

## SUSTAINING ENGAGEMENT IN A BLENDED LEARNING MODALITY

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**Abstract** - The use of blended and distance learning methodologies has been attractive to a growing number of higher education institutions due to its potential to enhance student enhancement. Study shows that this mode of learning delivery has the potential to increase student engagement. This study aimed to determine the key factors of the blended learning environment that sustain student engagement. A descriptive survey with qualitative support was conducted to 123 student teachers from a state university in Mindanao. These participants were enrolled in a course delivered in a blended learning environment for one semester through a Moodle platform. Through a survey questionnaire, the participants assessed their preferred and actual learning experiences in a blended learning environment context and reflected on the activities that fostered or hindered engagement. The findings indicate a close alignment between student teachers preferred and actual experiences within the blended learning environment. Three core factors - relevance, interactivity, and connectedness - emerged as pivotal in sustaining engagement within the blended learning framework.

**Keywords:** *Blended Learning, student engagement, peer support, teacher support, interactivity*

### INTRODUCTION

The use of blended and distance learning has been attractive to a growing number of higher education institutions (Oakley and others, 2006). This modality has become more common during the Covid-19 pandemic, and most schools, if not all, have to shift their instructional delivery to remote teaching & learning. Most of the recent definitions for blended courses indicate that this approach to learning offers potential for improving how we deal with content, social interaction, reflection, higher order thinking, problem solving, collaborative learning, and more authentic assessment in higher education, which could potentially lead to a greater sense of student engagement (Vaughan, 2014). Study shows that this mode of learning delivery has the potential to increase student engagement.

Gilboy, Heinerichs, and Pazzaglia (2014) stated that students in blended learning (BL) are more engaged as instructors consistently encourage student interaction through use of an online discussion board. Vaughan (2014) uses engagement-related parameters including active/collaborative learning, student-faculty interaction, level of academic challenge, and engagement in effective educational practices. His study found out that students are engaged effectively as the BL course used collaborative learning application, team-based project work, and empathetic instructors. Singh (2020) aligns blended learning with the social constructivist approach and is a useful theoretical framework to assess student engagement and performance within the classroom model wherein the studies demonstrate that students value increased peer interaction and the role of the tutor as a facilitator rather than an information deliverer in the flipped classroom format.

Student engagement is essential, particularly in a blended learning environment. A study from Bouiheres, Le, MDonald, Nkhoma, and Montera (2020) concluded that student engagement in a blended learning environment encompasses involvement with co-curricular activities and interaction with faculty and peers. As such, student engagement increases interactions, communication skills, self-confidence, and self-awareness (Bouiheres et al., 2018; Kumar 2009). Barber (2015) stated that learners share affective and emotional content during the focus group discussion. They were allowed to choose a format and control their social connections as they depend on one another to increase engagement.

Although the conducted research and literature show that different factors were associated with strengthening engagement within a blended learning environment, more studies are needed to explore when it comes to sustaining engagement in this mode of learning. Blended learning literatures have been



found to have little consistency or specificity in the operationalization measuring engagement in technology mediated learning (Halverson and Graham, 2019). The use of the blended learning model, showed that most learners have excellent performance in the blended learning environment however have high preference in the quality of blended learning experiences - wherein students' actual blended learning experiences almost meet their expectations( Canoy and Buan, 2016) . In relation to that study, we want to further investigate how to meet students' expectations of quality blended learning experiences through sustaining engagement in a blended learning environment. In light of this, the current study investigated the preferred and actual learning experiences of student teachers and determined the factors that sustain student engagement in the blended learning environment.

## 1. METHODOLOGY

### 2.1 Research Design

This study employed a descriptive research design, integrating quantitative and qualitative methods in a sequential manner. The initial phase focused on collecting quantitative data using descriptive statistics to identify patterns and trends. Subsequently, the study transitioned to the qualitative phase, utilizing open-ended questions to gather nuanced insights from participants. The combination of these approaches contributed to the robustness and validity of the study's conclusions.

### 2.2 Sample and Data Collection

In this study, we focused on a cohort of 123 student teachers enrolled in a State University in the Philippines. The selection of participants was purposive, as all of them had completed a blended learning course for one semester both prior to and during the pandemic. The course was facilitated by a proficient instructor with expertise in blended learning. To ensure ethical considerations, participants were provided with and signed a consent form.

