

RESEARCH ARTICLE

EXPLORING BLENDED LEARNING IN BEHAVIORAL AND SOCIAL SCIENCES TERTIARY CLASSES

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ABSTRACT

With the descriptive-survey as the research method used, this study gathered data on student perceptions of, readiness for, and attitude towards blended learning (BL) as an alternative learning approach. The findings revealed that by and large, the respondents had positive perceptions of and attitude towards BL for it instills independent learning, heightens diligence, and provides closer communication between professors and students. However, they were found to be lacking in readiness. Moreover, class section was found to significantly influence their attitude and overall assessment of BL, but not their perception and readiness, while teacher factor was detected to be significantly influencing their attitude. Despite complaints of body discomfort and expensive internet connection costs, the respondents' over-all assessment of their BL experience was very positive, indicating that BL is an effective and efficient instructional modality for behavioral and social science tertiary courses.

Keywords: Digital natives, Blended learning, Teaching innovations

INTRODUCTION

The 21st century ushers in rapid technology advancement directed

at providing enhanced quality of life in all its aspects. As far back as 1999, world-wide education consultants already held that "students who use the technology for real communication with a real audience are much more capable of talking to adults, because they are getting used to it...technology facilitates cooperative learning, encourages new roles for learners and the ability to work independently."(Saltpeter, 1999). The benefits of utilizing technology outweigh its drawback. Several references recognize the use of technology as teaching-learning partner (Jonassen, et al, 2012). More than just hardware, technology can be tools to support knowledge construction, as information vehicle for exploring knowledge, as social medium to support learning, and as intellectual partner. Linked to the world-wide web, technology has burst open countless settings and schema to enrich the acquisition and application of knowledge for both the teacher and the taught.

One such positive outcome of technology wired to cyberspace is blended learning. An alternative to teaching methods, the use of blended learning, a.k.a. blended classes, confirms the convenience of online classes and face-to-face discussions with the faculty and fellow students. The concept of "anytime, anywhere" education is optimized, allowing learners to do most of their learning whenever and wherever it is best for them through the availability of computer equipment and internet connection. This educational thrust eradicates any excuse not to learn, much more in not finishing a college degree.

For the past decade, evaluations on blended learning have revealed positive outcomes wherein learners perform much better than their counterparts in face-to-face classroom setting (US Department of Education, 2009). The favorable acceptance of this approach holds equally true in the Philippines, as announced by schools and institutions such as University of the Philippines, De La Salle University, University of the East, SEAMEO-INNOTECH Philippines, Department of Agriculture, and Asian Development Bank.

College students of the 21st century label themselves as "digital natives" and christened their middle-aged professors as "digital immigrants". Because of the evolution on how the digital world has

permeated almost all aspects of life, the older generations who are not as proficient technologically are gaining ground to acquaint themselves with the gadgets that present learners use. More than a decade ago, Prensky (2001) already remarked how school officials, in assessing the perceived decline of the educational system, failed to acknowledge that the students of the present generation are not the virtual students the educational system was designed for, a realization that stands true at present. Blended learning attempts to bridge the gap in the delivery architecture of education: level up the educational system using technology and the internet that 21st century students are most adept with.

As the National Center of Teacher Education, the Philippine Normal University (PNU) continually seeks alternative teaching-learning methodologies without compromising excellence. Keeping pace with teaching innovations for optimal learning, its Faculty of Behavioral Education and Social Sciences (FBeSS) pilot tested blended learning in school year 2013-2014. The present study inquires into the experimental implementation of the aforesaid instructional delivery to enrich teaching styles and learning experiences, and remedy weaknesses. Specifically, it focused on describing students' perceptions of, readiness to, and attitude towards blended learning, and their assessment of the their BL experience in terms of receiving quality instruction and extent of learning, as well as identified whether class section and teachers influence these. Moreover, the study sought the participants' recommendations on the problems, issues, and challenges in a blended learning environment, but it did not cover how the faculty implemented it (e.g., blended learning model used).

The respondents of this study comprised of 129 students from five classes of three faculty members of the FBeSS who utilized blended learning during the first semester of school year 2013-2014.

