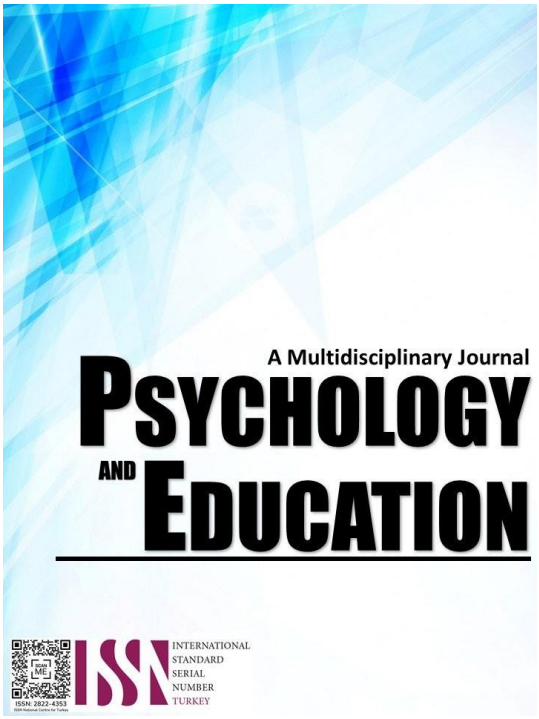
ASSESSMENT OF BLENDED LEARNING IMPLEMENTATION AND STUDENT'S ACADEMIC PERFORMANCE TOWARD ENHANCED INSTRUCTIONAL POLICY



PSYCHOLOGY AND EDUCATION: A MULTIDISCIPLINARY JOURNAL

Volume: 20
Issue 7
Pages: 925-938
Document ID: 2024PEMJ1903
DOI: 10.5281/zenodo.11568189
Manuscript Accepted: 04-23-2024

Psych Educ, 2024, **20**(7): 925-938, Document ID:2024PEMJ1903, doi:10.5281/zenodo.11568189, ISSN 2822-4353

Research Article

Assessment of Blended Learning Implementation and Student's Academic Performance toward Enhanced Instructional Policy

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Abstract

The purpose of this research is to assess blended learning (BL) implementation and student's academic performance toward an enhanced instructional policy that makes blended learning effective. The study adopted a descriptive-correlational design. It involved selected junior high school students. The following were findings of the study: First, the assessment on the level of implementation of blended learning in terms of content, curriculum and instructional design showed that students have a good experience across all grade levels. Second, there is high significant difference between the level of implementation of blended learning vs grade level and age. Third, it showed that there is no significant difference between the levels of implementation of blended learning with the students' academic performance. The study recommends adopting the proposed Instructional Policy in the implementation of blended learning to help and make the blended learning effectively.

Keywords: *blended learning, academic performance, instructional policy*

Introduction

The Philippines has been surrounded by education challenges from its curriculum, teachers, facilities, policy, governance, and other related issues and concerns. Thus, many policies and programs have been implemented to solve these problems and improve the country's education quality. The demand for the 21st century-teaching approaches continues to rise as the Department of Education aims harder for outcome-based education, wherein its goal is to produce fully equipped and competitive graduates, which will make them productive in the workplace. With these objectives, it is swerving away from the traditional teaching approaches. Therefore, the adaptation of blended learning.

Blended learning is a type of learning that allows learners to utilize the ability to learn both face-to-face and online through digital platforms. The goal is not to complement or replace conventional learning styles but rather to incorporate necessary changes to make the educational path for learners more effective and personalized (Valamis, 2023). As mentioned in the literature of Ersin Balci (2017), in the study of Akkoyunlu, B. et al., the results showed that the students enjoyed participating in the blended learning environment. The perfect blended learning program includes web-based training supported by human touch and media. It optimizes the achievement of learning objectives by applying appropriate learning technologies to match the personal learning style.

Year two thousand and twenty (2020) pandemic has brought a clear gap especially in terms of educational setup. The Philippines, through the Department of Education (DepEd), adopted a Basic Education Learning Community Plan (BE-LCP) for the school year 2020-2021 as an adaptive measure to the "new normal". Many studies have demonstrated the effectiveness of blended learning; for example, the findings of a meta-analysis have shown that blended learning brings a more positive impact on students learning than online and face-to-face learning (Batda, 2014).

On the other hand, the adaptation of blended learning or new learning modalities presents many concerns such as accessibility. This includes not only access to online learning materials but also access to printed and modular learning materials for learners in a geographically isolated and disadvantaged area, those belonging to low-income households, and material accessibility for children with disabilities and very young children (4 years old and below).