For data collection, we employed two instruments: the Constructivist Online Learning Environment Survey (COLLES), developed by Taylor and Maor (2000), and the Critical Incident Questionnaire (CIQ), designed by Brookfield (Keefer, 2009). The COLLES instrument features six domains, encompassing 24 statements that delve into the participants' preferred and actual learning experiences within the blended learning environment. The domains address key questions about their engagement and overall experience. Participants responded to the instrument on a 5-point scale, where 5 indicated "almost always" and 1 indicated "almost never," providing quantitative insights into their frequency of engagement.

In tandem, the CIQ served as a tool for collecting qualitative data, aiming to identify critical moments when student teachers were either most or least engaged. This questionnaire comprised five open-ended questions. To complement the quantitative data obtained in the first phase, responses from the CIQ were meticulously analyzed and thematized, enriching our understanding of the participants' experiences in the blended learning environment. This dual-method approach ensured a comprehensive exploration of both quantitative and qualitative aspects, contributing to the depth and richness of the study's findings.

### 2.3 Analyzing of Data

Mean was used to describe the quantitative data particularly the preferred and actual learning experiences of the student teachers in a blended learning environment. The 5-point scale (scored from 5=almost always, 4=often, 3=sometimes, 2=seldom, 1=almost never) was used to interpret the variables being measured. Additionally, thematic analysis was used to categorize the responses of the participants to the open-ended questions as support to the quantitative data.

## 2. RESULTS AND DISCUSSION

This section shows and discusses the data gathered in the study. Scales in the COLLES were discussed first and were supported by the qualitative data that the learners voluntarily answered.

### **Preferred and actual learning experiences of student teachers in the blended learning environment**

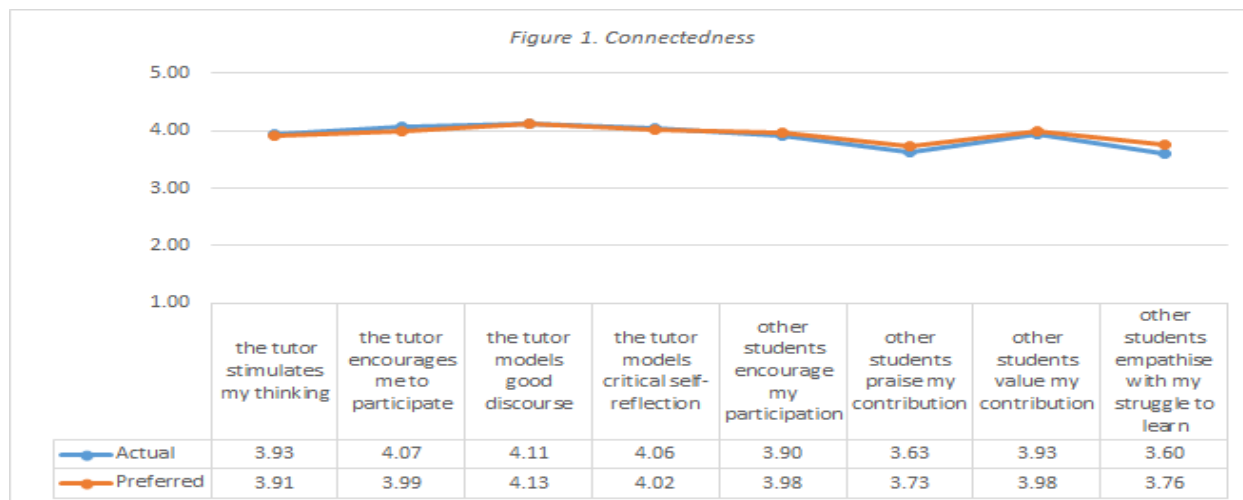
#### **Support**

The social presence of the participants in the class engages learners in meaningful learning that occurs in social activities. Learners enhance social negotiation that promotes motivation through given support from fellow learners and tutors. Whereas tutors on this study refer to the teacher.



Figure 1

Tutor support and Peer support (Connectedness)



**Tutor Support**

In the blended learning environment, teachers become facilitators. This role accompanies by providing a continuous interactive dialogue between teachers and students that supports an environment for the learner to cultivate independence in learning. The teacher’s social role involves creating a safe, positive, friendly, and motivating environment that fosters an open and meaningful learning experience (Scott, 2017).