The research instrument covered the students' perception of, readiness, and attitude towards blended learning. Overall assessment of vital teaching-learning processes and interaction, problems encountered, and recommendations were likewise incorporated. The instrument passed content validation and was pilot tested to ensure clarity of instruction and language. The final

form was administered to the student-respondents during the following semester by the faculty who handled blended learning classes.

For data analysis, both quantitative and qualitative methods were utilized. Means were computed to organize student data on perception, readiness, attitude, and overall assessment of BL experience, while correlation analysis was applied to assess the influence of class section and teacher on the aforementioned variables. For open-ended responses, themes and patterns were identified.

RESULTS AND DISCUSSION

Why Use Blended Learning (BL)

Most of the student respondents (82%, or 106 out of 129) had an understanding of what blended learning (BL) is. As their respective faculty elucidated on it, each class section was convinced that BL is an innovation to teaching and learning, an alternative when classroom contact proves unavailable, an opportunity to hone time management, a welcome break for sections with hectic schedules, and an option to submit course requirements. A few (9%) dissented the use of BL, claiming that the faculty was insistent and that class voting to employ BL or not was simply procedural.

Students' Perception, Readiness, and Attitude in Using BL

As illustrated in Table 1, there is an over-all unremarkable regard (Mean: 2.69) for BL which lends the impression that utilizing it was not a debatable issue among students. After a semester of BL experience, the respondents' perception bordered on a positive slant: that BL enhances teacher-learning methodology; that it instills independent learning; that it makes a student more diligent; and that it bridges the communication gap between professors and students. These findings support those of Delialioglu and Yildirim (2007) whose study revealed that the majority of respondents preferred doing activities rather than sitting silently and listening to the instructor. They further indicated that they enjoyed practicing

on the information they read on the website, just as online information stimulated their curiosity. Without being bounded by classroom rules and teachers' regulations, students could test concepts while connected to the internet. Through this method, they had more information to reinforce the application and relevance of the concepts in their lives.

Learners appreciate variety in learning methodologies. The traditional landscape of board work, long hours in classroom, chalk-eraser and paper-pencil architecture, and workbook exercises are creatively mixed with technology. When properly managed by the teacher, utilizing technology guarantees an attentive and enthusiastic learning stance.

Moreover, the respondents collectively disagreed that BL is time-consuming; that vital teacher contact is lost with BL approach; and that, given the choice, they would prefer traditional classroom learning over blended learning. These responses could very well be coming from the thoughts of Weiner (1990) when he pointed to motivation as an important factor in student achievement. Research evidence yields that motivation does not only determine student achievement, but also activates each task (Weiner, 1990). As shown in Table 1, the respondents agreed that BL helps students to develop independent learning; thus, their level of motivation is equally kindled. The emergence of "new" instructional methods has given rise to concepts such as independent learning, active learning, self-directed learning, among others (Simons et al., 2000). A number of different terms are used to describe independent learning, the most common being 'self-regulated learning' (Meyer et al., 2008). Motivation is important within self-regulation (Zimmerman, 2002), since it influences the three phases of self-regulation: forethought, performance, and self-reflection. Since these methods are based on constructivism, learners become more responsible for regulating their own learning process (Reiser, 2001). Self-regulated learners are motivated, independent, and metacognitively active participants in their own learning (Dalgarno, 1998; Pierce & Jones, 1998; Herrington & Oliver, 2000). Thus, time allotted to BL is not wasted. Fielding, Pierce, and Hughes (1992) held that motivated people tended to perceive time passing more quickly than actual time. As the students realized the value and

relevance of the concepts learned, this discovery had led them to satisfy their desire to know more, thereby confirming that time is well spent in blended learning.

Table 1. Students' Perception on Blended Learning

Statements	Section A	Section B	Section C	Section D	Section E	Overall Mean
1. Blended Learning enhances teacher-learning methodology.	3.31	3.40	3.31	3.57	3.17	3.32 (A)
2. It is time consuming.	2.17	2.33	2.31	1.95	2.36	2.22 (D)
3. It instills independent learning.	3.26	3.00	3.23	3.57	3.31	3.29 (A)
4. It makes a student more diligent than traditional classroom set-up.	3.14	3.00	2.85	3.00	2.61	2.92 (A)
5. Vital teacher contact is lost with BL approach.	1.98	2.27	2.23	2.87	2.25	2.17 (D)
6. Blended Learning bridges the communication gap between professors and students.	3.26	3.20	2.69	3.29	2.81	3.07 (A)
7. Given the choice, I prefer traditional classroom learning than Blended Learning.	1.79	1.93	1.62	1.71	2.03	1.84 (D)
Overall mean	2.70	2.73	2.60	2.77	2.65	2.69 (A)