In general, many studies are conducted in various schools and universities to analyze the views on blended learning modality or environment. Different multiples like enhanced learning, academic performance and achievement, use of technology, differentiated learning activities, and learning assessments considered. Students' perceptions and satisfaction merged can represent a better understanding of learning. Thus, it matters to give importance to the students' academic performance as determinants of improving the level of acceptance of students to this new kind of learning setup to ensure that they will achieve better competence relatively.

Thus, this study assessed blended learning implementation and student's academic performance toward enhanced instructional policy among Adamson University Basic Education Department Junior High School students, which shall help implement blended learning effectively.

Research Questions

The study aims to assess blended learning implementation and student's academic performance toward enhanced instructional policy among Adamson University Basic Education Department Junior High School students that make blended learning effective. Specifically, the study aimed to answer the following questions:

1. What is the profile of the respondents in terms of:

1.1. age; and
1.2. grade level?
2. What is the assessment on the level of implementation of blended learning in terms of:
2.1. content;
2.2. curriculum; and
2.3. instructional design?
3. Is there a significant difference with the assessment on the level of implementation of blended learning when their profile is taken as a test factor?
4. What is the academic performance of the students during the 2nd quarter of School Year 2022-2023 based on the grade point average reflected in the report card?
5. Is there a significant relationship between the student's experience of blended learning implementation and their academic performances?
6. What instructional policy may be generated based on the findings of the study that shall enhance the implementation of blended learning?

Literature Review

Education is a process by which people acquire or impact basic knowledge. It is also, where people develop vital skills, understand social norms, develop sound judgment and reasoning, and learn to discern right from wrong (World Vision, 2021). In addition, education is essential to society because its ultimate goal is to help people navigate life and to contribute to society (Abulencia, 2021). The Philippines has been surrounded by education challenges from its curriculum, teachers, facilities, policy, governance, and other related issues and concerns. Thus, many policies and programs were been implemented to solve these problems and improve the country's education quality.

Indeed, the demand for the 21st century-teaching approaches continues to rise as the Department of Education aims harder for outcome-based education, wherein its goal is to produce fully equipped and competitive graduates, which will make them productive in the workplace. Moreover, the rise of technology as an innate part of globalization has revolutionized teaching-learning. Parallel to this are instructional approaches and strategies, which will allow students to navigate all areas of learning, like how to communicate, collaborate, and explore. With these objectives, it is swerving away from the traditional teaching approaches. Therefore, the adoption of blended learning.

Blended learning is a type of learning that allows learners to utilize the ability to learn both face-to-face and online through digital platforms. The goal is not to complement or replace conventional learning styles, but rather to incorporate necessary changes to make the educational path for learners more effective and personalized (Valamis, 2023). According to one study (Preparing for the Digital University 2015, page 71), blended learning has proven to generate better learning outcomes when compared with other learning styles, such as solely online or face-to-face.

In the past years, technology in education has had various benefits for students, teachers, and the workforce. Technology can help remove educational boundaries. Likewise, technology enables collaboration and provides access to diverse and concurrent information.

Blended learning refers to an education program combining traditional classroom teaching methods. Traditional face-to-face learning combines eLearning methods; learners can reach their full potential (Robcondon, 2022). It is a conventional and technologically based approach to teaching modality.

The term 'blended learning' describes how eLearning is integrated or combined with a more traditional classroom setup, offering independent study (Movchan, 2023). This learning approach ensures that the learners remain engaged and that the learning experience is productive. Moreover, the learning strategy cat to l caters to learners' needs flexibly and conveniently with those with learning styles.

The perfect blended learning program includes web-based training supported by human touch and media. It optimizes the achievement of learning objectives by applying appropriate learning technologies to match the personal learning style. It is an education program combining traditional classroom teaching methods and online learning (Robcondon, 2022). Every student has different needs and learning styles; therefore, the flexible learning program approaches and teaching strategies will help students explore and experience the flexibility of learning at their own pace. Learners are the primary beneficiary and the key participants of the learning process. This gap in educational settings was been addressed by blended learning.

The COVID-19 pandemic caused a massive public health crisis worldwide that cuts across many sectors. It directly affected the state of education in as many as 188 countries which have imposed closures of schools, affecting more than 1.5 Billion children and youth worldwide (UNESCO, 2021).

Year two thousand and twenty (2020) pandemic has brought a clear gap between the things we used to have from what we are experiencing right now, especially in terms of educational setup. Some examples of those gaps are access to technology and digital learning resources. In addition, guidance, teacher skills, and support mechanisms applicable to different learning styles are also needed (Manila Bulletin, 2021). The Philippines, through the Department of Education (DepEd), adopted a Basic Education Learning

Community Plan (BE-LCP) for the school year 2020-2021 as an adaptive measure to the "new normal". It sets forth a package of educational interventions that was been implemented in response to the basic education challenges brought about by the pandemic (Ateneo Human Rights Center, 2020). This becomes an additional challenge for all educators to execute and implement the learning course in a remote learning style. This has emphasized that students need a learning-teaching process that is applicable or effective for their achievement.