In this study, the tutor refers to the teacher wherein students' expectations in the tutor enable them to engage in the blended learning class. In figure 1 above, students’ actual (Actual M = 4.04) experiences in the blended learning environment with regards to their teacher support was slightly higher from their preferred (Preferred M = 4.01) expectations. In the actual BL class, teachers were able to stimulate students’ thinking, encourage learners to participate, model good discourse and model learners in critical self-reflection.

The teacher’s ability to create and foster an engaging environment and the capacity to quickly assess learner’s performance and queries is paramount to student success (Aminen & Asl, 2015). The following are samples of student responses on the importance of teacher support fostering active engagement in the actual practice.

Table 1.

Categories of Teacher Support in a blended learning environment

Sample Responses	Categories
“The teacher’s feedback and the recommendations.” (S8)	
It felt helpful when the teacher gave away comments on our work so that we could revise it and make it better. (S31)	
The action that anyone took in the online class this week that I find most affirming and helpful was when our teacher gave us a chance to improve our work. (S49)	Giving Immediate Feedback
For me the most affirming and helpful thing is when we go back to our past lesson or review it because sometimes, I forget the topic that we tackle. (S94)	
The most helpful action that was taken in the online class is the videos, pdf, articles and blogs. This really helps our assignments to be well organized with a great idea in it. More importantly, resources are essential in making a difficult output. (S37)	teacher provides resources



It was when presenting the made rubric to the class and when answering the checkpoints in the WebQuest activity it was all helpful. Also, the teacher guided us along the way in doing the activity which he always does. (S41)

models good discourse

I find the instructions in every task most affirming and helpful because it is well explained on what we are going to do or how we can accomplish it. (S38)

when the professor attentively facilitated each group during the making of the rubric and when he individually commented on our works after the presentation and guided us on what to improve or revise on our work. (S66)

models critical self-reflection

Actions in the online class that improve and most helpful is when the activity is being studied earlier and then submitted online that will be presented in the normal schedule of class face to face. (S30)

The action that anyone took in the online class this week that I found most affirming and helpful was when the teacher extended the deadline of our exams. I felt happy I never got pressured. (S103)

The action that our class took in the online class this week which I find most affirming and helpful was when our teacher gave resources for us to study more about our lessons. (S111)

encourages to participate

when sir gave us longer time whenever we are answering our online quizzes (S113)

It's when the teacher gives an activity that we students work as a group. (S118)

Every time our professor sends an SMS blast, it helps me a lot because I have time to prepare to go to a nearby internet cafe shop. (S122)

The information disseminated by the teacher really helps us students reach them more and connect with the teacher even if we are not in the classroom. (S125)

Teachers are transformative intellectual engaging learners in a critical dialogue. Moore (2016) suggested that clear communication and feedback from the instructor can increase the level of care and support realized by the learners. In the actual practice, learners expressed the teacher's feedback and recommendation as a helpful tool in stimulating their thinking. The teacher's comment gave the learners time to work on revisions to improve their tasks and activities. It lets the student stimulate and self-reflect as the teacher can give the student information in organizing knowledge on the content (Parkes et al., 2013). In the online platform, the teacher initiates presence support with the course participants through text-based communication - which has considerable potential to facilitate critical discourse and reflection (Rappel, 2017). The teacher also encourages learners to actively participate in the class through lending ample time to work on their quiz, studying in advance by providing necessary resources online and giving students a chance to work collaboratively with peers. It relates to Bouilheres et al. (2020) that communication tools and apps could also be used in the online component of the course, such as course objectives call for discussion and communication in specific topics, discussions can move forward in an asynchronous environment. Moreover, the teacher models discourse and self reflection by providing guidance and facilitation through feedback and direct communication during face to face and even on the asynchronous online discussion. Also, the teacher provides the course with necessary learning theories, instructional methods, engagement strategies, assessment techniques, and resources to teach in ways that promote critical thinking, concept formation, and student engagement.

**Peer Support**

The general perception among the class shows that there exists an optimum degree of peer support (shown in figure 1). The figure entails a close result of the actual (M=3.76) and preferred (M=3.86) sensitivity and support provided by fellow students. In a closer look at the result, the figure above shows that there is a very close gap between the preferred and actual practice of the students giving praise to other students. It also shows high expectations of co-learners, giving out encouragement and valuing their contribution. Additionally, students' empathy for each other's struggle to learn on the actual almost meets the learners' expectations.