Legend:

3.50-4.00 Strongly Agree (SA)
2.50-3.49 Agree (A)

1.50-2.49 Disagree (D)
1.00-1.49 Strongly Disagree (SD)

The readiness to do BL (Table 2) obtained an overall mean score of 2.45 (somehow/sometimes) which purports the respondents' discomfort to study a course using it. To carry on with BL as an alternative teaching-learning strategy and, at the same time, adjust to the trimester class schedule scheme newly implemented by the University, the respondents apparently needed to: have further orientation and capability to connect to the internet for BL sessions; have resources to accomplish BL sessions and modules; be aware of several websites to enrich BL learning; and know how to do video conferencing and synchronous chat. One reason which seemed to hamper the respondents' readiness lies in the lack of fast and reliable Internet connections which unfortunately is traceable to the fused underinvestment and poor management (Foundation for Information Technology Education and Development, 2010). To illustrate, a study conducted by Barbour et al. (2006) found that of

the 23 developing countries surveyed, “only the Philippines has no indicated government funding for blended or online learning.” With regard to synchronous chat and video conference which are considered as higher level use of technology, students find them doubly difficult to avail themselves of because these mediums require additional hardware hardly accessible due to price constraints and perceived impracticality.

To do BL, one seeming obstruction to the respondents' readiness concerns expenses. Admittedly, internet in the Philippines is not just painfully slow; but also utterly expensive (Aquino, 2014). Also, allocating financial resources for internet connection is not prioritized among the majority of college students, since school fees, books, school supplies, uniform, transportation, and food are what families prepare for in sending their children to college (Muzones & De Jesus, 2009).

However, to ensure valuable online learning, increasingly important learning components are synchronous communication and collaboration tools (e.g. synchronous text chat, audio-conferencing, video-conferencing, and whiteboards). Several learning institutions support the idea that to ensure the learner's full participation, particularly those with disabilities, these synchronous tools must be made accessible to them. In general, this means ensuring that the user interface of the tool as well as the real-time communication managed by the tool is both accessible (<http://www.imsglobal.org/accessibility/accessiblevers/sec7.html>).

Evidences of the respondents' ease in using BL are their ready skills to upload course requirements, answer course tests and activities online, and operate computer hardware/laptop/tablet for BL classes. Fortunately, the present generation of learners is attuned with technology. In this regard, the study of Frankl and Bitter (2012) confirms that eLearning and blended learning are appropriate teaching and learning tools to address the education needs of a new generation of students, branded aptly as the 'digital natives'.

Table 2. Students' Readiness to do Blended Learning

Statements	Section A	Section B	Section C	Section D	Section E	Overall Mean
1. I can easily connect to the internet for BL sessions.	2.36	2.38	2.08	2.27	2.17	2.26 (S)
2. I have financial resources to accomplish BL sessions and modules.	2.24	2.19	2.23	1.91	2.31	2.19 (S)
3. I am aware of several websites to enrich my BL learning.	2.50	2.19	2.39	1.91	2.19	2.27 (S)
4. I know how to	2.50	2.19	2.39	1.91	2.19	2.27 (S)
a. do video conferencing						
b. synchronous chat (all my classmates and I are online with the teacher at the same time)	2.71	1.93	2.15	2.24	2.31	2.37 (S)
c. answer course tests, activities online	2.60	2.44	2.54	2.82	2.92	2.70 (A)
d. upload course requirements (e.g. HW, projects) required in our BL classes.	2.76	2.50	2.62	2.91	2.94	2.79 (A)
5. I know how to operate computer hardware / laptop /tablet for my BL classes.	2.69	2.50	2.77	2.64	2.75	2.68 (A)
Overall mean	2.54	2.29	2.38	2.39	2.48	2.45 (S)

Legend:

2.5-3.00	Agree (A)
1.5-2.49	Somehow/Sometimes (S)
1.0-1.49	Disagree (D)