The House of Representatives even filed a new bill to try to educate everyone on how to live the post-lockdown life. House Bill No. 6623 or The New Normal for the Workplace and Public Spaces Act of 2020 set some parameters and standards. These public standards include policies banning large social gatherings, requiring facemasks, encouraging public distancing, among others (Publico, 2022).

The adaptation of blended learning among schools in the country during the new normal setting in Philippine Educational set-up. People learned how to live with the pandemic. Some researchers found out the affectivity of blended learning during the new normal setting. The benefit of a blended learning approach, such as students have no particular guideline when to study and able to draw resources as many as necessary.

The different learning delivery modalities that may be adopted by schools are face-to-face learning, distance learning (modular, online or TV and radio-based), blended learning, and homeschooling. Furthermore, students can pick a task that best suits his or her learning level and style. Teacher resources, like vodcasts, serve as reviewers. They can learn and play their favorite online games and can recount an understanding of the topics through claymation storytelling (Tupas, 2020).

The Department of Education Curriculum and Instruction ensures that the organization focuses on the delivery of a relevant, responsive, and effective basic education curriculum around which all other strands and offices provide support. It covers the development of curriculum, which develops and manages the national education policy framework on curriculum development and management for the department. Moreover, it also develops national curriculum standards for basic education, designs, develops special curriculum programs appropriate for all types of learners, and formulates policies and guidelines relevant to the management, contextualization and localization of the curriculum (DepEd).

The DepEd Basic Education Learning Continuity Plan (BE-LCP), the overall framework for the School Year 2020-2021, was been guided by the principles of health and safety of learners and teachers, sensitivity to equity considerations, learning continuity, and safe return to schools based on risk assessment. While the BE-LCP allows for reopening of schools in low-risk areas, subsequent policy pronouncements of the President and the Secretary of Education that opening of schools was been allowed only when a vaccine against COVID19 was been available renders this option unavailable at that time (Dela Cruz, 2020). In 21 July 2020, the President reconsidered and allowed the conduct of limited face-to-face classes and started only in January 2021 (Deped.gov.ph, 2020).

The two main adjustments introduced by the BE-LCP are the streamlining of the K-12 curriculum into the most essential learning competencies and the identification of multiple learning modalities and platforms for learning delivery. Learning competencies in all learning areas from kindergarten to senior high school reduced by 60%, to focus on competencies that a learner needs in order to continue to subsequent grade levels and to succeed in life. This includes research skills, reading comprehension, among others (DO_s2020_012).

The adaption of blended learning or new learning modalities presents many concerns such as accessibility. This includes not only access to online learning materials but also access to printed and modular learning materials for learners in a geographically isolated and disadvantaged area, those belonging to low-income households, and material accessibility for children with disabilities and very young children (4 years old and below). In addition, there are also concerns regarding the readiness of teachers and early childhood care and development workers to shift teaching methodologies and facilitate distance learning, prepare learning tools and resources and provide learners with necessary psycho-social support with the period of time for preparation given to them before classes resume.

To incorporate traditional and online learning modalities, blended learning was been adopted as the Department of Education suggested that conventional approaches shifted into blended learning during the pandemic. The DepEd secretary told using all alternatives to disrupt the opening of classes in the SY 2020-2021 (DO No. 44, series of 2022). Aside from alternative learning modality during the pandemic, blended learning can help students gain 21st-century technical skills essential for their future careers as it combines technology-oriented traditional learning approaches.

Blended learning is familiar to the Philippine Education System since many colleges and universities around the country already adopted these concepts a long time ago (Tupas & Laguda, 2022). While every method has advantages and disadvantages, blended learning prevails over other learning methods by making instruction delivery effective and result-oriented right from the start.

Several studies pointed out those positive results on the students' views toward blended learning modality. As mentioned in the literature of Ersin Balci (2017), in the study of Akkoyunlu, B. et al., the results showed that the students enjoyed participating in the blended learning environment. The study also showed that student achievement levels and participation frequency in forums affected their views about the blended learning environment. This study demonstrated the importance of the assimilation of interaction and communication for the success of online learning.

As mentioned in the study of Ersin Balci (2017), from the standpoint of Delialioglu &Yıldırım, summarize the effectiveness of blended

learning as follows: "A carefully designed and well implemented online instruction can help students access more information faster, can allow using multimedia environments to reach multiple senses of students, and provide support in understanding the content." Providing students with more incredible opportunities and widespread options of learning instruction for the success of learning will lead to achieving the educational goals and objectives.

