

## THE EXTENT OF LEARNERS' EXPECTATIONS ON BLENDED LEARNING

Marianne M. Andrada, Albert P. Bayawa II

*Marianne M. Andrada is a faculty at University of Baguio Science High School, Philippines. E-mail: marianne@e.ubaguio.edu*  
*Albert P. Bayawa II is a faculty at University of Baguio Science High School, Philippines. E-mail: albertbayawa@e.ubaguio.edu*

### KeyWords

Blended learning, online learning, extent of learners' expectations, online interaction, growth opportunities

### ABSTRACT

Blended learning is an approach that takes advantage of the best that both the classroom and online learning can provide. This study hopes to help schools improve their understanding of how students view blended learning and formulate a strategy to successfully implement blended learning. To do this, the research model by Tang (2013) was utilized. The conceptualized construct for each of the six learning aspects, i.e., learning flexibility, online learning, study management, technology, online interaction, and classroom learning, was administered to the University of Baguio Science High School's grades 7-12 students of the academic year 2019-2020. This study's main objective is to determine the extent of the learners' expectations of blended learning. The results show that the learners' top three online activities are to search for information, send instant messages, and access learning management systems. According to a decreasing percentage, learners' gadgets include smartphones, netbooks/laptops, desktop computers, and tablets with a subscription to internet access. The extent of the learners' expectations of blended learning and classroom learning are evident, while online interaction and classroom learning are observable. Sex and grade level do not affect the students' expectations of the learning flexibility of blended learning. There is no significant difference between the growth opportunity for blended learning between males and females when it comes to growth opportunity for blended learning. However, grade level varies between eight and twelve, nine and twelve, and eleven and twelve. Lastly, it can be said that the learners' expectations of blended learning can significantly affect the acceptance and implementation of blended learning. In conclusion, all learners are ready for blended learning with their hardware capabilities and internet connections, including their high acceptance of the growth opportunities awaiting them in their subjects with online learning expectations and interaction apart from classroom interaction.

### INTRODUCTION

As more academic content becomes openly and freely available, learners will look increasingly to their schools for support with their learning, rather than for delivering content, which puts a greater focus on teaching skills and less on subject expertise. Teachers need a robust framework for assessing the value of different technologies, new or existing, and deciding how or when these technologies make sense for them and their students to use—traditional classroom teaching and especially transmissive lectures designed for another age. Although lectures have served us well, learners are now in a different generation that requires other methods. The critical shift is towards greater emphasis on skills, particularly knowledge management, and less on memorizing content. Teachers need design models for teaching and learning that lead to the development of the skills required in a digital age.

Technologies are merely tools that can be used in a variety of ways. What matters more is how technologies are applied. The same technology can be applied in different ways, especially in education. Information technology (IT) has provided new means for learning delivery outside of conventional classrooms, especially when the problem is the lack of available classrooms. Blended learning is an approach that takes advantage of the best that both the classroom and online learning can provide. This study hopes to help schools improve their understanding of how students view blended learning and formulate a strategy to successfully implement blended learning.

Teaching methods need to be used that help to develop and transfer specific skills that serve both the purposes of knowledge development and dissemination while at the same time preparing graduates for work in a knowledge-based society. This is where online learning comes in and is gradually being used as a supplement to traditional teaching, usually referred to as a blended or flexible learning mode.

The majority of jobs now require both academic and skills-based knowledge that needs to be integrated and contextualized. As a

result, teachers in the digital age mean that their own skills level needs to be increased to cope with these demands. Teachers need to find the middle ground between complete learner freedom and over-direction to enable learners to develop the critical skills needed in a digital age.

### Literature Review

A factor that makes students somewhat different today according to Bates (2015) is their immersion in and facility with digital technology, and in particular social media: instant messaging, Twitter, video games, Facebook, and a whole host of applications that run on a variety of mobile devices such as tablets and mobile phones. Such students are always 'on.' Most students come to school immersed in social media, and much of their life revolves around such media. As a result of their immersion in digital media. They expect to use social media in all other aspects of their life. Why should their learning experience be different?

With the increasing use of tablets, smartphones, and touch screen devices to be used in blended learning courses, Guzer and Caner (2013) recommended that there should be more studies guiding teachers or administrators on how to create a successful blend. As technological innovations spread, new types of blends will occur, and education will be blended with different technologies. The researchers further reiterated to integrate constructivist and collaborative models into blended learning environments and aim to educate more creative and curious students. The latter read, write, and produce for the world.

Findings in the study of Kimiloglu et al. (2017) show that, interestingly, once companies step into adopting e-learning even at an introductory level, most of the previously mentioned obstacles begin to diminish. This research has shown that companies with some level of experience in e-learning perceive the advantages much more strongly than those who have never used it at all. Similar to the diffusion of most technologies in the market, once the resistance threshold is passed, acceptance of and attitude toward the new technology rapidly improves.

From a pedagogical perspective, the findings of Oz et al. (2014) suggest that schools and faculty members should be equipped with digital devices since it is beyond dispute that the increasing ubiquity and accessibility of digital and mobile devices have rendered the Computer-Assisted Language Learning (CALL)-mediated instruction globally an inevitable part of education in inclusive learning in particular.

An in-depth analysis of the questionnaire (Rahimi, 2011) showed that students' attitudes towards CALL improved in all items except one item. The decrease in the positive attitudes of students toward the item can be attributed to the role of the teacher during the experiment. While before the experiment, students thought that their attitudes were dependent on teachers' attitudes, after the experiment, they felt a little more independent of the teacher's attitudes. This supports the fact that teachers' role is essential in improving students' autonomy in computer-based instruction.

Learners' attitude about the online learning environment is influential to students' engagement in e-mentoring. Learners who can control their learning and utilized various assisted functions in online learning engage more with their mentors (Omar, 2012).

It is particularly important when addressing many of the requirements of learners in a digital age who choose a particular approach. The following are theories of learning that may have significant implications for the way the technology is used to support teaching:

A teacher applying an objectivist approach to teaching, according to Bates (2015), has to be in control of what and how students learn, choosing what is essential to learn, the sequence, the learning activities, and how learners are to be assessed. Objectivists believe that there exists an objective and reliable set of facts, principles, and theories that both have been discovered and delineated or will be over time.

