

# Teachers' and Students' Attitudes Towards Blended Learning Effectiveness in Selected Colleges in Shandong Province

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## Abstract

Blended learning is one of the most important ways of the educational process. Its advantages are due to the fact that it combines traditional and online learning. This study determined the students' awareness, attitudes, and perspective of course effectiveness factors and the perspective and attitudes of the faculty teaching in the blended environment at the participating school. Generally, the over- all mean is interpreted that teachers integrated technology in their teaching. Overall, there is a significant difference between the attitudes of the teacher and student respondents towards the effectiveness of blended learning classroom environment. The result indicates that teacher and student respondents have different perceptions when it comes to their assessment of effectiveness of blended learning classroom environment. Also, when age is taken as test factor, the data indicates that teacher respondents have different level of assessments in terms of effectiveness of this kind of learning setup when grouped depending on their age. There are three major themes which emerged from the thematic analysis of the interviewees' responses on the teachers' observations on the attitudes towards blended learning effectiveness; effectivity of the combination of an online class learning and traditional in-class learning than using one-way delivery of information, blended learning improves learning of new skills and pedagogies, and low-speed internet and connectivity problems causes to reach difficulties with blended learning online resources.

## Keywords

Blended Learning; Blended Learning Effectiveness; Student Experience Blended Learning.

## 1. Introduction

### 1.1. Research Background

While the Chinese government still may play an important role in blended learning in the present, private institutions' involvement, learners' motivation, and learning ideology could become more important in promoting and implementing blended learning. How best to use the current educational makers. Many approaches have been developed for this purpose including e-learning, distant learning and recently blended learning. Many universities are adopting these approaches for teaching students.

Today, blended learning is one of the most important ways of the educational process. Its advantages are due to the fact that it combines traditional and online learning. This study will determine the students' awareness, attitudes, and perspective of course effectiveness factors and the perspective and attitudes of the faculty teaching in the blended environment at the participating schools that offers blended learning in teaching process. The rationale for choosing blended learning centers on capitalizing on the optimal features of both online and face-to-face, brick-and-mortar learning environments. Linton (2018) argued that, "Blended learning enables teachers to take advantage of the affordances of technology, while increasing

the impact of face-to-face instruction.” According to Dziuban et. al (2006), the value added of online learning is its flexibility, which allows learners to make multiple attempts in an asynchronous manner, using multiple pathways to understand the content.

## **1.2. Problems in Blended Learning Effectiveness**

Although previous studies have been conducted on teachers’ perspectives of using blended learning and the leadership support of blended learning, these phenomena have not been studied from the perspective of attitudes. In addition, the change process for implementing blended learning has been studied, but a gap in the literature exists on teachers and students’ attitudes in online courses.

## **2. Literature Review**

### **2.1. Definition**

#### **2.1.1. Course Effectiveness Factors**

When present, course effectiveness factors and benefits may be perceived to increase learner success. Course effective factors considered in this study include but are not limited to increased flexibility that allows adult learners to juggle personal, work-related, and educational objectives compared to a lecture course, enhanced critical thinking and problem solving skills, enhanced time management skills, enhanced computer skills, greater access to the instructor compared to an online course, that students manage and monitor their own course progress and become more responsible learners, the varied and interactive learning materials that accommodate various learning styles, greater course participation for timid students, access to pre-recorded lectures and course materials for review if needed or missed by the student, greater opportunities to present ideas within the privacy of their homes, optimized face-to-face class time with faculty and other students to focus on challenging course modules, and greater student success as measured by decreased withdrawal rates (Gonzalez-Castillo, 2008).

#### **2.1.2. Course Effectiveness.**

Course effectiveness is not dependent on delivery modality but based upon methodology, content, organization and presentation of the teaching and learning process (Kuong, 2009).

## **2.2. Research on Blended Learning**

In a report by the European Commission (2020), blended learning is a flexible model that can support a project or course of study to progress whilst not requiring teachers and learners to be in the same physical space at all times. On a practical level, this is useful for times when attending a school site is not possible, or when other sites are more appropriate for the learning approach. It demands a careful consideration of pedagogical approach by requiring decisions to be made about how and when to best use the different environments for independent study, collaborative enquiry, social interaction, and practical application.

As stated in the research of Hrastinski (2019), the breadth of conceptualizations means that essentially all types of education that include some aspect of face-to-face learning and online learning are being described as blended learning in the literature. Since blended learning seems to mean many things, it is important that researchers and practitioners carefully describe what blended learning means to them. Blended learning is also used to describe other blends, such as combining different instructional methods, pedagogical approaches or technologies, although these blends are not aligned with the most influential blended learning definitions.

