education 4.0.

Singapore, Myanmar, Thailand, and Malaysia lead the redesigning of the higher education landscape in alignment with the demands of IR 4.0 in response to the ASEAN Work Plan on Education 2016- 2020, which underscores the strengthening of ICT integration in education (Mustafa, 2018). With the ubiquitous presence of mobile technology – of smartphones – as well as with the expansion in networking services nationally and globally, physical limitations are no longer barriers to education. The twenty-first century makes it possible for learning and learners to become connected through mobile cloud-smart technology devices like cellular phones, laptop computers, tablets, and other *portable devices*,

and are no longer limited to knowledge acquisition but extended to skills acquisition as well.

As technological advancements rapidly change, twenty-first-century universities also go through rapid socio-economic and technological changes. Traditional teaching materials have been replaced by digitalized instructional materials that emerge in the 21st century.

In the context of technological developments and digitalization, new requirements and expectations toward employability and higher education are a mass phenomenon. With these developments, higher education institutions are encountering challenges to develop non-traditional curriculums requiring new adult learning models with more personalized learning approaches. These challenges encompass a large population of learners differing in educational backgrounds, needs, motivations, abilities, learning preferences, time availability, and course content requirements.

The rapid improvements in Information and Communication Technologies (ICT) also influence change in the educational field. As a result of those

changes, new approaches towards learning and teaching processes have come to the fore – online learning, e-learning, MOOC learning, Blended learning. Allen & Seaman (2013), as cited in the article of Smith, B., & Brame, C (n.d.), surveyed more than 2,800 colleges and universities and statistics reveal that at an average of more than 6.7 million students in higher education are taking at least one online course; the number of public institutions offering complete online programs increased from 48.9% in 2002 to 70.6% in 2012 and 77% of academic leaders rate the learning outcomes in online education as the same or superior to those in face-to-face classrooms.

This IR 4.0 trend in the education landscape posits a positive indicator of a paradigm shift in both pedagogy and andragogy. Blended learning (BL) - combining online and face-to-face modes of learning (Bencheva, N., 2010) - is being adopted worldwide in higher education, corporate training, and K-12 education. Predictions project that BL would “emerge as the predominant model of the future” (Watson, 2008), become the “new traditional model” (Ross & Gage, 2006), or the “new normal” in course delivery (Norberg, Dziuban, & Moskal, 2011).

The 21st century has ushered in varying trends changing the landscape of higher education. With these changes, the demand for more skilled, more competitive individuals becomes the clamor of the industry in the age of digitalization. Thus, to meet the change and demand of the century, Zamboanga Peninsula Polytechnic State University (ZPPSU), (then Zamboanga Polytechnic State College (ZCSPC)), addresses the varying challenges of Industry 4. 0 vis-à-vis Education 4.0 by adopting the emerging trend in higher education - Blended Learning.

Higher education institutions pursue innovation in the educative process, transitioning from traditional lectures to digitization delivery of learning content. (Arum et al. 2012).

As a proponent of the digitalization of education in the Zamboanga Peninsula, Zamboanga Peninsula Polytechnic University underpins its mission to transform its delivery of education services responsive and aligned with the current trends in the 21st century educational landscape.

Larkin (2010) adheres to the integration of face-to-face oral communication with online written communication. This fusion would result to a unique learning experience. Several types of research on the adoption of blended learning show that compared to conventional face to face learning, students in a blended learning environment yield a positive attitude towards lessons and internet-supported learning and examination success rates are high (Dowling et al., 2003; O’Toole and Absalom, 2003; Riffell and Sibley, 2004 cited in Eryilmaz, 2015).

The study of Kintu, et.al (2017) affirmed that blended learning design features and student characteristics projected student satisfaction as an outcome are significant predictors of student learning. A nationwide study sponsored by the Online Learning Consortium found that 65.2% of participating institutions of higher education (IHEs) offered blended courses (Allen and Seaman 2003). The study of Dziuban, et.al (2018) cited the 2017 New Media Consortium Horizon Report revealed that blended learning designs are among the short-term driving forces for technology adoption in higher education in the next 1–2 years.

Meanwhile, the study conducted by Vernadakis, M, et.al (2009) revealed that perceived e-learner satisfaction was higher than the average indicating students' high satisfaction with the overall learning experience. The study of Kiviniemi (2014) revealed a significant increase in the performance of students in the blended learning mode. Students even further preferred the blended learning approach.

Among the challenges, the Philippine education system faces in this milieu is its readiness to accept Blended Learning as an integral part and parcel of teaching and learning, and to adopt Blended Learning as the contemporary pattern to reach learners wherever they may reside and learn.