In terms of attitude, the overall mean score obtained is 2.82, interpreted as Agree (Table 3). As may be attributed to a positive BL experience, the respondents agreed that: all college students should try blended learning, even once before graduation (mean =3.39); they wanted to try various teaching and learning strategies (mean=3.36); were excited to operate digital technology (desktop computers, laptop, tablet) to enhance teaching-learning delivery (mean=3.22); and could easily learn how to utilize new websites for BL sessions (mean=3.13).. When students have a positive attitude toward blended learning, they become more adaptable and

flexible, a finding congruent with extant literature (Brown, 2003; Garrison & Kanuka, 2004; Collopy & Arnold, 2009; Vaughn, 2007; Howard, 2009; Tsai, 2010; Smyth et al., 2012).

Table 3. Students' Attitude towards Blended Learning

Statements	Section A	Section B	Section C	Section D	Section E	Overall Mean
1. I want to try various teaching-learning strategies such as BL.	3.45	3.27	3.33	3.23	3.39	3.36 (A)
2. I believe teaching-learning is better in actual classroom contact than in BL.	1.76	2.00	2.00	1.91	1.67	1.81 (D)
3. I am excited to operate digital technology (desktop computers, laptop, tablet) to enhance teaching-learning delivery.	3.12	3.60	3.17	3.32	3.14	3.22 (A)
4. I can easily learn how to utilize new websites for BL sessions.	3.26	3.47	3.00	2.91	3.03	3.13 (A)
5. Course syllabus is easily satisfactorily completed when BL is used.	3.21	3.20	2.83	3.00	2.61	2.97 (A)
6. I interact better with my classmates because of the BL method.	3.07	3.20	2.42	2.50	2.78	2.94 (A)
7. I believe that BL develops multiple intelligences among students and professor.	3.10	3.27	2.75	3.14	2.56	2.94 (A)
8. Online sessions are tiring for me.	2.17	2.00	2.67	2.59	2.50	2.36 (D)
9. I lose motivation to learn well when the course is taught using BL.	2.14	2.00	2.42	2.64	2.28	2.28 (D)
10. All college students should try BL, even once before graduation.	3.48	3.27	2.92	3.68	3.33	3.39 (A)
Overall Mean	2.88	2.93	2.75	2.90	2.70	2.82 (A)

Legend:

3.50-4.00 Strongly Agree (SA) 1.50-2.49 Disagree (D)
 2.50-3.49 Agree (A) 1.00-1.49 Strongly Disagree (SD)

Students' Assessment on Blended Learning Experience

Having used blended learning, the respondents, grouped by class section, assessed five (5) areas of concern using a scale of 1 (Poor)

to 5 (Excellent): completion of course syllabus, quality of learning, quality of professor's teaching, grade/rating received, and quality of teacher-student interaction. Table 4 displays the results of the assessment.

Table 4. Students' Assessment on Blended Learning Experience

Area of Concern	Section A	Section B	Section C	Section D	Section E	Overall Mean
1. Completion of your course syllabus	3.98	3.53	3.67	3.96	3.78	3.83 (VG)
2. Quality of your learning	3.98	3.60	3.42	3.82	3.58	3.74 (VG)
3. Quality of your professor's teaching	4.20	3.40	3.17	4.36	3.31	3.78 (VG)
4. Grade/rating you received	4.29	3.73	3.75	3.46	3.83	3.90 (VG)
5. Quality of teacher-student interaction	4.02	3.93	3.17 (G)	3.41	3.25	3.60 (VG)
Overall mean	4.09	3.64	3.43	3.80	3.55	3.77 (VG)

Legend:

4.50-5.00	Excellent	1.50-2.49	Fair
3.50-4.49	Very Good	1.00-1.49	Poor
2.50-3.49	Good		

The respondents generally rated their BL experience as Very Good (overall mean = 3.77). Among the five class sections, Section A assessed their BL experience the highest, especially on the area of concern on grade/rating received, while Section C gave the lowest rating with an overall mean score of 3.42 (Good). This is the same class section with the highest per cent of problems encountered (see Table 5).

All areas of concern obtained an overall average appraisal of "Very Good" from the five class sections. Top in the ranking was the grade/rating received (3.90), followed by completion of course syllabus (3.83); lowest was the quality of teacher-student interaction (3.60).