In research made by Tupas and Laguda (2020), they mentioned that blended learning (BL) appears to have a consistently positive effect in comparison with no intervention. It seems to be more effective than or at least as effective as nonblended instruction for knowledge acquisition in health professions. Moreover, pre-posttest study design, exercises, and objective

outcome assessment in blended courses could improve health care learners' knowledge acquisition.

### 3. Problem Solutions

#### 3.1. Profile of the Respondents

Tables 1 and 2 present the profile of the teacher and student respondents in terms of: age, sex, and grade level.

##### 3.1.1. Profile of the Teacher Respondents

**Table 1.** Profile of the Teacher Respondents

Profile	Frequency	Percentage	Rank
<b>Age</b>			
21-30 years old	13	21.7%	2.5
31-40 years old	11	18.3%	4
41-50 years old	15	25.0%	1
51-60 years old	13	21.7%	2.5
61 years old above	8	13.3%	2
<b>Total</b>	<b>60</b>	<b>100%</b>	
<b>Mean</b>	<b>2.87</b>		
<b>Standard Deviation</b>	<b>1.35</b>		
<b>Sex</b>			
Male	28	46.7%	2
Female	32	53.3%	1
<b>Total</b>	<b>60</b>	<b>100%</b>	
<b>Mean</b>	<b>1.47</b>		
<b>Standard Deviation</b>	<b>.50</b>		
<b>Grade Level</b>			
Grade 1	13	21.7%	3.5
Grade 2	14	23.3%	2
Grade 3	13	21.7%	3.5
Grade 4	20	33.3%	1
<b>Total</b>	<b>60</b>	<b>100%</b>	
<b>Mean</b>	<b>2.67</b>		
<b>Standard Deviation</b>	<b>1.16</b>		

**Age.** Fifteen (15) or 25% of the entire teacher respondents are within the age range of 41-50 years old, on the other hand, thirteen (13) or 21.7% of them belong to the age groups of 21-30 years old and 51-60 years old. Lastly, only eleven (11) or 18.3% of the teacher respondents are within the age range of 31-40 years old. Overall, this portion accumulated a mean of 2.87 and a standard deviation of 1.35.

**Sex.** Thirty-two (32) or 53.3% of the entire population of the teacher respondents are female, to compare, only twenty-eight (27) or 46.7% of them are male. This goes to show that majority of the responses that were obtained on this study came from female teacher respondents. Finally, this data accumulated a mean of 1.47 and a standard deviation of 0.50.

**Grade Level.** Twenty (20) or 33.3% of the entire population of the teacher respondents are on their grade 4 level, to add, fourteen (14) or 23.3% of them are on the on the second grade. However, thirteen (13) or 21.7% of the teacher respondents are either on their first grade or third grade. Finally, this portion obtained a mean of 2.67 with a standard deviation of 1.16.

### 3.1.2. Profile of the Student Respondents

**Table 2.** Profile of the Student Respondents

Profile	Frequency	Percentage	Rank
<b>Age</b>			
16-20 years old	28	23.3%	2
21-25 years old	27	22.5%	3
26-30 years old	39	32.5%	1
31 years old above	26	21.7%	4
<b>Total</b>	<b>120</b>	<b>100%</b>	
<b>Mean</b>	<b>2.53</b>		
<b>Standard Deviation</b>	<b>1.08</b>		
<b>Sex</b>			
Male	57	47.5%	2
Female	63	52.5%	1
<b>Total</b>	<b>120</b>	<b>100%</b>	
<b>Mean</b>	<b>1.53</b>		
<b>Standard Deviation</b>	<b>0.50</b>		
<b>Grade Level</b>			
Grade 1	30	25.0%	2
Grade 2	25	20.8%	4
Grade 3	37	30.8%	1
Grade 4	28	23.3%	3
<b>Total</b>	<b>120</b>	<b>100%</b>	
<b>Mean</b>	<b>2.53</b>		
<b>Standard Deviation</b>	<b>1.11</b>		

**Age.** Thirty-nine (39) or 32.5% of the population of the student respondents are within the age range of 26-30 years old, whilst, twenty-eight (28) or 23.3% of them are 16-20 years old, on the other hand, twenty-seven (27) or 22.5% of them are in the age group of 21-25 years old. Henceforth, only twenty-six (26) or 21.7% of the student respondents are 31 years old and above. Lastly, this data accumulated a mean of 2.53 and a standard deviation of 1.08.