A sense of support with peers enables learners’ continuity to a blended learning environment as it enables them to feel valued, thereby disconnecting them from developing feelings of isolation. An example of peer support during the delivery of instruction done online from the course is shown in table 2.

**Table 2.**  
***Categories of Peer Support in a blended learning environment***

Sample Responses	Categories
I found it most affirming and helpful this week, when my classmate gave me information for this week’s Group Activity: making rubric and the SMS Blast of the teacher is very helpful. (S82)	encouraging peer participation
My classmates are reminding me that there is a new task posted in the online classroom. (S83)	
when my classmates forced me to do our reports, assignments, and when my classmates teach me how to execute the steps correctly (S7)	encouraging peer participation and empathizing the struggle to learn
In the class, I am most engaged as a learner when it comes to sharing ideas with my classmates. (S9)	valuing peer contribution and praising peer contribution
during the activity on making a rubric we were able to critic our classmates work and they were able to critic ours as well (S62)	
Guiding others to express their ideas. (S20)	
Both teacher and students took the online class this week. It was most affirming and helpful because our teacher helps our task easier by keeping us updated through text and also students or classmates help me and cooperate with me. (S51)	
Like accepting our contribution to the task. Also, through different ideas it widened my perspective and knowledge. (S16)	empathizing the struggle to learn
"I find forums helpful when I got help when I have questions that I did not understand very well" (S21)	
Helping me if I have questions that I do not understand very well. (S21)	
When our classmates helped us on what to improve on our rubric (S62)	
When I would ask a classmate to further elaborate about difficult things on chat. (S146)	

Table 2 above shows the different types of engagement in terms of peer support experienced in the blended learning classroom. Learners encourage peer participation using technology mediated tools to communicate with peers through reminding activities to be done in the class and assigning roles equally to all the members of a group. Mbaty (2012) stated, posting messages in the discussion board indicates a personal view for the student that shows a level of social presence. This social presence creates an opportunity for learners to feel valued and to gain empathy. Learners perceived forums as affirming and helpful when it comes to being valued, praised, encouraged, and empathized.

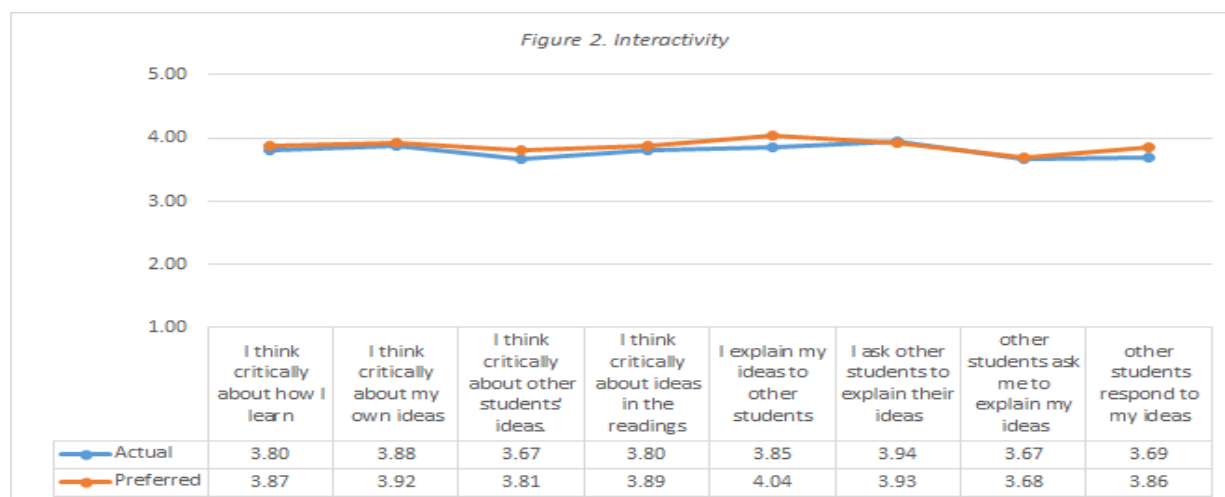
Learner’s value and praise students’ contribution during collaborative tasks wherein learners feel comfortable sharing and contributing ideas to the group. They value peer contribution in terms of giving and taking in critics as a chance to improve their works. Learner’s value their peers’ contributions through presented works and shared ideas that help them widen their perspectives in the learning process.