Besides, the respondents of Faculty A appeared to have had the best experience in terms of completing their course syllabus, quality of learning, and quality of the professor's teaching. As for the grade

or rating received and the quality of teacher-students interaction, the respondents of Faculty B seemed the most satisfied. As far as the quality of professor's teaching is concerned, the respondents of Faculty A, B, and D rated their experience as Very Good. Despite the dissimilar results, the faculty handling the class sections was found to be not significantly influencing the respondents' assessment of their experience in their blended classes (Table 6).

Though the respondents had diverse ways of looking at the areas of concern in their BL experiences, the overall mean indicated that they generally had a Very Good BL involvement. It means that notwithstanding the fact that the faculty had different ways of completing their syllabus, rating the students, and defining the quality of learning, of teaching, and their interaction, all were able to step up, rating favorably their experience of BL model for one semester.

Influence of Class Section and Teacher on Students' Perceptions,

Readiness, and Attitude in Using BL

For both perception of and readiness for blended learning, the correlation results (Table 5) revealed that the respondents' regard and ease to do BL is an individual, private construct uninfluenced by how their classmates in the same class section perceived and were ready to do BL. Therefore, how one regards BL and his/her readiness for it are developed by the person alone.

Moreover, in grouping the respondents according to the faculty who handled the BL course, the correlation results yielded that the faculty handling the subject had no significant effect on the respondents' perception and readiness (Table 6); hence, not dependent on the teacher and on his/her classmates. It appears that these respondents, on their own, were ready to answer course tests, online activities, upload course requirements (e.g., HW, projects) expected in BL classes, and to operate computer hardware/laptop/tablet for BL classes. There was no need for the teachers to teach them these skills, since all of these digital challenges were not new nor intimidating to them, because of previous exposure, as much as they are considered "digital

natives." Prensky (2001) put it more than a decade ago when he averred today's students – K through college – represent the first generations to grow up with digital and virtual technology. They have spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age. He added that computer games, email, the Internet, cell phones, and instant messaging are integral parts of their lives. Describing them as Digital Natives, he referred to them as "native speakers" of the digital language of computers, video games, and the Internet, and the teachers immersing themselves into the students' world are aptly labeled as Digital Immigrants.

The students were ready to perform the assigned tasks for the BL class and adjust themselves to the level suitable for the demands of the BL classes. Presumably, too, the students were willing to persist and use effective learning strategies that would help them secure an acceptable level of academic performance. In other words, the students had the resources, motivation, self-regulation and adaptability, to endure their BL experience. Thus, the teachers handling the BL classes did not have a significant relationship with their level of readiness for this new teaching-learning experience.

Yet, the respondents' attitude towards BL is affected by the entire class section they belonged to (Table 5). Attitude is a learned tendency to evaluate things and people in a certain way (<http://psychology.about.com/od/socialpsychology/a/attitudes.htm>). How attitudes are learned can be done by observing how people around them behave towards a target. In this study, one's mind-set and position toward BL were inevitably swayed by one's classmates.

Not only did the class section that the respondents belonged to affect one's attitude towards BL, the correlation results also revealed that the faculty handling the subject related significantly with their attitude to do blended learning (Table 6).

Attitude is a way of looking at things (Muellerleile, 2005). According to Yara (2009), the teacher's attitude and his/her method of teaching can greatly influence that of the students'. A common

hypothesis with respect to teacher's attitude and student achievement is that students taught using the right approach or attitude achieve at a higher level because their teachers have displayed the right attitude (Gibbons et al., 1997).

Oral (2004) held that a teacher has a crucial function in managing information technologies and in establishing a link between students and inflation technologies. Blended learning is usually perceived in three different ways: as media-based, as method incorporation, or as a fusion of online and traditional methods (Usta, 2007). It combines instructional media and techniques to produce educational output (Bersin, 2004). When the teacher is open and inspiring about the integration of technology in the teaching-learning environment, the students will acquire a positive attitude on technology in education. By contrast, if the teacher manifests a negative attitude towards technology applied to education, the students will also develop an undesirable attitude towards it.