**Sex.** Sixty-three (63) or 52.5% of the population of the student respondents are female respondents, to compare, only fifty-seven (57) or 47.5% of them are male respondents. This can be generalized that majority of the responses that were accumulated on this study came from female respondents. Finally, this portion obtained a mean of 1.53 with a standard deviation of 0.50.

**Grade Level.** Thirty-seven (37) or 30.8% of the population of the student respondents are on grade 3 level, to compare, thirty (30) or 25% of them are on their first grade, whilst, twenty-eight (28) or 23.3% of them are on their fourth level. However, only twenty-five (25) or 20.8% of the student respondents are on their second grade. Ultimately, this data obtained a mean of 2.53 with a standard deviation of 1.11.

### 3.2. Significant Difference in the Assessment of Both Teachers and Students when their Respective Demographic Profile are Taken as Test Factor

Tables 3-5 present significant difference in the assessment of both teachers and students when their respective demographic profile is taken as test factor such as their age, sex and grade level.

#### 3.2.1. Age as Test Factor

Table 3 presents the significant difference in the assessment of both teachers and students when age is taken as test factor.

**Table 3.** Significant Difference in the Assessment of Both Teachers and Students when Age is Taken as Test Factor

Attitudes	Age	Mean	SD	Computed F-value	Sig	Decision	Interpretation
Attitudes of <b>Teachers</b> Toward the Effectiveness of Blended Learning Classroom Environment	21-30 years old	2.82	.08	2.988	.026	Rejected	Significant
	31-40 years old	2.91	.06				
	41-50 years old	2.62	.05				
	51-60 years old	2.83	.07				
	61-above	2.76	.06				
<b>Total</b>		<b>2.78</b>	<b>.03</b>				
Attitudes of <b>Students</b> Toward the Effectiveness of Blended Learning Classroom Environment	16-20 years old	2.69	.27	.520	.669	Accepted	Not significant
	21-25 years old	2.74	.21				
	26-30 years old	2.65	.26				
	31-above	2.69	.32				
<b>Total</b>		<b>2.68</b>	<b>.27</b>				

**Teacher Respondents.** As shown in table 5, teacher respondents have obtained a computed f-value of 2.988 with a significance value of 0.26. Since the significance value is less than the set 0.05 level of significance, null hypothesis is rejected which means that there is a significant difference in terms of attitudes of teachers toward the effectiveness of blended learning classroom environment when grouped according to their age. The data indicates that teacher respondents have different level of assessments in terms of effectiveness of this kind of learning setup when grouped depending on their age. This further indicates that teacher respondents who are 31-40 years old found this kind of learning setup way more effective compare to the rest of teacher respondents in different age groups.

**Student Respondents.** As presented in Table 5, student respondents have obtained a computed f-value of 0.520 with a significance value of 0.669. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is failed to reject or accepted which means that there is no significant difference in the attitude of the student respondents toward the effectiveness of blended learning classroom environment when grouped according to their age. This only means that student respondents have the same level of assessment regardless of their age.

**3.2.2. Sex as Test Factor**

Table 4 presents the significant difference in the assessment of both teachers and students when sex is taken as test factor.

**Table 4.** Significant Difference in the Assessment of Both Teachers and Students when Sex is Taken as Test Factor

Attitudes	Sex	Mean	SD	Computed t-value	Sig	Decision	Interpretation
Attitudes of Teachers Toward the Effectiveness of Blended Learning Classroom Environment	Male	2.81	.10	-.769	.445	Accepted	Not significant
	Female	2.76	.13				
Attitudes of Students Toward the Effectiveness of Blended Learning Classroom Environment	Male	2.69	.25	-.048	.962	Accepted	Not significant
	Female	2.69	.29				

**Teacher Respondents.** As presented in Table 6, teacher respondents have obtained a computed t-value of -0.769 and a significance value of 0.445. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is failed to reject or accepted which means that there is no significant difference in the attitude of the teacher respondents toward the effectiveness of blended learning classroom environment when grouped according to their sex. This only means that both male and female teacher respondents have the same level of assessment.

**Student Respondents.** As casted in Table 6, student respondents have obtained a computed t-value of -0.048 with a significance value of 0.962. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is failed to reject or accepted which means that there is no significant difference in the attitude of the student respondents toward the effectiveness of blended learning classroom environment when grouped according to their sex. This goes to show that student respondents have the same level of assessment regardless of their age.