A study from Kintu, Zhu, and Kagambe (2017) implies that learners’ capacity to go on their work by themselves supported by peers and higher levels of interactions using the quality technology led them to construct their ideas. Moreover, learners empathize with each other’s struggle to learn through

forums. Forums provide students with discussion opportunities that will not affect the success of the in-class discussion. On the forum discussion, students initiate a topic from the given instruction given by the teacher and work out their guidelines for discussion. Through the time attributed by the forum, learners manage their own time to think about their contribution to the discussion and craft their responses to convey their ideas most clearly and convincingly (Hussin et al., 2009).

**Interactivity**

Interaction in a blended learning environment occurs between learners and instructors, learners and other learners, and users and the technology. It is built upon social constructivist principles that use communication and dialogue in various means to the extent that learners take the initiative in constructing, understanding, and controlling their learning processes. Thus, learners have a greater responsibility in managing their learning in a blended learning environment.



(1=almost never; 2=seldom; 3=sometimes; 4=often; 5=almost always)

Mean for Reflective thinking: Actual (M = 3.79), Preferred (M = 3.87);

Mean for Interactivity: Actual (M =3.79), Preferred (M=3.88)

Mean for Interactivity: Actual (M=3.79), Preferred (M=3.87)

**Figure 2. Interactivity**

Figure 2 shows learners' actual (M=3.79) experience in the blended learning class almost meets their preferred (M=3.87) learning expectations. It shows that as learners think critically about how they learn, think critically about their own ideas, think other students' ideas and ideas in the readings almost meet their preferred expectations. Additionally, in the actual experience, learners were able to ask other students to explain their ideas and other students ask to explain their ideas. However, they have high expectations when it comes to explaining their ideas to other students - which they prefer to occur often, and high preference for other students to respond to their ideas.

In the case of a blended learning environment, one crucial aspect of learners participating in an active learning class would be the ability of learners to control their learning process in reflecting on their own experiences. Discussions are one way of helping students interact in a learning space. Through conversation, a group of learners can develop and construct ideas that no student had previously thought of. In table 3, learners shared how interaction with peers, teachers, and materials used engages them actively in the learning environment.

**Table 3. Categories of engagement in a blended learning environment**

Sample Responses	Categories
During group discussion. Since there is much information from the members of the group, critical thinking skill is highly needed in picking the most important and brief details to present. (S11)	group activities





The moment I feel that I am engaging in the online class as a learner is when we have group activities sharing our own thoughts and opinions. I've used my critical and creative thinking in engaging in our group work. Moreover, I managed to spend my time wisely in making our group outputs. (S37)

"I find forums helpful when my classmates tried their best in making simple explanation on the subject matter" (S15)

Every time we have reporting because everybody can exchange ideas and opinions, it may be in a physical or online class. Reporting's were posted prior to the date of reporting, and we can ask questions if there are things that I, myself cannot understand. (S13)

Sharing of ideas in forums

That was when we had our group task together with my members. I really enjoyed it and gave my ideas as well during those times. (S23)

When the members of a certain topic answered and clarified the topics, us learners were confused. (S5)

"I find myself engaged during presenting our output and hear the comments and suggestion from my fellow students and my teacher" (S22)

Those actions not only answer my question but also open another opinion based on my question. (S11)

Peer-rating

"Some students delivered their message quite complicated and hard to understand, some shares ideas but not directly to the point" (S18)

I think the Checkpoint/quiz after checking the web resources because it helped me assess the things I learned while doing the web quest. I was able to realize that I still do need to widen my understanding and explore more for me to totally grasp the ideas that are needed. That I still need to study or dig deeper to fully understand the topic. (S34)