Many studies have demonstrated the effectiveness of blended learning; for example, the findings of a meta-analysis have shown that blended learning brings a more positive impact on students learning than online and face-to-face learning (Batda, 2014)

As the students cognize their type of learning, this will motivate and help them achieve the goal of producing globally competitive students. According to the study by Aventijado et al. (2020), students enjoy learning when their preferred activities are performed – hence, having the attributes of an active learner. Learning styles are an essential factor for students to know well in school.

A blended learning model supported by videos enables increased flexibility from the viewpoint of study participation (Laine et al., 2015). In addition, study participation is possible by choosing the participation mode from the face-to-face study, real-time video, and on-demand video. With this, the blended learning environment or modality of learning helps students cover all the senses that will demonstrate their learning styles toward learning success. Thus, the student can choose the participation mode that best mirrors his or her preferences.

According to the definition by the Encyclopedia of the Sciences of Learning, learning activity is a special kind of human activity whose main objective is the acquisition of knowledge, skills, and competencies produced by society in the process of history using specific particular actions taken upon learning objects by their substance and structure.

Learning activity is the finished framework of the general activity approach (Podolskiy, 2012). A helpful learning activity experienced by learners is learners they can take on what they have learned from engaging with the activity and use it in another context or for another purpose. On the other hand, Diana Laurillard (2012) classified learning activities into six types: acquisition, inquiry discussion, practice, collaboration, and production. Learning activities should provide experiences that enable students to engage, practice, and gain feedback on specific outcomes.

Learning activities must align with their assessment, with the learning outcomes for the course or program overall, and with the student's needs at this stage of their learning. According to IIEP Learning Portal Team, to improve learning outcomes, policymakers need to know what students are learning and what needs to be improved. Assessing learning is essential to measuring educational achievement, evaluating national education systems, and monitoring progress towards Sustainable Development Goal (SDG) 4. Despite the difficulty of assessing student learning during COVID-19, monitoring learning and alternatives, such as educational access, were essential to measure learning loss and accelerate recovery. The COVID-19 pandemic opens the educational system to change the assessment methods and new strategies from the design to the classroom level. This will help enhance and develop a more effective distance learning system.

In the study of Karine Apresyan et al. (2021), they cited the description of B.S. Kubekova that examination in the form of a written test traditionally considered the primary evaluation method of the student's learning abilities and academic performance. The advantages of this method include the development of a culture of thinking and verbal self-expression. By way of this, students' ability to express their ideas logically and adequately demonstrated.

As discussed by an Iowa University article (2022) on traditional face-to-face teaching, traditional lecture-style class, information sometimes fed to the student and then passed back to the instructor through written proctored assessments. Their evaluation shows that students have found that the face-to-face classroom can be an active learning environment.

Moreover, as the article discussed, the traditional lecture-style class uses reading requirements from the textbook and other resources provided or referred to by the instructor to supplement the material covered in person., the course pace occurs at a specific time in one physical location and is set schedule, the discussion takes place in the physical learning environment.

The delivery of exams, quizzes, and critiques is typically in the physical learning space during regularly scheduled class time in traditional face-to-face classes. Submitting homework assignments, research papers, laboratories, studio work, and the like occurs in person and hard copy form.

According to the Department of Education memorandum order (DepEd Order No. 8, s. 2015), classroom assessment gathers evidence of what a learner knows, understands, and can do. This series of infographics discusses the two types of classroom assessment.

Formative Assessment and Summative Assessment. Formative Assessments are done individually and collaboratively manner. Formative assessment provides bases for making instructional decisions. In contrast, a formative evaluation conducted during the lesson properly informs teachers of the student's progress in developing the learning competencies. It shown after the study assesses whether learning objectives achieved. Summative assessments classified into three components, namely, Written Work (WW), Performance Tasks (PT), and Quarterly Assessment (QA). These three will be the bases for grading. The learning area's nature defines how these three components assessed (Llego, 2023).

E-learning assessments are a digital way to check what someone knows (Creative Learning, 2022). It depends on the learning

management system or course platform you use to create your courses. Some LMS only provide the ability to create online quizzes, graded SCORM assignments, and interactive learning activities, and they come with online learning community-building tools. These limitations of e-learning assessment platforms are continuously in the evaluation as technology changes abruptly.

Academic performance represents achievement outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college, and university (Steinmayr et al., 2020). Academic achievement is a complex or multifaceted cognitive performance that comprises different learning areas.

According to the citation of Liem, 2019 in his editorial, scholars agree that students' academic achievement is a 'net result' of their cognitive and non-cognitive attributes (Lee & Shute, Citation 2010; Lee & Stankov, Citation 2016). It is the totality of the performance outcome of the students based on the specific goals and objectives determined to be as accomplished.