Also, Alvarez, Jr. (2020) argued that in the context of virtual classroom, learners have the opportunity to access the learning materials regardless of time and space. Thus, the literature discusses that teachers and students are being mediated with ICT through the notion of blended-based instruction. This implies that teachers and students, in blended learning, are both part of the virtual classroom irrespective of geographical separation and face-to-face classroom meeting.

**3.2.3. Grade Level as Test Factor**

Table 5 presents the significant difference in the assessment of both teachers and students when grade level is taken as test factor.

**Table 5.** Significant Difference in the Assessment of Both Teachers and Students when Grade Level is Taken as Test Factor

Attitude	Grade Level	Mean	SD	Computed F-value	Sig	Decision	Interpretation
Attitudes of <b>Teachers</b> Toward the Effectiveness of Blended Learning Classroom Environment	Grade 1	2.82	.08	1.779	.162	Accepted	Not significant
	Grade 2	2.71	.05				
	Grade 3	2.70	.07				
	Grade 4	2.86	.05				
<b>Total</b>		<b>2.78</b>	<b>.03</b>				
Attitudes of <b>Students</b> Toward the Effectiveness of Blended Learning Classroom Environment	Grade 1	2.77	.21	2.090	.105	Accepted	Not significant
	Grade 2	2.59	.32				
	Grade 3	2.68	.27				
	Grade 4	2.69	.26				
<b>Total</b>		<b>2.69</b>	<b>.27</b>				

**Teacher Respondents.** As presented in Table 7, teacher respondents have accumulated a computed f-value of 1.779 with a significance value if 0.162. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is failed to reject or accepted which means that there is no significant difference in the attitude of the teacher respondents toward the effectiveness of blended learning classroom environment when grouped according to their grade level. This can be interpreted as teacher respondents have the same level of assessment regardless of their grade level.

**Student Respondents.** As shown in Table 7, student respondents have obtained an f-value of 2.090 with a significance value of 0.105. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is failed to reject or accepted which means that there is no significant difference in the attitude of the student respondents toward the effectiveness of blended learning classroom environment when grouped according to their grade level. This goes to show that student respondents have the same level of assessment regardless of their grade level.

According to Nouri (2016), higher education has been pressed to adopt more flexible, effective, active, and student-centered teaching practices that address the constraints of traditional transmittal education paradigms. The flipped classroom concept has recently been proposed as a way to help with this shift. However, research on the usage of flipped classrooms in higher education is still in its early stages, and little is known about students' perspectives of flipped classroom learning. In a last-year university research techniques course, students' perspectives of flipped classroom teaching were investigated. The findings demonstrated that a huge majority of students had a positive attitude toward flipped classrooms, video, and Moodle, and that having a positive attitude toward flipped classrooms was strongly connected

with having a positive attitude about Moodle. Increased motivation, engagement, learning, and effective learning are all perceived to be better. When it came to attitudes about using video as a learning tool, perceived improved learning, and perceived more effective learning, low achievers reported much more favorably than high achievers.

### 3.3. Teachers' Observations on the Attitudes Towards Blended Learning Effectiveness in Selected Colleges in Shandong Province

There are three major themes which emerged from the thematic analysis of the interviewees' responses on the teachers' observations on the attitudes towards blended learning effectiveness. The researcher grouped the themes: Effectivity of the combination of an online class learning and traditional in-class learning than using one-way delivery of information, blended learning improves learning of new skills and pedagogies, and low-speed internet and connectivity problems causes to reach difficulties with blended learning online resources.

**Table 6.** Analysis of three main themes

Theme	Teacher Respondents	Quote
1. Effectivity of the combination of an online class learning and traditional in-class learning than using one-way delivery of information	Sir Andrew	The COVID-19 pandemic has really affected the whole of educational system, but its blessing in disguise lies on its blended learning approach. I can tell that students learn more and perform more mainly because of their competency in the use of technology and its application inside the face-to-face classrooms.
	Sir Alfred	Blended learning has provided me an ample time to assess my teaching approaches and methodologies for years. I always thought that technology are just aids for teaching; it can also shape the learning landscape. The teachers are now enjoying employing technological techniques and are seeing great results from their students.
	Ma'am Emma	It helps educators see way beyond what they've just learned in college and even in graduate school. Blended learning effectivity are primarily concerned with the students, yes, but now I also think that it is more on the advantage of teachers. They are also learning and being armed by it.
2. Blended learning improves learning of new skills and pedagogies	Sir Reggie	New pedagogical developments for teachers are being steered by this blended learning. Methodologies are being improved for the benefit of the whole academic community. Teachers can't deny this, it is the new normal of education.
	Ma'am Vicky	Some of the experienced or seasoned teachers are being mentored by the younger ones. This positivity in the academic workplace has given birth to a more collaborative way of sharing new best practices among educators.
	Ma'am Jen	Teachers are now being used to different platforms and networks. This development in the art of teaching will make education thrive in the midst of any crisis. Education will always find its way for the young, and teachers will be there to make it happen.
	Ma'am Layson	The main problem that teachers encounter is on the