interactive assessment

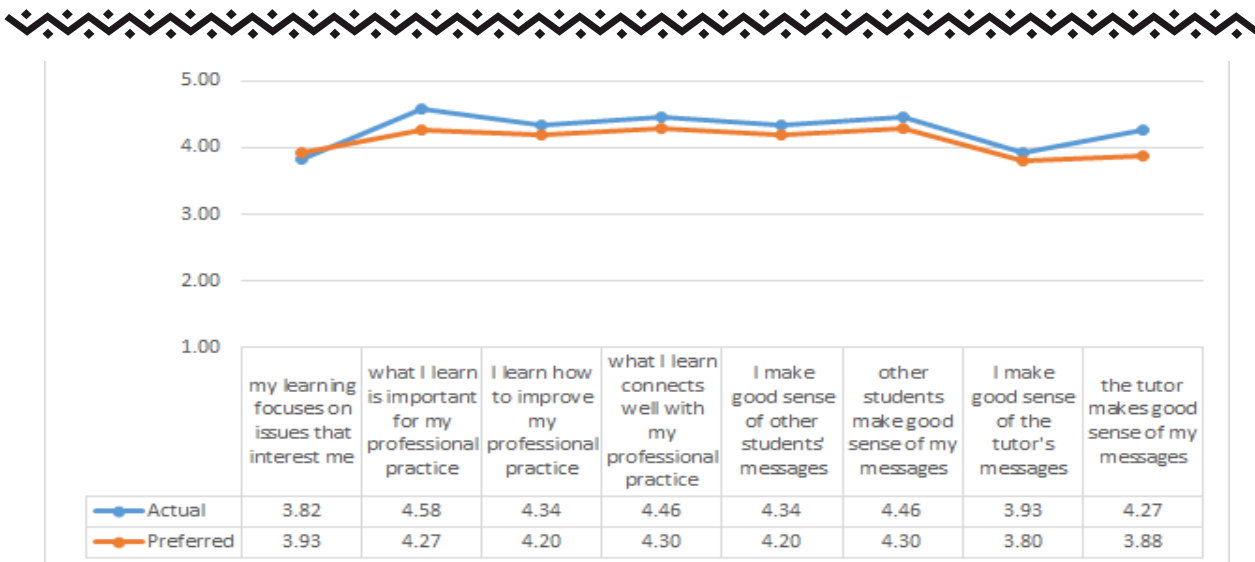
It was helpful for us to evaluate our work. We were able to see what is lacking in our rubrics and if we were able to follow the right way of making rubrics. (S54)

Table 3 shows responses on how learners actively engage themselves in the learning community by determining the needs of providing accurate information that meets their needs through interactions with the teacher, peers, and materials. It shows that learners are critical in their learning through engaging in discussions and collaborative works. Learners find concrete examples of the topic through examining and evaluating the materials and through the works of others that they perceived helped them in understanding and comprehending the lessons thus helping them to improve the task at hand. Learners also participate in active discussions as they explain and ask other students' ideas for comments and suggestions relative to clearing out confusion in certain lessons. In this manner, blended learning allowed students to have the opportunity to engage dynamically with the course instructor and peers over-complicated content matter and reflect on their learning (Moore et al., 2016).

Learning communities designed around collaborative learning activities enhance the social presence of a shared learning space that helps students feel a sense of belongingness. They become a part of a learning space that encourages socialization (Bouliheres et al., 2020). This way, learners can reframe their perception of learning to learn how to learn. They will have acquired necessary skills in a self-paced type of learning, self-directed, taking the initiative to determine needs, assessing goals, and identifying resources and strategies for learning (Knapp, 2020; Parkes et al, 2013; Rappel, 2017).

**Relevance**

Tertiary education learning environments provide a real-world, case-based environment for meaningful and authentic knowledge (Scott, 2017). In this context, learning aligns with standards that attain a higher level of learning through the perception and reaction to a shared dialogue in a learning community differ from how individuals understand the messages in bridging what is already known to what they have to learn. The learning process in this context emphasizes the means through which ideas are shared and developed.



(1=almost never; 2=seldom; 3=sometimes; 4=often; 5=almost always)  
 Mean for Relevance: Actual (M = 4.3), Preferred (M = 4.17);  
 Mean for Interpretation: Actual (M =3.97), Preferred (M=4.01)  
 Mean for Relevance and Interpretation: Actual (M =4.14), Preferred (M=4.09)

Figure three above shows that actual (M=4.14) blended learning experience almost meets learners preferred (M=4.09) expectations in terms of how they perceive blended learning relevance to their practice through making good sense of peer and teacher’s messages. It shows that blended learning focuses on the lessons that interest them; however, they have a high preference on the importance of what they learn in their professional practice, what they learned to improve their professional practice, and the connection of what they learn to their professional practice. Additionally, the result suggests that there is comprehensible and meaningful communication in the actual blended learning class; however, learners' preference is high.