Abudu and Gbadamosi (2014) confirmed the significant effect of teachers when they said that the teacher plays a significant role during the learning process, and they can directly or indirectly influence the student's attitudes toward science which in turn can influence student's achievement. After all, teachers are invariable role models whose behaviours are easily mimicked by students. To this effect, Paechter, Maier and Macher (2010) specifically mentioned that students' assessments of the instructor's expertise in e-learning and her/his counseling and support were the best predictors for learning achievement and course satisfaction.

Besides, correlation analysis results showed that the section to which the respondents belonged and the classmates they were with had a significant influence on their assessment of their experience in their BL class (Table 5). Several studies and related literature cited in a research done in Reed College (2007) confirm the phenomenon of peer effects. Having better peers gives students a better education. The vast majority of those related literature hold that peers can have a strong positive or negative influence on their classmates' learning. One stated, "I think the chemistry of an individual section has everything to do with whether or not some students go far" (Parker et al., 2007). Such observation may explain

why in this study, the overall learning experience of the respondents was affected by the class section they belonged to.

Interestingly, both Sections A and C were handled by the same faculty member. However, as Table 6 shows, the faculty is not significantly associated with the student-respondents' assessment of their BL experience.

Table 5. Correlation between Class Section and Student Perception, Readiness, Attitude, and Assessment of Blended Learning

Section	Perception	Readiness	Attitude	Assessment
Pearson Correlation	-.043	-.053	-.204*	-.290**
Sig. (2-tailed)	.629	.553	.021	.001
N	127	129	127	126

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 6. Correlation between Teacher and Student Perception, Readiness, Attitude, and Assessment of Blended Learning

Teacher	Perception	Readiness	Attitude	Assessment
Pearson Correlation	-.117	.067	-.237**	-.155
Sig. (2-tailed)	.192	.452	.007	.083
N	127	129	127	126

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Problems Encountered

As shown in Table 7, at least 60% of the respondents complained of body discomfort and expensive internet connection brought about by the use of BL in their classes. Both difficulties are somehow interrelated. Much ado has been said of slow internet connection in the Philippines which results to one paying for increased time usage per hour and subsequent prolonged computer use. When surfing link crawls, one is stuck longer in front of the computer monitor amidst what are usually distressing internet café environment, or uncomfortable computer set-up at home. Notably, to compound the problem, most PNU students belonged to average middle-income, and allotment for internet expenses may

not be a priority.

That time to study for other subjects has been reduced is another concern for half of the respondents in their 2nd year or 3rd year of study at that time they had one course conducted using BL. These students normally carry eight to nine courses in one semester. Even an extra hour to comply with BL requirements can already eat up the time allotted for the other subjects the respondents cannot neglect either. Akin to this hassle is the wasted time locating online modules, as cited by 37% of the respondents. The ambiguity and confusion in internet browsing may explain the respondents' recommendation that the faculty members improve BL modules and provide clear instructions.

Table 7. Percent of Responses Across Class Sections on Problems Encountered

Problems Encountered	Class Section					Mean %
	A	B	C	D	E	
Body discomfort (e.g. eye strain, back ache)	43	44	92	82	81	65
Expensive internet connection	48	63	75	77	61	61
Reduced time to study for other subjects	55	56	67	27	47	50
Time wasted to locate online modules	26	63	67	23	36	37
Reduced time to be with family	48	19	42	18	25	33
Reduced time for leisure	31	63	17	14	36	32
Forced to ask someone else to complete online modules	14	38	58	14	19	23
Lack of comprehension in reading modules	7	32	25	32	22	20
No computer equipment to use	0	38	0	36	28	19
Lack of skill to operate a computer	12	25	17	18	11	15

The rest of the problems encountered dwell on reduced time to be with family, lessend time for leisure, having someone else complete online modules, lack of comprehension in reading modules, unavailability of computer equipment to use, and insufficient skill to operate the computer. Interestingly, the respondents value family time and leisure that reflects their desire for a balanced study-family-fun lifestyle. Regrettably, some respondents resort to seeking someone else to complete online modules, a deceptive conduct that might be due to pressure imposed on them to ensure a passing grade, or perhaps due to mismanagement of time, even lack of diligence. This action is one adverse consequence of BL, when the user working on an online module is virtually invisible. The lack of comprehension in reading modules can be a spin-off from the respondents' inadequate comprehension level, or from the faculty member's insufficient instructions, or from probable flawed modules which render content appreciation strenuous.