OBJECTIVES OF THE STUDY

This research study aimed at looking into the readiness and acceptability of Fourth Year tertiary students of Bachelor of Science in Teacher Education of Zamboanga City State Polytechnic College (now Zamboanga Peninsula Polytechnic

State University) in adopting blended learning. Specifically, it sought to 1) determine students' perception of a blended learning environment in terms of interaction, instruction, instructor, course management, and technology; 2) highlight the employment of blended learning in the classroom as an innovative pedagogical approach to aid higher education institutions to create and support the new 21st-century learning environments; 3) set the framework as a basis for policy formulation for digitalization of the educative process;

METHODOLOGY

The research sought the approval of the conduct of the study from the school officials, particularly from the Office of Research Operations and the Dean of the College of Teacher Education. Moreover, respondents were assured that data collected from them are solely for research purposes only and confidentiality is ensured. No harm in any form was encountered in the conduct of the study.

To answer the query as to the readiness and acceptability of the learners in adopting the blended learning pedagogy, purposive sampling of respondents in the BTTE program was utilized. The graduating class of the Bachelor in Elementary Education and Bachelor in (BTTE) whose classes were immersed in a Blended Learning environment – the use of Facebook, and pre-curated Massive Online Open Course websites - were the focus of the study.

The researcher identified classes having the blended learning exposure with the approval of the teacher concerned. Eighty-eight students were asked to answer the two-part modified survey questionnaire – Student Satisfaction Survey Form (SSSF). (Naaj, M. A., Nachouki, M., & Ankit, A., 2012).

Questionnaires were distributed to participants in the class and then collected by the researcher after participants had finished them. Participants were assured that the investigation was conducted solely for academic research and would not affect their assessment in any way so that they could respond to the questionnaire objectively and honestly.

The participants completed the Student Satisfaction Survey Form (SSSF). The first section collected demographical/personal data while the second consisted of 35 items on a 5-point Likert scale, ranging from '1-strongly disagree' to '5-strongly agree' for positive items and from '1-strongly agree' to '5-strongly disagree' for negative items.

The 35 items addressed the following student satisfaction elements: 1) instructor, 2) technology, 3) class management, 4) interaction and 5) instruction. The questionnaires were then retrieved after the students answered the survey, and subsequently, data analysis was conducted. The quantitative study employed the weighted mean of each student satisfaction element in determining the overall perception and satisfaction of students in the blended learning mode employed in class.

RESULTS AND DISCUSSION

1. Perceptions of ZCSPC students on the blended learning environment

1.1. In terms of Interaction

The overall mean of 3.66 for blended learning in terms of Interaction generally shows a Very Satisfactory perception of students. The item I5, related to interaction with other students, yielded the highest mean of 3.94. This suggests that students are very satisfied with the level of interaction among themselves as learners of the course in a blended learning environment. Notably, the lowest mean of 2.76 in I4 is reflected as the least as to the dissatisfaction in terms of the collaboration of tasks among students. This supports the students' high satisfaction towards the interaction via blended learning mode.

Results of the study revealed that the two learning modes (which are Blended Learning and Face-to-face), in learners' views, had mixed well within the blended course as they were regarded as helpful and complementary to each other by making each other more interesting and more effective.

The present study adds that learners prefer blended learning because F2F and online learning

within the blended modality can interact with each other and complement each other.

1.2. In terms of Instruction

As to the Instruction factor of the blended learning environment, the average mean for student satisfaction in this group is 3.46; the highest rate of mean confirmed the students' perception that the use of blended learning technology in the course encourages them to learn independently.

However, the item, (*If I had known this was going to be a blended learning class, I would have not taken it.*) under Instruction, students' expression of not taking the blended learning class earned the lowest mean rate of 2.73. Still, on average, the result shows Very Satisfactory feedback that students welcome the idea of a blended learning course.

The results pose a welcoming response to the role of teachers in the teaching-learning process. Students' positive perception of using technology in place of the physical presence of the teachers through a blended atmosphere implies that students also prefer to construct knowledge on their own in the teachers' absence. (i.e., *The use of blended learning technology in this course encourages me to learn independently.*)

1.3. In terms of Instructor

Students, in general, were very satisfied with instructors; the highest satisfaction in this group showed a mean of 3.82 (i.e., *The instructor uses blended learning technology appropriately*). The average in this group is also Very Satisfactory, which is on the average of 3.49.