Synthesis

Many studies conducted in various schools and universities to analyze the views on blended learning modality or environment. Different multiples like enhanced learning, academic performance and achievement, use of technology, differentiated learning activities, and learning assessments considered. The above collection of foreign and local studies informed the researcher that the students who used the implemented blended learning modality benefited from the information and communication technology.

Students' perceptions and satisfaction merged can represent a better understanding of learning. Thus, it matters to give importance to the students' academic performance as determinants of improving the level of acceptance of students to this new kind of learning setup to ensure that they will achieve better competence relatively.

Learning activities and learning assessments vary in different forms of learning modality. However, the foundation of learning activities and modalities must permanently anchor on the course or subject's objectives and required learning competencies. Formative and summative forms of assessment are both types of assessment that govern the face-to-face and online learning modalities.

With this information, assessment of blended learning implementation and students' academic performance determined as the basis for the instructional policy that would be a key to improving and leading the instructional method to success. Thus, this study assessed blended learning implementation and student's academic performance toward enhanced instructional policy among Adamson University Basic Education Department Junior High School students, which shall help implement blended learning effectively.

Methodology

Research Design

This research employed a descriptive comparative-correlational design. It is a non-experimental, quantitative research design. The survey questionnaire to be used is based on a validated survey questionnaire adopted from the study of Akkoyunlu and Soylu (2008) e' views entitled "Learners' Views on Blended Learning and Its Implementation Process," which was partially modified to fit the content and answer the research questions of study. The study was conducted at Adamson University Basic Education Department Junior High School. The administration of the survey questionnaire was done by the researcher to gather information about students' perceptions of blended learning implementation. The questionnaire aims to correlate the students' perspectives between the online modality, face-to-face classes, and blended learning. In this case, the learning assessment during online learning, face-to-face class, and blended learning has been compared. The questionnaire was used to get data on the students' perspectives on different learning modalities that have been implemented or experienced in online learning, face-to-face learning, and blended learning modality. Thus, the survey instrument provided some insights and correlation about students' academic performance when learning in the implementation of blended learning modality as a basis for instructional policy.

Respondents

The study involved selected junior high school students, which was determined through stratified random sampling using Slovin's Formula. Table 1 presents the number of respondents.

Table 1. *Number of Respondents*

Grade Level	*Total Population*	*Sample*
7	190	61
8	187	60
9	228	73
10	290	93
Total	895	287

e = 0.05

Instruments

The instrument employed in this study includes a student's Likert scale and demographic profile questions under Part I, including sex, age, and grade level. Part 2.1 is consisted of seven (7) questions regarding content matter that taught during the implementation of the

blended learning modality. Meanwhile, Part 2.2 consists of another seven (7) questions concerning the curriculum area during the implementation of blended learning modality. Part 2.3 consists of additional seven (7) questions about instructional design applied by the teachers. Part 3 is the academic performance (GWA) during the second quarter of SY 2022-2023. The information consolidated from the demographic profile and Likert scale used to analyze the data.

The survey used is a Likert Scale adapted from Akkoyunlu and Soylu (2008), which designed to understand the perceptions of students and instructors regarding blended learning. The questionnaires developed for the present study slightly modified to fit the institution's blended learning format and for the study's purpose.

Reliability and Validity

The validated survey used is a Likert Scale adopted from Akkoyunlu and Soylu (2008). The reliability of the final forms of the surveys was calculated using Cronbach's alpha, and scores were; Online platform: 899, Face-to-face Instruction: 867, Assessment: 894, General views: 934) and 892 for instructors are satisfactory reliability levels.

Similarly, the modified instrument undergone tests of validity and reliability. In order to guarantee the instrument's intrinsic value validation was conducted by the selected experts. The instrument was first individually e-mailed to the experts so none of the evaluators knew the other reviewers. After this initial review, issues relating to the instrument's wording, syntax, the construct's and the content's validity, were raised; experts were also asked to answer the items they considered sufficiently appropriate to be part of the final instrument, as "correct" or "incorrect". The author separated the items that the three evaluators were in complete agreement upon, in terms of construction and answers ("correct" or "incorrect"). After completing the suggested modifications to the summaries and items wording and content, experts were contacted a second time in order to conduct an independent second evaluation. On this occasion, the items that had not been previously agreed upon in terms of construction or answers were presented anew. There were no further observations regarding the summaries' construction and only a few regarding the presented items. After this round, the items that were not agreed upon or that were not considered adequate were discarded. Finally, the author elaborated the instrument with the items that had been previously balanced among the three indicators: Curriculum, Learning Content and Instructional Materials. Reliability test used a pilot test of the survey instrument to 30 respondents. Cronbach's alpha was used to measure the internal consistency..

Procedure

The study conducted in three phases:

Pre-gathering phase. The researcher got the consent of the participating schools, the participants, and the authors of the survey questionnaire that adapted in the study.