Perception and reaction to a shared dialogue in a learning community differ from how individuals understand the messages in bridging what is already known to what they have to learn. Learning involves social negotiation and mediation, such as content and skills relevant to the learner. Here are some responses as learners find relevance of the instruction in the actual practice considering dialogue developed in practice that emphasized as a means through which learners engage and makesense of the content - ability to reflect and build bridges between what they already know and what they have learned, are built upon a well and active dialogue moderated through facilitation.

**Table 4.**  
**Categories of Relevance in a blended learning environment**

Sample Responses	Categories
When it catches my interest. Or I see it as an interesting topic/lesson. (S3)	students’ interest
Every week, I always look forward to the activities that will be given but this week I find the making of rubrics very engaging. (S54)	
It is when I did the web quest. Using the resources given, I was able to discover new things or lessons which gave me ideas about what exactly Portfolios for students are all about. Also, it widens my knowledge about how to assess the student's finished portfolios and the essential elements of it. (S34)	connects to future professional practice
For me, it is when we're doing a group task, activities, quizzes, and exams because as a learner, I could apply what I've learned from the discussion. (S24)	
"For me, it is when we have collaborative discussions that we need to submit online. It is helpful because we can identify each other's opinion on the topic" (S13)	feedback from peers and teacher
When my classmates tried their best in making a simple explanation on the subject matter. (S6)	





When my group mates were cooperating with each other and collaborating on tasks online as well. (S137)

This happens every time we are tasked to do an online activity and the teacher will have his criticism and praise. (S27)

As I've said earlier, the group message of my leader and teacher helps me a lot as it updates me when there is an online class. (S148)

It is when the instructor does the discussions and makes comments on our reports. (S6)

The moment in the class I was most engaged as a learner was when the teacher shared his actual experiences in the teaching field that correlates the content of the lesson. (S8)

The teacher really does assist us and give proper instructions during discussions and even in applications. (S98)

In presenting our output and hear the comments and suggestion of my fellow studs and teacher (S22)

The moment in the online class that I feel most engaged as a learner is when we do the revision of every output we had, it's because it is one way that we can improve our outputs from the comments that the instructor gave us. (S147)

Learners have learning needs that are specific and must be relevant for their student teaching. Table 4 above shows how learners embark on the learning process to achieve course goals relevant to their practice by making good sense of the exchanged dialogue happening in the blended learning classroom. Learners expressed that BL focuses on issues that interest them as they look forward to activities, tasks, quizzes, and exams to be done. Also, they perceived how lessons would connect to their student teaching experience such as knowledge on how to assess portfolios. Learners also make good sense of teacher and peers' messages as they perform collaborative tasks that develop dialogues of exchange ideas that are perceived as relevant to their practice and learning. Learners combine individual reflection to intrapersonal and interpersonal dialogue as they negotiate, ask questions and try hard to find answers themselves, garnering a sense of ownership for their work, which a commitment to their learning can occur (Amineh & Asl, 2015).

Active learners need to know why they need to learn something as they are willing and able to direct and participate in the planning and implementation of their learning (Scott, 2017). Learners find relevance in the instruction as they relate what they learn in their experiences. A study from Shand and Glasset (2018) found out that in order for learners to be successful in both coursework and fieldwork, they must experience the need to learn how to plan practical lessons. Learners expressed that in the BL classroom, they were exposed to activities that engaged their interest as they found relevance on the activities and its importance in their future practice. Also, learners gathered relevant resources, created useful instructional materials, and designed engaging, differentiated student activities and assessments for their future class. Moore (2016) suggested the need for learners to realize the need to integrate teachers' skills in the instruction, which could provide examples of instructional strategies, including implementation, to connect professional development courses to the existing classroom.

The general perception of the learners shows that all the factors were realized in the actual blended learning classroom; however, they have high preference in all factors. The above result shows that there exists an optimum degree of tutor and peer support. It entails that the actual sensitivity, support, encouragement, and good sense of communication closely met the preferred blended learning expectations of the learners. This shows that the forums and activities done both online and face to face provided the learners a sense of interaction that helped them improve their engagement in the learning environment. Additionally, learners and teachers have comprehensible and meaningful communication in the actual blended learning class despite the high preference.

## *2. Factors that sustain student engagement in a blended learning environment*

Taking into account the results stated above, the factors that sustain engagement in the blended learning environment are boiled down into three factors namely, support, active learning, and connectedness.