Respondents' Recommendations to the Faculty and Fellow Students

Having gone through one semester of BL experience, the respondents proposed the following recommendations for its enhancement. For the faculty, the top five recommendations were: use BL only for specific, appropriate topics (18%), improve BL modules (15%), teach the topics effectively (12%), continue with face-to-face class discussions (11%), and inform students first what BL is before implementing it (9%).

Top five recommendations to fellow students were: be open and flexible to teaching-learning innovations, e.g. use of BL (25%); have time management to do BL (13%); know what BL is (11%); be obedient and disciplined to do tasks (10%); and be honest, do not plagiarize, nor not let others do your tasks (9%).

As for the query if the student-respondents would agree to have more courses taught in BL, two-thirds of the respondents (57%, or 74 out of 129) responded in the affirmative, and 35% (45 out of 129) in the negative. The rest (8%) had no answer.

The following reasons support the Yes responses: BL is innovative and effective (36%); BL enhances learning skills (20%); BL has wide

range of teaching strategies (19%). The rest mentioned other notable basis such as: BL can save on transportation fare; BL helps shy students to communicate; BL helps to make one computer-literate; and there is a plan when classes are disrupted.

Those who voted No justified their answer with the following reasons: the traditional way of teaching and learning is preferred (31%), only subjects appropriate for BL should use BL (29%); using computer with internet is too expensive (16%); there is no computer and internet to use (13%); BL makes students lazy (9%); there is body discomfort (4%); and too much time is consumed with BL (4%).

CONCLUSION AND RECOMMENDATIONS

Blended Learning is generally accepted by the respondents as a preferred variation in teaching-learning methodology that instills independent learning, heightens diligence, and provides closer communication between professors and students. Digital natives that they are, most of the respondents have skills to do online class requirements amidst tight financial resources. There was a positive attitude and excitement towards blended learning, plus a strong vote that all college students should try blended learning even just once before graduation. One semester of BL experience in one course convinced most of them that in a blended learning environment, course syllabus can be completed on time, learning and teaching is of quality and course rating received and quality of teacher-student interaction are very satisfactory.

With BL implemented in their classes, the majority of the respondents complained of body discomfort (e.g., eye strain, back ache) and the expensive internet connection costs. Despite the positive perception, readiness, attitude, and over-all assessment of BL, only two-thirds of the respondents agreed to have more courses taught using BL. This lackluster feedback, though, can serve as a catalyst to improve BL practice, especially useful in this time that the University has ventured into the trimester scheme of class schedules which utilizes BL as one teaching-learning strategy.

Finally, this study confirms previous findings that BL plays a pivotal role in the students' academic formation. More pointedly, blended learning environment has been presented as a promising alternative learning approach (Graham, 2006) if not capable of improving, expanding, and even transforming students' learning and knowledge (Donnelly, 2010). Educators should embrace it and help students develop the necessary skills to demonstrate higher levels of interaction. Ultimately, obtaining student feedback about the blended learning environment is vital for the successful design and implementation of the educational process.

Based on the findings of this study, the following recommendations are offered:

To the University Management

- a. To provide assistance to faculty and students to do BL smoothly and easily by maintaining strong internet/wifi connection in the University; and
- b. To establish an official BL template in terms of how many class hours are best intended for actual classroom contact and appropriate for online usage.

To the Faculty

- a. To design BL modules only for suitable course topics;
- b. To ensure BL modules have clear instructions, content, and desired outputs;
- c. To orient the students adequately before online classes are begun;
- d. To conduct regular assessment and obtain feedback if students are learning the lessons as planned;
- e. To sustain regular face-to-face classroom contact; and
- f. To consider and implement any of the blended learning models.

To the Students

- a. To be flexible to try blended learning activities;
- b. To submit original online course work; and

- c. To avoid plagiarizing and having others do the online course requirements.