During the gathering phase. The survey questionnaire instrument administered to all Adamson University's Basic Education Department Junior High school students. The data-gathering phase conducted during students' intramurals week. Therefore, the researcher used printed forms to gather the needed data. The researcher consolidated all the data gathered, recorded, tallied, and analyzed the results of the survey questionnaires.

Post-gathering phase. The researcher calculated, evaluated, and interpreted the data and generated answers to the research study's problem.

Data Analysis

The researcher reviewed and analyzed the data gathered through the survey questionnaire. The mean score indicated in the following description:

3.51 – 4.00	Very Good Experience
2.51 – 3.50	Good Experience
1.51 – 2.50	Poor Experience
1.00 – 1.50	Very Poor Experience

Ethical Considerations

The study protocol that was subject to approval by the Ethics Review Committee was made and approved. The researcher followed the informed consent process. There were no risks in participating in this study. No incentives given to respondents who joined. Without any obligations, the respondents were given an option to withdraw anytime from the study. No data was identifiable to the respondents, the university, and the community. Partial results made available upon request. The researcher ensured the confidentiality of the identity of the respondents, and all relevant information kept private. Actual master and survey forms kept for one year after the study's conclusion and discarded afterward. There was no conflict of interest in this study.

Results and Discussion

The result of the study of the assessment of blended learning implementation and students' academic performance toward enhanced instructional policy among Adamson University Basic Education Department Junior High School students is shown and discussed

below:

Profile of the Respondents

Table 2. *Age and grade levels of the students*

Profile	*Frequency*	*%*
Age		
13 years old and below	114	39.721
14	67	23.345
15	74	25.784
16	32	11.150
Total	287	100
Grade Level		
7	61	21.254
8	60	20.905
9	73	25.436
10	93	32.404
Total	287	100

Table 2 presents the age and grade levels of the students who were respondents in the study. Most of the respondents under grade 7 level having the age of 13 years and below answered the questionnaire. These respondents were qualified under the standard age requirement for grade 7 level according to the Department of Education enrolment manual. In addition, most of the respondents from grade 8 level also within the standard age requirement having 13 years of age. It went the same with the respondents from grade 9 level having 4 years old who answered the questionnaire. Lastly, the table showed that the respondents from grade 10 level mostly came from 15 years old of age who were also qualified under the standard age requirement for grade 10 level according to the Department of Education enrolment manual.

Assessment on the Level of Implementation of Blended Learning in Terms of Content

Table 3. *Assessment on the level of implementation of blended learning in terms of content*

Content	*Mean*	*SD*	*Interpretation*	*Rank*
The content of blended learning sessions helps me to understand the lessons easily.	3.13	0.680	Good Experience	3
I have easy access to the information I need during blended learning sessions.	3.55	0.605	Good Experience	1
Blended learning modality allows me to meet the learning objectives and minimum learning competencies of my subjects.	3.145	0.573	Good Experience	2
Understanding the content through blended learning is much easier.	2.815	0.755	Good Experience	6
Blended learning is a flexible way to understand the content compared to other modalities.	3.083	0.720	Good Experience	4
Online class alone helps me more to understand the lessons than blended learning.	2.2	0.727	Poor Experience	7
Blended learning session helps me to learn better and assist in the retention of information about the subject.	3.003	0.699	Good Experience	5

Legend: 3.50 – 4.00, Very Good Experience (VGE); 2.51 – 3.50, Good Experience (GE); 1.51 – 2.50, Poor Experience (PE); 1.00 – 1.50, Very Poor Experience (VPE)

Table 3 presents the assessment on the level of implementation of blended learning in terms of content in the study. Overall, in the assessment on the level of implementation of blended learning in terms of content showed that item 2 statement has the highest mean among all the items generating an interpretation of good experience; and item 6 statement showed the lowest mean among the items, generating an interpretation of poor experience. The results correlate to the study of Tong et.al. (2022) that, observations and student opinion survey results also indicated that blended learning increased student interactions with teachers and improved self-study abilities and learning attitudes. Blended approach also helps cater to the individual needs of the learner, most students have unique learning styles, and a blended approach is more likely to cater to those needs than a traditional classroom teaching experience alone.

Assessment on the Level of Implementation of Blended Learning in Terms of Curriculum

Table 4 presents the assessment on the level of implementation of blended learning in terms of curriculum in the study. Overall, in the assessment on the level of implementation of blended learning in terms of curriculum showed that item 11 statement has the highest mean among all the items generating an interpretation of good experience; and item 12 statement showed the lowest mean among the items still generating an interpretation of good experience. Students most likely benefited on blended learning subject curriculum as it caters face-to-face interaction to make things clear unlike pure online sessions only as it generated the highest mean among all the statements under curriculum assessment.