Skinner's theory of learning provides the underlying theoretical basis for the development of teaching machines, measurable learning objectives, computer-assisted instruction, and multiple-choice tests. Behaviorism's influence is still strong in corporate and military training, and some areas of science, engineering, and medical training. It can be of particular value for rote learning of facts or standard procedures such as multiplication tables, for dealing with children or adults with limited cognitive ability due to brain disorders, or for compliance with industrial or business standards or processes invariant and do not require individual judgment. Behaviorism, with its emphasis on rewards and punishment as drivers of learning, and on predefined and measurable outcomes, is the basis of general conceptions of learning among many parents as well as computer scientists interested in automating learning.

Cognitivism focuses on the 'thinking' domain. In more recent years, Anderson and Krathwol (2000) have slightly modified Bloom et al.'s original taxonomy, adding 'creating' new knowledge. They argued that a hierarchy of learning where learners need to progress in each of the levels, from remembering to evaluating/creating. A cognitivist approach would mean focusing on teaching learners how to learn, developing stronger or new mental processes for future learning, and on developing a deeper and continuously changing understanding of concepts and ideas.

For constructivists, learning is primarily a social process that requires communication between the learner, teacher, and others. This social process cannot effectively be replaced by technology, although technology may facilitate it. Constructivist' teachers place a strong emphasis on learners developing personal meaning through reflection, analysis, and the gradual building of layers or depths of knowledge through conscious and ongoing mental processing. Reflection, seminars, discussion forums, small group work, and projects are critical methods to support constructivist learning in campus-based teaching and online collaborative learning, and communities of practice are essential constructivist methods in online learning.

Connectivism has emerged in recent years that are particularly relevant to a digital society. For Siemens (2005), it is the connections, and the way information flows that result in knowledge existing beyond the individual. Learning becomes the ability to tap into significant flows of information and to follow those flows that are significant.

With all these, the challenge for teachers is to develop teaching methods that build on learning theories discussed above.

## Theoretical/Conceptual Framework

Advances in information technology, such as web applications, mobile devices, and telecommunications, have inevitably changed the design and delivery of classes. From classroom learning to online learning, schools have experienced a paradigm shift in their teaching practices and in ways their students learn. To adapt to the changing trends in education, it is paramount to always look for innovative solutions to improve the learning delivery environment for teachers and students (Tang, 2013).

In another study by Svensson and Baelo (2014), their purpose is to know the perceptions of teacher-students about their digital competences to develop their future profession. They defined digital competence broadly as the confident, critical, and creative use of ICT to achieve goals related to work, employability, learning, leisure, inclusion, and participation in society.

If studying to be teachers need digital competence, Guzer and Caner (2013), on the other hand, discussed that blended learning emerged as one of the most popular pedagogical concepts at the beginning of 2000. With an increasing tendency, many kinds of research have reported on blended learning since it flourished. The lack of technological availability prevented the blending of traditional face-to-face learning with distributed learning environments. However, within the recent ten years, the introduction of the new technological innovations filled the gap between traditional face-to-face learning and distributed learning environments. This study reviewed and analyzed the studies carried out on blended learning by reflecting on the past, the present, and the future. Recent developments in technology encourage teacher educators to apply blended learning in their classroom, but how it should be implemented will be one of the key questions discussed in this research.

The information below are some models valued for teaching in a digital age and may be used to design one's teaching with an online focus: Harasim's pedagogy of group discussion (2012) described online collaborative learning (OCL) with the three phases of knowledge construction through discourse: first, idea-generating: this is brainstorming, to collect the divergent thinking within a group; second, idea organizing: this is where learners compare, analyze and categorize the different ideas previously generated, again through discussion and argument; and third, intellectual convergence: the aim here is to reach a level of intellectual synthesis, understanding, and consensus, usually through the joint construction of a piece of work, such as an essay or assignment. Another critical factor is that in the OCL model, discussion forums are not addition or supplement to core teaching materials, such as textbooks, recorded lectures, or text in a learning management system (LMS), but are the core component of the teaching.

Analyze, Evaluate, Design, Develop, Implement, and Evaluate (ADDIE) is a design model that many professional instructional designers use for technology-based teaching. It allows these design principles to be identified and implemented on a systematic and thorough basis. It is also a handy management tool, allowing for the design and development of large numbers of courses to a standard high quality (Morrison, 2010).

Hibbitts and Travin's (2015) alternative to ADDIE presents the following learning and technology development model that incorporates the various stages of course design: assess learner needs, define, conceptualize, deliver, assess technology fit, design, evaluate, implement.

Regardless of the model for learning design, it will be essential to assess how technology will impact the pedagogy. The SECTIONS model by Bates (2015) which stands for Students, Ease of use, Costs, Teaching functions, Interaction, Organizational issues, Networking, Security and privacy is a practical framework to inform instructors best when deciding what media or technology to use for face-to-face, online or blended learning courses.

Recognizing that in education media are usually used in combination, the six fundamental building blocks of media are face-to-face teaching, text, still graphics, audio, video, and computing (including animation, simulations, and virtual reality). This different media can be used to assist learners in learning in different ways and achieve different outcomes, thus also individualizing learning more (Bates, 2015).

A guide to multimedia design, Mayer (2009) identified 12 principles based on how learners cognitively process multimedia: coherence, signaling, redundancy, spatial contiguity, temporal contiguity, segmenting, pre-training, modality, multimedia, personalization, voice, and image.

Blended learning provides an opportunity for the gradual development of independent learning skills, as long as this is an intentional teaching strategy.

## Significance of the Study

Faculty often complain about students' use of technology such as mobile phones or tablets, for irrelevant multitasking in class. Learners may wonder, if most students have mobile phones or laptops, why are they still having physically to come to a lecture class? Why can't they just get a podcast or a video of the lecture? Lectures will allow teachers to make themselves known, impart their interests and enthusiasm, and motivate learners, but this will be just one relatively small but essential component of a much broader learning experience for students.

There are many different ways to teach. Most teachers will mix and match different methods, depending on the needs of both the subject matter and the needs of their students at a particular time. Some forms of teaching fit better with the development of the skills needed in a digital age. In particular, methods that focus on conceptual development, such as dialogue and discussion, knowledge management (rather than information transmission), and experiential learning in real-world contexts, are all methods more likely to develop the high-level conceptual skills required in a digital age (Bates, 2015).