The blended learning model shifts the classroom teacher's focus away from more traditional curricular and administrative tasks thereby providing more individualized support to students. Because the focus in this model has shifted from planning lessons and delivering content alone to being a facilitator of the learning process.

1.4. In terms of Course Management

The results showed that students are generally very satisfied with the course management which has a weighted mean of 3.49. Students generally find management related to video conferencing. The lowest mean item related to the managing of video conferencing is 3.34 which is still High.

The results revealed that there is a parallel classroom of blended learning and face-to-face.

1.5. In terms of Technology

Most students are very satisfied with the reliability of the technology used in the blended learning course as the weighted mean of the items in Technology is 3.89. The item related to the overall reliability of technology has the mean = 3.71, which is Very Satisfactory. Technology in blended learning contributed to the simulation of the teaching-learning process that is equally as effective as face-to-face.

2. Acceptability rate of students in adopting blended learning in class

From this research, the results registered a 3.56 weighted mean indicating that learners do manifest High acceptability to take on blended learning more especially with regards to learners' self-regulation of learning.

This result is supported by the study of Bhat et.al. (2021), Gaida, et.al. (2016) and Songsangyos, et.al. (2016). Based on these findings, self-regulation and motivation have a positive influence on student learning outcomes in courses using a blended learning approach, increases cognitive gain and receptive perception for e-learning to improve students' learning, and perceived ease of use, perceived usefulness, and behavior intention.

CONCLUSION

The 21st-century era expects learners to be compatible with the criteria of the jobs in the industry. The skills which learners need to develop in themselves must match with the job skills required in the industry, especially in this age of Industry 4.0, where the skills in information, media,

technology, learning and innovation, communication, as well as life and career skills are of prime importance. A compatible set-up of the teaching-learning process ensuring the development of the needed skills by the industry necessitates a paradigm shift in both the pedagogy and andragogy of learning. With the students' appreciation of blended learning, the approach can go a long way in producing skilled learners who can be creative and innovative graduates who satisfy employment demands in the industry. This study revealed the need for Zamboanga Peninsula Polytechnic State University to start building the framework for a paradigm shift in the educative processes.

RECOMMENDATION

Based on the study's findings, the following are the suggested recommendations:

1. Adopt and institutionalize the Blended Learning approach in the teaching-learning processes of ZCSPC;
2. Strengthen the instructional capacity of the faculty members in using the blended learning approach through follow-through of training.
3. Create and enforce policies to ensure the quality assurance framework that would institutionalize the adoption of blended learning for the faculty to adhere to;
4. Evaluate the adoption of the blended learning approach to teaching, and do a further study on the implications of blended learning environment on the academic performance of students.
5. Conduct a series of training workshops for teachers on the creation of online learning management systems;
6. Strengthen the program on the digitalization of learning by ensuring the stability and speed of the internet connection for wider access and a higher success rate of the implementation of a blended teaching modality of instruction in this 21st century era of the teaching-learning process.

REFERENCES

- Abou Naaj, M., Nachouki, M., & Ankit, A. (2012). Evaluating student satisfaction with blended learning in a gender-segregated environment. *Journal of Information Technology Education: Research*, 11, 185–200. <https://doi.org/10.28945/1692>
- Al-Busaidi, K. A. (2012). Learners' perspective on critical factors to LMS success in blended learning: An empirical investigation. *Communications of the Association for Information Systems*, 30(1), 11-34.
- Allen, I. E., & Seaman, J. (2012, December 31). *Changing course: Ten years of tracking online education in the United States*. Sloan Consortium (NJ1). <https://eric.ed.gov/?id=ED541571>
- Arum, R. (1970, January 1). *Documenting uncertain times: post-graduate transitions of the 'Academically Adrift' cohort*. VOCEDplus, the international tertiary education and research database. <https://www.voced.edu.au/content/ngv%3A50491>
- Bencheva, N. (1970, January 1). [PDF] *learning styles and e-learning face-to-face to the traditional learning: Semantic scholar*. <https://www.semanticscholar.org/paper/Learning-Styles-and-E-Learning-Face-to-Face-to-the-Bencheva/09278f8fa4f4243dbdb316cfa07b8f6d6fa466a7>
- Bhat, G. M., Bhat, I. H., Shahdad, S., Rashid, S., Khan, M. A., & Patloo, A. A. (2021). Analysis of feasibility and acceptability of an e-learning module in anatomy. *Anatomical Sciences Education*, 15(2), 376–391. <https://doi.org/10.1002/ase.2096>
- Dziuban, C., Graham, C. R., & Moskal, P. D. (2018). Blended learning: the new normal and emerging technologies. *Int J Educ Technol High Educ*, 15(3). <https://doi.org/10.1186/s41239-017-0087-5>
- Eryilmaz, M. (2015). The Effectiveness of blended learning environments. *Contemporary Issues in Education Research (CIER)*, 8(4), 251–256. <https://doi.org/10.19030/cier.v8i4.9433>
- Gaida, J. E., Seville, C., Cope, L., Dalwood, N., Morgan, P., & Maloney, S. (2016). Acceptability of a blended learning model that improves student readiness for practical skill learning: A mixed-methods study.