These results also correlated with the findings in the assessment of Hudspeth (2018), revealed three important outcomes; increased engagement, accountability, and adaptability may inspire teachers across all curriculums and across grade levels to incorporate blended learning into their student-centered classrooms. Moreover, blended learning has the capability to provide more effective and flexible

ways of delivering knowledge to students. The nature of this method provides it with the ability to address various learning preferences of students as well as have the capability to meet all their learning needs (Moutaoukil, 2022).

Table 4. *Assessment on the level of implementation of blended learning in terms of curriculum*

Content	*Mean*	*SD*	*Interpretation*	*Rank*
Various blended learning assessments help me understand what I have learned and help me reflect on my progress.	3.207	0.642	Good Experience	2
The subject curriculum for blended learning is time-bound which allows the sharing of ideas and discussion in sessions, which is effective and nourishes me.	3.070	0.599	Good Experience	4
Blended Learning subject curriculum provides opportunities to practice different skills.	3.175	0.700	Good Experience	3
Blended Learning subject curriculum caters face-to-face interaction to make things clear unlike pure online sessions only.	3.295	0.717	Good Experience	1
Learning the subject through blended learning is easier for me.	2.943	0.728	Good Experience	7
I can study at my own pace through the blended learning session.	3.015	0.771	Good Experience	6
I can study repeatedly during blended learning.	3.028	0.734	Good Experience	5

Legend: 3.50 – 4.00, Very Good Experience (VGE); 2.51 – 3.50, Good Experience (GE); 1.51 – 2.50, Poor Experience (PE); 1.00 – 1.50, Very Poor Experience (VPE)

Assessment on the Level of Implementation of Blended Learning in Terms of Instructional Design

Table 5. *Assessment on the level of implementation of blended learning in terms of instructional design*

Content	*Mean*	*SD*	*Interpretation*	*Rank*
Evaluation criteria or rubrics in blended learning session guides us in how and what to do in our tasks or exercises	3.210	0.592	Good Experience	3
Blended learning can help me complete my requirements by providing extra practice or time.	3.238	0.653	Good Experience	2
The instructions in the online class are appropriate and adequate and I find it very clear and user-friendly.	2.962	0.692	Good Experience	7
Worksheets, quizzes, and activities in the blended learning sessions are comprehensive.	3.203	0.619	Good Experience	4
Online workbook is a useful tool for me to study on my own and being able to practice through PC or mobile devices provides huge practicality for me.	3.075	0.749	Good Experience	5
Online class gives me the opportunity to practice various activities that make me more competitive in my learning	2.965	0.710	Good Experience	6
The Face-to-face setting with gestures and demonstration is quite effective.	3.373	0.671	Good Experience	1

Legend: 3.50 – 4.00, Very Good Experience (VGE); 2.51 – 3.50, Good Experience (GE); 1.51 – 2.50, Poor Experience (PE); 1.00 – 1.50, Very Poor Experience (VPE)

Table 5 presents the assessment on the level of implementation of blended learning in terms of curriculum in the study. Overall, in the assessment on the level of implementation of blended learning in terms of instructional design showed that item 21 statement has the highest mean among all the items generating an interpretation of good experience; and item 17 statement showed the lowest mean among the items still generating an interpretation of good experience.

The results showed a correlation in the study of Al Maskari (2018) a positive attitude among students towards blended learning courses in terms of instructional design. Cao (2023) stated in her study that in overall, achievement in blended learning is determined by the effectiveness of the instructional design, the quality of the learning materials.

Relationship between the Assessments on the Level of Implementation of Blended Learning with Their Profile

Table 6. *Difference on Assessment on the level of implementation of blended learning in terms of grade levels*

Variables	*Sig.*	*Interpretation*	*Decision*
Content	0.000	Significant	Reject Null
Curriculum	0.000	Significant	Reject Null
Instructional designs	0.000	Significant	Reject Null

a = 0.05

Table 6 presents the difference in assessment on the level of implementation of blended learning in terms of grade levels. The respondents' grade level under their profile, the assessment on the level of implementation of blended learning is highly significant in all areas namely, content, curriculum and instructional designs having positive correlations and significant at that because all the p values are 0.000. This means that the null hypothesis pertaining to these relationships is rejected. According to the study of Keshin (2019) entitled "Factors Affecting Students' Preferences for Online and Blended Learning: Motivational Vs. Cognitive" showed that there is a correlation between the preferences of the learning environment, and the constructs of self-efficacy, e-learning motivation, and task value. It can be said that the motivational variables are more effective in the learning environment preference. The students with high task value, e-learning motivation, and self-efficacy preferred studying in blended learning environments. Cognitive strategies,

self-directed learning, learner control, and test anxiety factors are independent of the learners' learning delivery preferences. Moreover, according to the result of the study of Anh Le (2021) showed that students' online learning outcomes are affected by 6 factors in the descending order, respectively, learner characteristics, perceived usefulness, course content, course design, ease of use, and faculty capacity. Lastly, according to the study of Kintu (2023), the learner characteristics, design features investigated are potentially important for an effective blended learning environment. He presented that there are statistically significant differences ($p < .005$) in the performance between age groups with means of 62% for age group 20–30 and 67% for age group 31 –39. The indicators of self-regulation exist as well as positive attitudes towards blended learning.