This study hoped to help schools improve their understanding of how students view blended learning and formulate a strategy to implement blended learning successfully.

### Objectives of the Study

The objective of this study is to determine the extent of the learners' expectations of blended learning. Specifically, it sought to answer the following problems:

1. What are the different activities of the learners online?
2. What gadgets are used by learners?
3. What is the extent of the learners' expectations of blended learning and classroom learning?
  - 3.1 Is there a significant difference between the expectations of blended learning and classroom learning of learners with different sex and grade level?
4. What is the growth opportunity for blended learning?
  - 4.1 Is there a significant difference between the growth opportunity for blended learning with different sex and year level?
5. Is there a significant relationship between the learners' expectations and their growth opportunities on blended learning?

### METHODOLOGY

The following section explores details of the proposed study design, sample population, data gathering tools, and procedures with the corresponding treatment of data, including ethical considerations in doing this study.

#### Study Design

The research was a quantitative study following the discussion of each of the learning aspects that can influence how adaptable to blended learning students are. The research model by Tang (2013) was utilized. He conceptualized a construct for each of the six learning aspects, i.e., learning flexibility, online learning, study management, technology, online interaction, and classroom learning.

#### Sample/Population of the Study

Participants are learners with assent and consent from grades 7 to 12 from the University of Baguio Science High School of the school year 2019-2020. The reason for the selection was for comparison purposes. Differences in terms of learning needs and attitudes between the selected grade levels may arise. Aside from that, older students may have experienced a blended learning environment of some sort and might provide better opinions. Moreover, to formulate a strategy to implement blended learning successfully, all grade levels will need to be represented. For the computation of the sample size, a 0.05 level of significance was used. After getting the sample size of 285, stratified sampling was used to get the samples per grade level. In summary, there are 42 grade 7, 51 grade 8, 44 grade 9, 36 grade 10, 42 grade 11, and 70 grade 12 students.

#### Data Gathering Tools

The survey consisted of three sections conceptualized by Tang (2013): section A contained the different activities engaged in by the learners when they are online, section B included a list of the different gadgets available for use by the learners, section C has 14 items classified as expectations on learning flexibility (LF), expectations on online learning (OL), expectations on online interaction (OI); expectations on classroom learning (CL); and growth opportunities for blended learning (BL). There are three items for each construct stated above, except for OI with two items.

#### Data Gathering Procedures

Before scheduling with the respondent's computer laboratory teacher, the learners who were 12 to 17 years old during the time of data collection were given an assent form for their parents to sign a consent form if they agree. It was given early January and took about 2 weeks to retrieve. 18 years and older learners' consent were asked at the beginning of the created google forms. The survey forms' link was sent to the computer subject teachers for them to share with their respective students during their classes via google classroom. The researchers were present during these classes to explain to them the purpose and why their participation is important. The researcher then requested the students to click the google forms' link shared with them by their teacher via their subject's google classroom. They were guided throughout, answering clarifications during the process. Those who did not consent did not answer the survey and continued with their subject requirement quietly. The duration of the survey from introduction to submission took about 15-20 minutes to finish. The data were gathered starting January 21 and was collected until early March just before all schools were closed due to the pandemic. However, the online survey forms remained open after that in case the respondents were not able to participate during the assigned schedule but gave their consent just the same.

#### Treatment of Data

To generalize the online activities of the learners and the gadgets used by the learners, frequency and percentage were utilized. The table below was used to interpret the level of expectations and growth opportunities of the learners on blended learning:

Table 1  
*Level of Expectations and Growth Opportunities*

Arbitrary Value	Range	Interpretation
1	1.00 – 1.74	Evident: obvious, clearly seen, usual
2	1.75 – 2.49	Observable: seen, noticed, recognized

3	2.50 – 3.24	Limited: Observed to some extent, maybe concealed but known
4	3.25 – 4.00	Absent: not observable, non-existent

To check the normality of the data distribution, the Shapiro Wilk test was done using a 0.05 level of significance. Since the data were not all normally distributed, the researchers ought to use non-parametric tests. To test if a significant difference exists between the expectations of learners with different gender, the Mann-Whitney test for independent samples with 0.05 level of significance was utilized. In contrast, for samples with different year levels, the Kruskal Wallis test was used.

To test if a significant difference exists between the perception of male and female learners on the growth opportunity for blended learning, the Mann-Whitney test was utilized. For learners with different year levels, the Kruskal Wallis test was used was also utilized. Since a significant difference exists among the perceived growth opportunity for blended learning of learners from different year levels, a post-hoc test, accurately the pairwise Mann-Whitney test was done using the same level of confidence.

Pearson's correlation was used to compute the correlation coefficient of the learners' expectations of blended learning and growth opportunities. The following ranges were used to interpret the computed correlation coefficient: 0 (No correlation), 0.01 – 0.19 (Very Weak), 0.20 – 0.39 (Weak), 0.40 – 0.59 (Moderate), 0.60 – 0.79 (Strong), 0.80 – 0.99 (Very Strong), and 1 (Perfect). The significance of the computed correlation is tested using a t-test and a 0.05 level of significance. A multiple regression analysis was done to see the overall effect of the learners' expectations on the growth opportunities for blended learning after a significant correlation. The researchers used the regression to make further or analyze a model for the study.

### Ethical Considerations

The learners and their parents who agreed to participate in the study completed a survey via google forms during their respective computer classes. The total duration was utmost 20 minutes. The minimal risks and inconveniences for participating in this study include a feeling of discomfort when answering the survey, the time spent taken from class for participating might be considered an inconvenience.

To minimize these risks and inconveniences, the following measures were taken: Questions were clarified when the participants needed context while taking the survey. Floating of questionnaires via google forms were available online outside the scheduled time given by the subject teacher and the students were able to answer at a time convenient to the participants. Their responses were confidential, and any personal information collected was accessed only by the researchers doing the study. The results of this study may be used in reports, presentations, or publications, but their names will not be used. Results will only be shared in aggregate form.

Additionally, the researcher will store the data in a password protected computer accessed only by the researchers. The data will be retained three years after the project is completed, and the data will be disposed of properly. The paper records will be shredded, and the digital files will be erased.