		uploading of materials and during synchronous sessions. Internet connectivity problems disrupt learning possibilities and spaces among the teachers and learners.
3. Low-speed internet and connectivity problems causes to reach difficulties with blended learning online resources	Ma'am Ram	Teachers, upon encountering connectivity problems, are mainly relying on pre-recorded video lectures that are sometimes not fit with the needed competencies by the students.
	Ma'am Jemai	It is making a sort of disconnect too among the teachers and learners. The students may wait a little longer as expected in the uploading of classroom materials and references if the teachers are having a hard time in their internet connectivity. They may also not be able to send messages or instructions to the students. It is definitely a problem.

### 4. Conclusion

Teacher respondents are dominated by female within the age range of 41-50 years old and on their fourth grade. On the other hand, most of the student respondents are male who are 26-30 years old and on third grade. Generally, this can be concluded that majority of the responses obtained on this study came from the aforementioned groups of people.

In terms of their attitude, both teacher and student respondents agree towards the effectiveness of in the blended learning classroom environment. But it can be noted that, among the two respondents, teacher respondents have found this kind of learning setup way more effective than the student respondents.

There is a significant difference between the attitudes of the teacher and student respondents towards the effectiveness of blended learning classroom environment. The result indicates that teacher and student respondents have different perceptions when it comes to their assessment of effectiveness of blended learning classroom environment. It can be concluded that teacher respondents found this kind of learning setup more effective compare to student respondents. When age is taken as test factor, the data indicates that teacher respondents have different level of assessments in terms of effectiveness of this kind of learning setup when grouped depending on their age. This further indicates that teacher respondents who are 31-40 years old found this kind of learning setup way more effective compare to the rest of teacher respondents in different age groups. However, there is no significant difference in the attitude of the student respondents toward the effectiveness of blended learning classroom environment when grouped according to their age.

If sex is taken as sex factor, it is concluded that there is no significant difference in the attitude of both the teacher and student respondents toward the effectiveness of blended learning classroom environment when grouped according to their sex. This only means that both male and female teacher and student respondents have the same level of assessment.

Finally, when grade level is taken as test factor, it shows that there is no significant difference in the attitude of the student respondents toward the effectiveness of blended learning classroom environment when grouped according to their sex. This goes to show that student respondents have the same level of assessment regardless of their grade level.

### References

[1] Dziuban, C., Hartman, J., Judge, F., Moskal, P., & Steven, S. Blended learning enters mainstream. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs* (pp. 195– 208). (Pfeiffer, San Francisco, 2006).

- [2] European Commission. Blended learning in school education – guidelines for the start of the academic year 2020/21. Education and Training. (2020) [https://www.school-education-gateway.eu/downloads/Blended%20learning%20in%20school%20education\\_European%20Commission\\_June%202020.pdf](https://www.school-education-gateway.eu/downloads/Blended%20learning%20in%20school%20education_European%20Commission_June%202020.pdf).
- [3] Gonzalez-Castillo, D. An exploratory study of faculty attitudes regarding hybrid course effectiveness in an urban community college system. (2008). Retrieved from ProQuest Dissertations and Theses.
- [4] Hrastinski, S. What Do We Mean by Blended Learning? Tech Trends. (2019). <https://doi.org/10.1007/s11528-019-00375-5>.
- [5] Kuong, J. Distance education in nursing: A review of the literature. *Journal of Professional Nursing*, Vol. 25 (2009), No.3, p.163-168. <https://doi.org/10.1016/j.profnurs.2008.05.005>.
- [6] Linton, J. *The blended learning blueprint for elementary teachers*. (Thousand Oaks, CA: Corwin Press, 2018).
- [7] Tupas, F. and Laguda, M. Blended Learning – An Approach in Philippine Basic Education Curriculum in New Normal: A Review of Current Literature. *Universal Journal of Educational Research*. (2020). <https://www.hrpub.org/download/20201030/UJER54-19517549.pdf>.