REFERENCES

- Agricultural Training Institute. Department of Agriculture. (2013). ATI CARAGA Conducts First-Ever Blended e-Learning Course. Retrieved on July 3, 2013 from <http://ati.da.gov.ph/news/2013/ati-caraga-conducts-first-ever-blended-e-learning-course-artificial-insemination-pigs>.
- Alontaga, J. (2012). 20 DLSU Experience. Retrieved on November 7, 2013 from http://www.knowledgecommunity.ph/pdf/Jasper_Alontaga_Hybrid_Learning_%.pdf.
- Asian Development Bank Institute. (2013). [Opening Remarks by Mario Lamberte, Director for Research at 4th Microfinance Training of Trainers: Blended Distance Learning Course](#). Retrieved on July 3, 2013 from <http://adbi.adb.org/speeches/2007/08/17/2347.opening.remarks.mfftot/>.
- Aquino, Paolo Benigno. 2014. Probe 'slow, expensive' internet in Phl. Retrieved on September 19, 2014 from www.philstar.com/.../probe-slow-expensive-internet-phl-bam-aquino.
- SEAMEO-INNOTECH. (2013). Blended Learning Courses for School Leaders and Managers. Retrieved on July 3, 2013 from <http://www.innotech.org/blendedlearning.html..>

- Jonassen D., J. Howland, R.M. & Crismond, M. D. (2012). How Does Technology Facilitate Learning? Retrieved on November 7, 2013 from <http://www.education.com/reference/article/how-does-technology-facilitate-learning/>
- Virginia Community University Center for Teaching Excellence. (2009). Meta Analysis of Blended Classes. US Department of Education. Retrieved on July 3, 2013 from http://www.vcu.edu/cte/resources/OTLRG/01_06_Blended_Classes.html.
- Muzones, G. M. & de Jesus, J. E. (2009). As Cost of Education Rises, Dropout Rates Among Filipino Youths Soar. Retrieved on September 19, 2014 from <http://bulatlat.com/main/2009/05/30/as-cost-of-education-rises-dropout-rates-among-filipinos-soar/#sthash.NX4nCbR4.dpuf>.
- Parker, J., Rivenburg, J., Beaman, J., and Christopherson, N. (2007). Learning from Your Classmates: A Multi-Method Assessment of Classmate Peer Effects in First-Year Core Courses at Three Colleges. Retrieved on September 19, 2014 from http://academic.reed.edu/economics/parker/PNAIRP_gen_paper.pdf.
- Prensky, M. (2001). Visionary, yet Practical Perspectives on Education Today and Tomorrow. Retrieved on November 7, 2013 from <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf..>
- Robinson, B. (2002). The CIPP approach to evaluation. Retrieved on November 11, 2013 from [http://www.fivehokies.com/Evaluation/Evaluation%20Approaches/Management%20Oriented/CIPP%20Approach%20o%20Evalaution.pdf. .](http://www.fivehokies.com/Evaluation/Evaluation%20Approaches/Management%20Oriented/CIPP%20Approach%20o%20Evalaution.pdf.)
- Salt peter , J. (1999). In How Can Technology Benefit Our Students?

Retrieved on November 6, 2013 from http://www.k12.hi.us/~teono/teri/benefits_of_technology.htm.

University of the East Graduate School Curricular Offerings. (2013). Graduate School. Retrieved on July 3, 2013 from http://www.ue.edu.ph/calooacan/main.html?page=colleges&link=gs_offerings..

University of the Philippines Information Technology Development Center. (2013). E-Learning. Retrieved on November 7, 2013 from <http://media.itdc.up.edu.ph/upittc/node/138>. .

Washtenaw Community College. (2013). What Students Say About Blended Claases. Retrieved on July 3, 2013 from <http://www.wccnet.edu/academics/classes/blended/>.

Akkoyunlu, B. & Yilmaz-Soylu, M. (2013). Readiness for Blended Learning: Understanding Attitude of University Students. *International Journal of Cyber Society and Education*, 6(2), pp. 79-100.

Akkoyunlu, B. & Soyulu, M. Y. (2008). A Study of Students Perceptions in a Blended Learning Environment Based on Different Learning Styles. *Educational Technology and Society*, 11(1), 183-193

Gamoussi, SORRY CANNOT LOCATE ANYMORE ET AL AUTHORS (2013). *Blended Learning in Undergraduate Education: The Relationship Between Student's Perceived Course Interaction and Satisfaction*, Greece: Democritus University of Thrace.

Yushau, B. (2006). *The Effects of Blended Learning on Mathematics and Computer Attitudes in Pre-Calculus Algebra*, Saudi Arabia: King Pahd University of Petroleum and Minerals.