Taking part in this study was voluntary and will not result in any penalty nor affect their grades nor unfairly treated. Their decision to participate in this study will not affect their current or future relations with the school.

The benefits of participating in this study include being a catalyst to the effective and efficient delivery of blended learning strategies in the study halls of UB Science High School. For the graduating class, taking part in this study may not have direct benefits, but it will help the researchers learn what students need when it comes to applying blended learning in the classroom.

The knowledge to be gained from this study will contribute to educational research. If the participants have questions about the study, an office phone number and email of the researcher was provided. Finally, the findings of the study will be disseminated through the proceedings of each department's INSET (if applicable).

## RESULTS AND DISCUSSION

After gathering and organizing the data presented are the different tests, analyses, interpretations, generalizations, and discussions about the results. Descriptive information, inferences, and implications are also presented to support the said results of the study.

In testing the normality of the data gathered using the Shapiro-Wilk test, the data were not normally distributed at 0.05 level of significance. Thus, the researchers ought to use non-parametric tests with 0.05 level of significance at both one and two-tailed tests, as shown on the following tables.

### Different activities of the learners online

Table 2 shows the different activities of the learners online with their respective frequency and percentage. It is observed that the highest percentage (99.65%) of learners do search for information online. This is not surprising since the learners today do their assignments and other school activities with the aid of information taken from the internet.

Table 2  
*Different Activities of Learners Online*

Activities	Frequency	Percentage (%)
Send email	212	74.39
Download mobile apps from app stores	267	93.68

Visit social networking sites	271	95.09
Watch streaming videos	277	97.19
Read online news	191	67.02
Listen to streaming audio	257	90.18
Access e-data bases	147	51.58
Search for information	284	99.65
Download files from peer to peer or P2P sites	85	29.82
Access learning management systems	280	98.25
Shop and buy things	172	60.35
Send instant messages	282	98.95
Just surfing websites	257	90.18
Play online games	184	64.56
Do online banking	83	29.12

Also, sending instant messages were done by 98.95% of the learners. This case is not unusual since the mode of communication of learners today is via the internet. It can be seen that 98.25% access learning management systems, which are very promising when it comes to blended learning. Out of the 15 activities, eight are done by more than 90% of the learners. Aside from the mentioned activities, these include downloading mobile apps from app stores, visiting social networking sites, streaming videos, listening to streaming audios, and surfing the websites.

It is quite notable that 13 out of 15 online activities were done by the majority or more than half of the learners. Only two online activities were done by less than 30% of the respondents. Online banking has the least percentage since students usually do not earn. Having bank accounts, whether online or not, is not a necessity for them. Thus, few students can only do online banking if given by their parents or guardians an account. Also, downloading files from P2P sites is only done by 29.82% of the respondents due to the availability of shows online or stream right to their smart TV, game console, personal computer, mobile or tablet and more which does not require downloading.

Bates (2015) explained that the students are immersed in digital media with a whole host of applications making the different activities of learners online common occurrence. The resulting data also reflects various reasons for the high school students being active online. This information helps in contextualizing and reinforcing lessons to what is important to them, prepare lesson activities that are anchored to what they commonly do online, and perhaps introduce topics that adds to what is uncommon for them to do online such as accessing data bases for research purposes or financial planning through different life stages.

### Gadgets are used by learners

Table 3 shows the gadgets used by the learners. Starting from the highest percentage, almost all or 99.65% of the learners use a smartphone. This is not surprising since, in this generation, smartphones are viewed to be a necessity since it is probably the easiest way of communication for both parents and students.

Table 3  
*Gadgets used by the learners*

Activities	Frequency	Percentage (%)
Smartphone	284	99.65
Tablet	119	41.75
Netbook/Laptop	249	87.37
Desktop Computer	182	63.86
Subscribed to broadband internet access at home	257	90.18
Subscribed to smartphone internet access	217	76.14

In 2017, the number of smartphone users in the Philippines was estimated to reach 30.4 million. Sanchez (2020) explained, the data means around 32% of the population in the Philippines would use a smartphone and is expected to rise to 40% by the year 2021. Also, the majority of the respondents, or 90%, have the internet at home. In 2018, the number of internet users in the Philippines grew to almost 70 million, accounting for more than half of the total population (Sanchez, 2020). From the six gadgets listed, five is used by the majority of the learners, while less than half of the learners own a tablet. This is because of functionality, most functions of a tablet can be done by smartphones nowadays and some other functions by a laptop, netbook, or desktop. Thus, a need for owning a tablet is not that necessary than that of a smartphone. According to Sanchez (2020), for accessing the internet, consumers in the Philippines utilize several devices. However, mobile devices, especially mobile phones, are the leading device for consumers to access the internet. A quarter of the population used mobile phones in 2018 to access the internet. It is forecasted to grow and penetrate almost half of the population by 2023.

Having known the gadgets used by the learners, some online learning materials like the choice of software, platforms, file format,

and meetings can be anchored to the gadgets used by the learners for teaching and learning to be successful. Thus, it is very important to see the gadgets used by the learners in order to create the right strategies that can be supported by the said gadgets to maximize its features and applications. Also, this will give teachers the idea on some of the limitations of online learning that are anchored on the limitations of the gadgets used by the learners. With the information at hand, lessons may be created using a successful blend with different technologies.

#### Extent of the learners' expectations of blended learning and classroom learning

Table 4 shows the extent of learners' expectations on blended learning and classroom learning. The computed mean for the learning flexibility of blended learning and the online learning are interpreted to be evident while online interaction and classroom learning are observable. With this, the learners expect that deciding where to study, when to study, and studying at their own pace using blended learning are usually done, clearly seen, and noticeable. Also, learners expect online learning to be a comfortable, useful platform of learning, and easy access to the lecturer or teacher is usually seen.

Table 4

*Extent of learners' expectation on blended learning and classroom learning*

Expectations	Mean	Standard Deviation	Descriptive Equivalent
Learning Flexibility	3.38	0.4545	Evident
Online Learning	3.26	0.4597	Evident
Online Interaction	3.22	0.5292	Observable
Classroom Learning	3.12	0.4280	Observable

As for the online interaction, students expect that the ease of use and ease of communication with others online using blended learning to be recognizable and noticeable. In the classroom learning, learners expect that learning through collaboration face-to-face, being more productive, and studying better through lecturer-directed classroom-based activities are recognizable and noticeable.