*Support* refers to the extent to which tutors enable students to engage in online learning by providing challenges and communicative role modeling. It is also the extent to which students provide sensitive and encouraging support to other students. Moreover, the teacher and peers form social presence through sensitive and encouraging support through continuous interactive dialogue and communication in different mediums.

*Active learning* refers to the extent to which students engage in an online rich educative dialogue with peers and tutors' presence. It is also to the extent to which blended learning stimulates critical reflective thinking as learners examine and evaluate understanding the works and ideas of others by engaging dynamically in discussions and collaborative works.

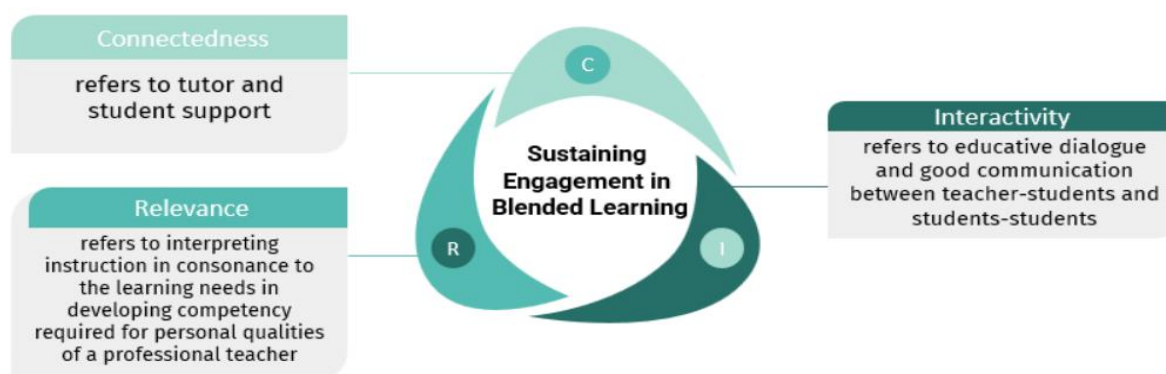
*Connectedness* refers to the extent to which engagement in the blended learning environment enables students and tutor to co-construct meaning in a connected manner and make good sense of each other's online communications that focuses on the importance of the content as it connects on the improvement of skill relevant to their professional practice.

## CONCLUSION

This study's findings show the students' preferred and actual engagement in a learning community within a blended learning environment. Figure 3 shows that sustaining engagement using blended learning modality highlights three main factors: support, active learning, and connectedness.

Figure 3.

### Sustaining Engagement in a Blended Learning Environment



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The study's findings show that sustaining engagement using blended learning modality highlights three main factors namely: support, active learning, and connectedness. Support refers to student and tutor social presence. Here, learners' interaction and engagement with other participants are significant in developing themselves as independent learners. Learners feel a sense of belongingness in the learning community as teachers & peers support them. It shows that participants realize a sense of support through peer and teacher social presence.

Moreover, active learning refers to the educational dialogue and good communication between teacher-students and students-students. Additionally, teacher support strengthens student-teacher interaction through positive and constructive feedback in both face-to-face and online activities. Student support also entails an active interaction that encourages them and their peers to actively engage themselves in complex tasks in a blended learning environment.

On the other hand, connectedness refers to interpreting instruction according to their learning needs in developing competency required for a professional teacher. They acquire knowledge, skills, understanding, attitudes, values, abilities, and experiences to prepare themselves for the actual teaching practice.

Among the factors stated in this study, reflective thinking was not further realized despite the intense engagement between the participants, teachers, and materials. The findings of this study suggest an improvement in the design to include an assessment that empowers students to do self-assessment.

Through this, students become critical on how their work meets the goals set for learning concepts and skills. It promotes metacognition and imparts reflective skills that will be useful in academic performance and future careers. The findings of this study are significant for assisting instructors and blended learning implementers in designing materials that would be effective and disintegrate the learner from feelings of isolation.

Moreover, findings can also provide a better understanding of how instructors design blended courses that account for the factor of meaning and knowledge that are both personally and socially constructed. This shed light on accounting elements in instructional design in developing an active blended learning environment anchored in a social constructivist perspective. Results also support Canoy and Buan (2016) results on experience in the student-centered classroom exceeding their preferred classroom environment in terms of students' reflective thinking, interactivity, and peer support. Furthermore, the study implies that the blended learning model used was effective in sustaining student engagement.

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