- Focus on Health Professional Education, 17(1), 3–17.
<https://search.informit.org/doi/10.3316/aeipt.215126>
- Garrison, D. R., & Vaughan, N. D. (2012). *Blended learning in higher education framework, principles, and guidelines*. <https://www.wiley.com/en-us/Blended+Learning+in+Higher+Education%3A+Framework%2C+Principles%2C+and+Guidelines-p-9781118269558>
- Kintu, M.J., Zhu, C., Kagambe, E., (2017). Blended learning effectiveness: the relationship between student characteristics, design features and outcomes. *International Journal of Educational Technology in Higher Education*
- Kiviniemi, M. T. (2014). Effects of a blended learning approach on student outcomes in a graduate-level public health course. *BMC Med Educ*, 14(47).
<https://doi.org/10.1186/1472-6920-14-47>
- Larkin, H. E. (2010). "But they won't come to lectures. . .The impact of audio-recorded lectures on student experience and attendance". *Australasian Journal of Educational Technology*, 26(2), 238–249.
- Mahajan, M. V., & Kalpana, R. (2018). A study of students' perception about e-learning. *Indian Journal of Clinical Anatomy and Physiology*.
- Mezied, A. (2016, January 22). *What role will education play in the Fourth Industrial Revolution?* World Economic Forum.
<https://www.weforum.org/agenda/2016/01/what-role-will-education-play-in-the-fourth-industrial-revolution/>
- Norberg, A., Dziuban, C. D., & Moskal, P. D. (2011). A Time-Based Blended Learning Model. *Research Gate*, 19(3), 207–216.
- Smith, B., & Brame, C. (2012). *Blended and online learning*. Northern Illinois University: Center for Innovative Teaching and Learning.
<https://cft.vanderbilt.edu/guides-sub-pages/blended-and-online-learning/>
- Songsangyos, P., Kankaew, S. Jongsawat, N., (2016). "Learners' acceptance toward blended learning," 2016 SAI Computing Conference (SAI), pp. 890-892, doi: 10.1109/SAI.2016.7556085.
- Ross, B., & Gage, K. (2006). *Handbook of blended learning: Global perspectives, local designs* [E-book]. San Francisco, CA: Pfeiffer.
- The evolution of technology in the classroom. Purdue University Online. (n.d.).
<https://online.purdue.edu/blog/education/evolution-technology-classroom>
- Vernadakis, N., Derri, D., & Michalopoulou, M. (2009). Students' satisfaction from blended learning instruction.
https://www.researchgate.net/publication/234082593_Students'_satisfaction_from_blended_learning_instruction
- Watson, J. (2008). Blending learning: The convergence of online and face-to-face education. *North American Council for Online Learning*.
<https://eric.ed.gov/?id=ED509636>
- Watson, J. (2008b). North American Council for Online Learning; Promising Practices in Online Learning. *North American Council for Online Learning*.
- Zhu, C. (2017). University student satisfaction and perceived effectiveness of a blended learning course. *Int. J Learning Technology*, 12(1), 66–82

AUTHOR'S PROFILE



Collin C. Ceneciro, is currently the Director for Planning and Development Office, Quality Management System Leader, and the Head for Learning and Transition, Flexible Learning Office of Zamboanga Peninsula Polytechnic State University. She is also a fellow of the Korea International Cooperation Agency (KOICA) Philippines and the Silla University where she completed the Capacity Building for Higher Education Policy last October 6 to 19, 2019 in Silla University, Republic of Korea. Currently, she is the Director for Planning and Development and Quality Management System Leader of Zamboanga City State Polytechnic College, where she also handles Professional Education subjects in the College of Teacher Education. She is also a researcher in the field of Social Sciences. She completed her Doctor



of Philosophy in Development Management Educational Administration and Masters in Education English at Ateneo de Zamboanga University.

COPYRIGHTS

Copyright of this article is retained by the author/s, with first publication rights granted to IIMRJ. This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution-Noncommercial 4.0 International License (<http://creativecommons.org/licenses/by/4>).