Findings in the study of Kimiloglu et.al (2017) relates to the results in table 4 about the learners' expectations on blended and classroom learning. Accordingly, with some level of experience in e-learning, the perception about the advantages are much more strongly than those who have never used it at all. Once the resistance threshold is passed, acceptance and attitude toward the new technology rapidly improves. A few teachers already introduced blended learning in the classroom as early as 2 years ago which is somehow reflected in the results. Omar (2012) elaborates further that the learner's attitude about online learning environment is influential to students' engagement in e-mentoring. Learners who can control their learning and utilized various assisted functions in online learning engage more with their mentors.

Table 5 shows the Mann-Whitney test between the extent of the expectations of male and female learners on blended learning. For the learning flexibility of blended learning, the computed means were said to be evident using the scale of interpretation provided in table 1. It implies that both male and female students expect that deciding where to study, when to study, and studying at their own pace using blended learning are usually done, clearly seen, and noticeable. Similarities in the expectation of male and female learners on the learning flexibility of blended learning are supported by not rejecting the hypothesis that no significant difference exists between the said expectations of the learners with a different sex. With this, being male or female does not affect the students' expectations of the learning flexibility of blended learning.

Table 5

*Mann-Whitney test between the extent of male and female learners' expectation on blended learning*

Expectations	Sex	Mean	Descriptive Equivalent	p-value	Interpretation
Learning Flexibility	Male	3.38	Evident	0.915	Not Significant
	Female	3.38	Evident		
Online Learning	Male	3.31	Evident	0.032	Significant ( <i>one-tail</i> )
	Female	3.21	Observable		
Online Interaction	Male	3.26	Evident	0.246	Not Significant
	Female	3.19	Observable		
Classroom Learning	Male	3.12	Observable	0.899	Not Significant
	Female	3.13	Observable		

\*alpha = 0.05

Notably, the computed mean for online learning for male learners is evident while observable for female learners. This means that male learners expect online learning to be a comfortable, useful platform of learning, and easy access to the lecturer or teacher is usually seen. In contrast, female learners expect these to be noticeable and recognizable. The difference between the expectation of online learning of male and female students is supported by having a significant difference at one-tail since the p-value is less than the significance level. Thus, that expectation of male learners on online learning's comfortability, usefulness, and immediate access to the teacher is more than that of the female learners' expectations.

As for the online interaction, male students expect that the ease of use and ease of communication with others online using blended learning are usual and seen. In contrast, female learners see it to be recognizable and noticeable. Still, this difference is not significant since the p-value is higher than the confidence level. Thus, the gender of the learners does not affect their expectations of online interaction using blended learning.

Considering the classroom learning, both the computed means for male and female learners were interpreted to be observable. With this, the learners expect that learning through collaboration face-to-face, being more productive, and studying better through lecturer-directed classroom-based activities are recognizable and noticeable in classroom learning. Having no significant difference supports the similarity of the expectations of male and female students in classroom learning. Again, the sex does not affect the expectations of the learners on classroom learning. Similarly, no differences were noted in the blended learning study by Shantakumari and Sajith (2015). Interestingly, Meyer (2003) found that gender differences appear in online exchanges just as they would in regular situations. Males were more likely to control online discussions, posed more questions, expressed more certainty in their opinions and were more concrete, whereas females were more empathetic, polite, and agreeable.

Table 6 shows the Kruskal Wallis test among the extent of learners' expectations on blended learning as viewed by students from different year levels. It shows that for all of the four categories, no significant difference exists among the expectations of the students with different year levels since the corresponding p-values are less than the level of significance. With this, the year level of the learners does not affect their expectations of both blended and classroom learning.

Table 6

*Kruskal Wallis test the extent of learners' expectation of blended learning as viewed by students from different year levels*

Expectations	Year Level	Mean	Descriptive Equivalent	p-value	Interpretation
Learning Flexibility	Grade 7	3.37	Evident	0.378	Not Significant
	Grade 8	3.37	Evident		
	Grade 9	3.36	Evident		
	Grade 10	3.27	Evident		
	Grade 11	3.44	Evident		
	Grade 12	3.43	Evident		
Online Learning	Grade 7	3.17	Observable	0.084	Not Significant
	Grade 8	3.32	Evident		
	Grade 9	3.38	Evident		
	Grade 10	3.22	Observable		
	Grade 11	3.33	Evident		
	Grade 12	3.15	Observable		
Online Interaction	Grade 7	3.10	Observable	0.187	Not Significant
	Grade 8	3.25	Evident		
	Grade 9	3.33	Evident		
	Grade 10	3.19	Observable		
	Grade 11	3.15	Observable		
	Grade 12	3.25	Evident		
Classroom Learning	Grade 7	3.09	Observable	0.188	Not Significant
	Grade 8	2.99	Observable		
	Grade 9	3.11	Observable		
	Grade 10	3.21	Observable		
	Grade 11	3.15	Observable		
	Grade 12	3.19	Observable		

\* $\alpha = 0.05$

Starting with the learning flexibility of blended learning, students from different year levels expect it to be evident and is usual and seen. The students expect that deciding where to study, when to study, and studying at their own pace as part of the flexibility of blended learning is a usual advantage and undeniably. As for online learning, students from grades 7, 10, and 12 accept that comfortable, useful platform of learning, and easy access to the lecturer or teacher are observable, recognizable, and can be seen in blended learning. In contrast, students from grades 8, 9, and 11 expect it to be evident and seen. Since these differences are not significant, students' expectations from the different year levels on online learning do not differ.

As for the online interaction, students from grades 7, 10, and 11 accept that ease of use of the platform and ease of communication with others online is to observable, recognizable, and can be seen in blended learning. In contrast, students from grades 8, 9, and 12 expect it to be evident, usual and can be seen on blended learning. Again, these differences are not significant, which implies that the expectations of students from different year levels do not differ from each other.

Students from the different year levels expect that learning through collaboration face-to-face, being more productive, and studying better through lecturer-directed classroom-based activities are recognizable, noticeable, and can be seen in classroom learning. With this, students still recognize the effectivity of classroom learning over online learning, although this is still just expectations from the students.

Perhaps, connectivism has emerged in recent years that are particularly relevant to a digital society. For Siemens (2005), it is the



connections, and the way information flows that result in knowledge existing beyond the individual. Learning becomes the ability to tap into significant flows of information and to follow those flows that are significant regardless of differences in grade level. For constructivists, learning is primarily a social process that requires communication between the learner, teacher, and others. This social process cannot effectively be replaced by technology, although technology may facilitate it (Bates, 2015).

**Growth opportunity for blended learning**

Table 7 shows the Mann-Whitney test between the level of growth opportunities for blended learning as viewed male and female learners, the Kruskal Wallis test on the growth opportunities for blended learning as viewed by students from different year levels, and as a whole. The computed mean for the overall is interpreted to be observable. This imply that the growth opportunities as perceived by the learners can be generalized to be noticeable, recognizable, and can be seen for blended learning.

It is seen that both the computed means for the male and female learners are said to be observable by using the scale on table 1. This implies that growth opportunities are noticeable, recognizable, and can be seen for blended learning as perceived by both learners. Thus, students seem to recognize that joining or attending a course or subject that adopts blended learning is an avenue of learning that gives blended learning an opportunity to be used.

Table 7  
*Growth Opportunity for blended learning as viewed by students with different sex and year level*

Category	Groups	Mean	Descriptive Equivalent	p-value	Interpretation
Sex	Male	3.06	Observable	0.813	Not Significant
	Female	3.07	Observable		
Year Level	Grade 7	3.06	Observable	0.002	Significant
	Grade 8	3.27	Evident		
	Grade 9	3.20	Observable		
	Grade 10	3.05	Observable		
	Grade 11	3.13	Observable		
	Grade 12	2.80	Observable		
<b>Overall</b>		<b>3.07</b>	<b>Observable</b>		

\*alpha = 0.05

The similarity in the perception of male and female students on the growth opportunities for blended learning is supported by not rejecting the hypothesis that no significant difference exists between the growth opportunity for blended learning as viewed by male and female learners since the p-value is less than the level of significance. With this, it can be said that the learners' sex does not affect their perception of the growth opportunities for blended learning.

Female or male students' perceived accomplishment and enjoyment of the blended class significantly influenced their learning satisfaction. Because of the reduced face-to-face class meeting time and increased use of online systems and other related technologies, it is common to expect that students need to make more effort to get familiar with and make effective use of the blended learning environment. Therefore, to help keep them interested in learning, educators should put more effort into checking and making sure that students enjoy the learning environment and have a sense of accomplishment in their education (Dang, 2016).

With the advancement and development in internet technologies, differences between males and females in growth opportunities for blended learning are not significant. Still, the new focus can be on how the two utilize technology in different ways. It is quite interesting that only students from grade 8 see an evident and apparent chance for blended learning to be used in learning while the remaining students recognized and can see its growth opportunity. This difference is said to be significant. Thus, the year level of the students affects their perception of the growth opportunities for blended learning. It implies that implementing blended learning can be affected by the year level of the learners. With this, a post-hoc test is shown in table 8 to see where the significant difference lies.

Table 8  
*Post-hoc test on the Growth Opportunity for blended learning*

Group 1	Group 2	p-value	Interpretation
Grade 7	Grade 8	0.1103	Not Significant
Grade 7	Grade 9	0.2676	Not Significant
Grade 7	Grade 10	0.9131	Not Significant
Grade 7	Grade 11	0.6055	Not Significant
Grade 7	Grade 12	0.0860	Not Significant
Grade 8	Grade 9	0.5657	Not Significant
Grade 8	Grade 10	0.1737	Not Significant
Grade 8	Grade 11	0.3742	Not Significant
Grade 8	Grade 12	0.0007	Significant
Grade 9	Grade 10	0.3115	Not Significant
Grade 9	Grade 11	0.6312	Not Significant
Grade 9	Grade 12	0.0034	Significant

Grade 10	Grade 11	0.6837	Not Significant
Grade 10	Grade 12	0.0984	Not Significant
Grade 11	Grade 12	0.0339	Significant

\*alpha = 0.05

Table 8 shows the post-hoc test using the pairwise Mann-Whitney test among the perception of students from different year levels on the growth opportunity for blended learning. Interestingly, the significant difference in the growth opportunity for blended exists between grade 8 and grade 12 students, grade 9 and grade 12 students, and grade 11 and grade 12 students. It implies that within the said pairs, the students see the growth opportunity for blended learning differently, while students from grades 7 to 11 expect the same growth opportunity for blended learning. With this, it can be said from tables 7 and 8 that there are reasons to implement blended learning in support with the classroom learning since it has a high level of growth opportunity as perceived by the learners.

Students are important change agents and it is necessary to pay attention to their perceptions in order to make the change as successful as possible. Grade 7, being new in high school, are eager to experience how blended learning may be applied in the months to come. The exposure and higher level of engagement of the grade 12 students to the application of blended learning made the difference in their views with grades 8, 9, and 11.

### Relationship between the learners' expectations and their growth opportunities on blended learning

Table 9 shows the correlation between the learners' expectations of blended and classroom learning with the growth opportunity for blended learning. The learning flexibility and the growth opportunity on blended learning have a very weak positive correlation, but this correlation is not significant. Thus, no significant correlation exists between learning flexibility and the growth opportunity for blended learning. It means that no variability in the learners' perception about the growth opportunity is affected by their expectations of the learning flexibility of blended learning. It implies that having learning flexibility as an advantage does not affect their decision to join or attending blended learning courses.

Table 9

*Correlation between the learners' expectations and growth opportunity for blended learning*

Expectations	Correlation coefficient	Descriptive Equivalent	p-value	Interpretation
Learning flexibility	0.08	Very Weak Positive Correlation	0.157	Not Significant
Online Learning	0.42	Moderate Positive Correlation	0.001	Significant
Online Interaction	0.31	Weak Positive Correlation	0.001	Significant
Classroom Learning	-0.10	Very Weak Negative Correlation	0.046 (one-tail)	Significant

\*alpha = 0.05

It was considering the correlation between students' expectations of online learning and the growth opportunity for blended learning, shown on the table that it is a moderate positive correlation. Not only that, but this correlation is also significant. Thus, the learners' expectations of online learning have a moderately positive effect on their willingness to adopt blended learning. It also implies that the higher the expectation of the students on online learning yields a higher expectation on the growth opportunity on blended learning giving the learners more reasons to join blended learning courses or subjects.

The learners' expectations of online interaction also have a significant correlation with their perception of growth opportunity on blended learning, which is a weak positive correlation. The same is right with online learning; students' higher expectations of online interaction mean more reason to adopt a blended learning course or subject.

As for classroom learning, it not surprising that a negative very weak correlation exists with the growth opportunity on blended learning. Though the correlation is very weak, it is still significant to use a one-tailed test. This implies that if students perceive the classroom learning to be more effective than blended learning, it makes them patronize the classroom learning over blended learning and vice versa. The variability on the expectations of learners on growth opportunities on blended learning is weakly affected by their expectations of classroom learning. This is one way of saying that students need other avenues in learning aside from classroom settings. With this, choosing the online learning and online interaction as the independent variables, a multiple regression analysis was done to see the overall effect of these two variables on blended learning.

Table 10 shows the multiple regression analysis of the growth opportunity for blended learning on the learners' different expectations of blended learning. As shown on the table, all of the independent variables significantly affect the learners' perception of the growth opportunity in blended learning. Considering the expectations of the students on online learning, it affects 17.63% of the variability on the students stand on the adaptation of blended learning as a means of growth opportunity. In comparison, 9.33% of the variability is affected by the expectations of the students on the online interaction on blended learning.

Table 10

*Multiple regression analysis of the growth opportunity for blended learning on the learners' expectations of online learning and online interaction*

Independent Variable	R square	p-value	Interpretation
Online Learning	0.1763	0.001	Significant

Online Interaction	0.0933	0.001	Significant
Online Learning & Online Interaction	0.1817	0.001	Significant

\*  $\alpha = 0.05$

As a whole, both expectations affect 18.17% of the variability on the learners' perception in accepting the growth opportunities offered by blended learning. To summarize the given correlation and regression, figure 1 shows the model of blended learning.

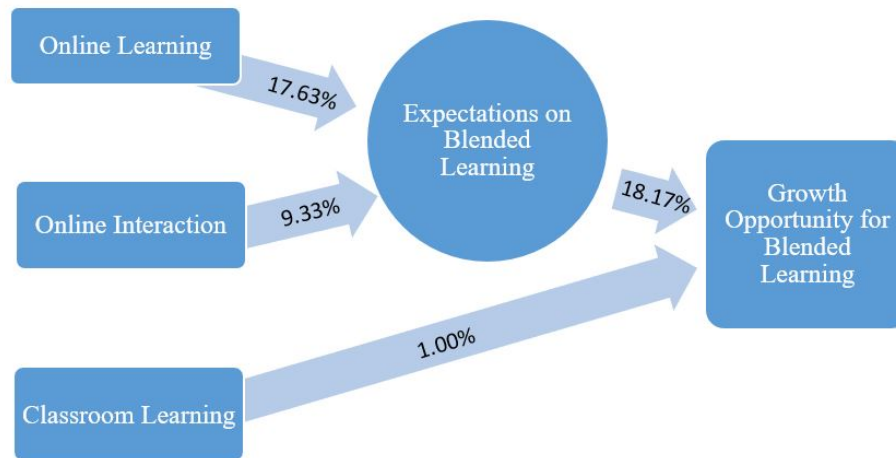


Figure 1. Growth Opportunity for Blended Learning Model

It is seen that the path for the acceptance of the growth opportunity for blended learning is affected by the two variables, the expectation of blended learning and classroom learning. Only online learning and online interaction significantly affect the growth opportunity for blended learning, while only 1% variability is affected by classroom learning. With this, it can be said that the learners' expectations of blended learning can significantly affect the acceptance and implementation of blended learning. It is essential to make sure that the expectations of the learners be taken into account so as to create a structure that must be carefully considered and deliberately chosen online activities that appeal to a variety of learners and that offer a variety of methods of accessing materials and engaging beyond just memorizing facts.

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

Based on the results, the researchers conclude that the learners are ready in the technical part of blended learning since almost all of the learners are using the internet as a way to search for information, access learning systems, and send messages and owned a smartphone. Not only that, but more than 90% also have internet connections at home, and 76% are subscribed to smartphone internet access, which is essential in implementing blended learning.

From the expectations of the learners on blended learning, it can be concluded that they are also into blended learning since they have high expectations on the learning flexibility, online learning, and online interaction of blended learning to be advantageous in learning. With this, it can be said that the implementation of blended learning will be easier for the students to accept since they recognize the advantages of blended learning. Also, blended learning is not gender sensitive and can accommodate the needs of both genders. This can also be applied to students with different year levels.

From the learners' perception of the growth opportunity for blended learning, it can be concluded that blended learning has a high acceptance level since students recognize and can see themselves attending or joining classes that adopt blended learning. With this, it can be seen that blended learning can be the new norm in the educational system. Since the grade level affects the level of expectations of the learners, the curriculum in different year levels may also have an effect in their expectations.

Since a significant correlation between the growth opportunity and the expectations on blended learning, specifically online learning and interaction exist, it is concluded that for blended learning to be successful, online learning and online interaction are some of the key points to note. Also, the effectiveness of classroom learning does not significantly affect the acceptance of blended learning as another mode of learning. Thus, the learners are open to new modalities of learning. Learners today are not limiting their selves to classroom-based learning only.

### Recommendations

As stated in the conclusion that students are ready into blended learning, the researchers recommend that blended learning will be a part of learning as a support on the usual face-to-face or classroom learning. Also, the learning platforms, software, multi-media formats, file formats, and other learning materials to be used in blended learning should be supported by smartphones and

can be accessed using smartphones' internet capabilities. With this, it is a must for a school to survey the gadgets and internet connectivity of the learners before implementing blended learning. In the implementation of blended learning, the researchers recommend that all materials should be supported by the different operating systems of smartphones.

Having high level of expectations on blended learning by learners, blended learning should be carefully studied and planned before implementing it to meet the expectations of the learners and for it to be effective. Learning flexibility and online learning are two of the main points to be taken into consideration in implementing the blended learning since students perceived it to be evident in the said learning.

Since a significant difference exists among the perception of the students with different year levels on the growth opportunity for blended learning, a study is recommended to see why other year levels tend to have higher expectations. In comparison, others have lower expectations and to evaluate how to have a higher acceptance of blended learning, considering that this is a critical requirement in its implementation. Also, the curriculum per year level should also be taken into account. With this, a specific study focusing on the applications and effectivity of blended learning in the different subjects of the learners should be done.

Since learners' expectations on online learning and online interaction significantly affect the adaptation or implementation of blended learning, it is then recommended that the true nature of online learning and interaction should be first discussed with the learners before implementing it. The researchers also recommend that a study on developing good online learning and online interaction should be done since they are one of the key points to make blended learning successful. All stakeholders need to be brought on board, especially the learners directly affected by blended learning. They must be willing to work with the new technologies that are carefully and thoughtfully considered. A slow and progressive implementation both by the teachers and learners may help them adjust to the changes and perhaps fine-tune what works best.

## Acknowledgment

The researchers would like to extend our gratitude to Dr. Antonio Mangaliag and the UBSHS colleagues who have assisted in conducting this research smoothly. Likewise, thanks to the University of Baguio for all the support and assistance leading to the completion of this study.

## References

- [1] A.w., Tony, & Bates. (2015, April 5). 1.6 Changing students, changing markets for higher education. Retrieved June 17, 2020, from <https://opentextbc.ca/teachinginadigitalage/chapter/section-1-6-changing-students-changing-markets-for-higher-education/>
- [2] Bates, T. (2015). Teaching in a Digital Age: guidelines for designing teaching and learning for a digital age. Vancouver: BC Open Textbooks.
- [3] Dang, Y., Zhang, Y., Ravindran, S., & Osmonbekov, T. (2016). (PDF) Examining student satisfaction and gender differences in technology-supported, blended learning. Retrieved November 23, 2020, from [https://www.researchgate.net/publication/319270681\\_Examining\\_student\\_satisfaction\\_and\\_gender\\_differences\\_in\\_technology-supported\\_blended\\_learning](https://www.researchgate.net/publication/319270681_Examining_student_satisfaction_and_gender_differences_in_technology-supported_blended_learning)
- [4] Guzer, B., & Caner, H. (2013). The past, present, and future of blended learning: an in depth analysis of literature. *5th World Conference on Educational Sciences*, 116, pp. 4596-4603. Rome: Elsevier Ltd. doi: 10.1016/j.sbspro.2014.01.992
- [5] Harasim, L. (2012). *Learning Theory and Online Technologies*. New York/London: Routledge
- [6] Hibbitts, P. D., & Travin, M. T. (2015). Learning + technology development process model. Vancouver: BC Open Textbooks.
- [7] Kimiloglu, H., Ozturan, M., & Kutlu, B. (2017). Perceptions about and attitude toward the usage of e-learning in corporate training. *Computers in Human Behavior*, 72, 339-349. doi: 10.1016/j.chb.2017.02.062
- [8] Mayer, R. E. (2009). *Multimedia learning* (2nd ed). New York: Cambridge University Press
- [9] Meyer KA. (2003, May). The web's impact on student learning. Retrieved March 20, 2020, from: <https://eric.ed.gov/?id=EJ675102>.
- [10] Morrison, G. (2010). *Designing Effective Instruction, 6th Edition*. New York: John Wiley & Sons
- [11] Omar, N. D. @, Hassan, H., & Atan, H. (2012). Student Engagement in Online Learning: Learner's Attitude toward E-Mentoring. *Procedia - Social and Behavioral Sciences*, 67, 464-475. doi: 10.1016/j.sbspro.2012.11.351
- [12] Oz, H., Demirezen, M., & Pourfeiz, J. (2015). Digital Device Ownership, Computer Literacy, And Attitudes toward Foreign and Computer-Assisted Language Learning. *Procedia - Social and Behavioral Sciences*, 186, 359-366. doi: 10.1016/j.sbspro.2015.04.028
- [13] Rahimi, M., & K., S. F. H. (2011). The impact of computer-based activities on Iranian high-school students' attitudes towards computer-assisted language learning. *Procedia Computer Science*, 3, 183-190. doi: 10.1016/j.procs.2010.12.031
- [14] Sanchez, M. J. (2020, March 10). Philippines: number of internet users 2023. Retrieved April 1, 2020, from <https://www.statista.com/statistics/221179/internet-users-philippines/>
- [15] Sanchez, M. J. (2020, March 10). Smartphone users in the Philippines in 2017. Retrieved April 1, 2020, from <https://www.statista.com/statistics/467186/forecast-of-smartphone-users-in-the-philippines/>
- [16] Shantakumari, N., & Sajith, P. (2015). Blended Learning: The Student Viewpoint. *Annals of medical and health sciences research*, 5(5), 323-328. <https://doi.org/10.4103/2141-9248.165248>
- [17] Siemens, G. (2005) 'Connectivism: a theory for the digital age' *International Journal of Instructional Technology and Distance Learning*, Vol. 2, No. 1.
- [18] Svensson, M., & Baelo, R. (2014). Teacher students' perceptions of their digital competence. *6th International Conference Edu World 2014 "Education Facing Contemporary World Issues."* 180, pp. 1527-1534. Pitesti: Elsevier Ltd. doi: 10.1016/j.sbspro.2015.02.302
- [19] Tang, C. (2013, December). Readiness for Blended Learning: Understanding Attitude of University Students. *International Journal of Cyber Society and Education*, 6(2), 79 - 100. doi:10.7903/ijcse.1086

- [20] Tang, Meng, C., & Yen, L. (2013, December 1). Readiness for blended learning: understanding attitude of university students. Retrieved June 17, 2020, from <https://researchonline.jcu.edu.au/29840/>
- [21] Teacher education through distance learning - DocShare.tips. (n.d.). Retrieved June 17, 2020, from [http://docshare.tips/teacher-education-through-distance-learning\\_58bb7596b6d87f01538b495c.html](http://docshare.tips/teacher-education-through-distance-learning_58bb7596b6d87f01538b495c.html)

© GSJ