Table 7. *Scheffe Test for Confirmatory Test of Differences on Grade Levels*

Variables	*Pairs with Sig. Difference*	*Sig.*	*Remarks*
Content Assessment	Grade 7 vs. Grade 10	0.012	Significant
	Grade 8 vs. Grade 9	0.005	Significant
	Grade 8 vs Grade 10	0.000	Highly significant
Curriculum Assessment	Grade 7 vs. Grade 8	0.009	Significant
	Grade 8 vs. Grade 9	0.002	Significant
	Grade 10 vs Grade 8	0.000	Highly significant
Instructional Designs Assessment	Grade 7 vs. Grade 8	0.009	Significant
	Grade 8 vs. Grade 9	0.002	Significant
	Grade 10 vs Grade 8	0.000	Highly significant

The data gathered analyzed further to see possible relations between the levels of blended learning implementation across the different grade levels. Table 7 presents the Scheffe Test for Confirmatory Test of Differences on Grade Levels.

In terms of the levels of blended learning implementation on content assessment, grade 7 vs grade 10 showed a significant p value of 0.012; grade 8 vs grade 9 showed a 0.005 significant p value; and grade 8 vs grade 10 showed 0.000 highly significant p value. With this, it strongly suggests that the implementation of blended learning in terms of content assessment has a significance that will tend to null hypothesis to be rejected pertaining to the relationship across or among different grade levels.

Moreover, in terms of the levels of blended learning implementation on curriculum assessment, grade 7 vs grade 10 showed a significant p value of 0.009; grade 8 vs grade 9 showed a 0.009 significant p value; and grade 8 vs grade 10 showed a highly significant p value 0.000. With this, it strongly suggests that the implementation of blended learning in terms of curriculum assessment has a significance that will tend to null hypothesis to be rejected pertaining to the relationship across or among different grade levels. This goes the same result with the instructional design assessment between the different grade levels. This means that the null hypothesis to be rejected pertaining to these relationships.

Table 8. *Difference on Assessment on the level of implementation of blended learning in terms of age*

Variables	*Sig.*	*Interpretation*	*Decision*
Content vs. Age	0.000	Highly Significant	Reject Null
Curriculum vs. Age	0.001	Highly Significant	Reject Null
Instructional Designs vs. Age	0.000	Highly Significant	Reject Null

a = 0.05

Table 8 presents the difference on assessment on the level of implementation of blended learning in terms of age. In terms of the respondents' age under their profile, the assessment on the level of implementation of blended learning is highly significant in all areas namely, content, curriculum and instructional designs having positive correlations and significant at that because all the p values are 0.000; 0.001 and 0.000 respectively. This means that the null hypothesis pertaining to these relationships is rejected. There is a highly significant difference between the level of implementation of blended learning when their profile is taken as a test factor in terms of age. Therefore, there is a considerable relationship between the level of implementation of blended learning in terms of content, curriculum and instructional design at the different ages of junior high school.

The data gathered has been analyzed to see possible relations between the levels of blended learning implementation across the different age of the respondents. Table 8 presents the Scheffe Test for Confirmatory Test of Differences on age.

Table 9. *Scheffe Test for Confirmatory Test of Differences on Age*

Variables	*Pairs with Sig. Difference*	*Sig.*	*Remarks*
Content Assessment	13 and below vs. 14	0.016	Significant
	13 and below vs. 15	0.000	Highly significant
	13 and below vs. 16	0.000	Highly significant
Curriculum Assessment	13 and below vs. 15	0.002	Significant
Instructional Designs Assessment	13 and below vs. 15	0.002	Significant

In terms of the levels of blended learning implementation on content assessment, age of 13 and below vs age 14 showed a significant p value of 0.016; age 13 and below vs age 15 showed a 0.000 highly significant p value; and age 13 and below vs age 16 showed 0.000

highly significant p value. With this, it strongly suggests that the implementation of blended learning in terms of content assessment has a significance that will tend to null hypothesis to be rejected pertaining to the relationship across or among different ages of the junior high school students.

Moreover, in terms of the levels of blended learning implementation on curriculum assessment, age of 13 and below vs age 15 showed a significant p value of 0.002. in terms of instructional designs assessment, age 13 and below vs 15 also showed a significant p value of 0.002. With this, it strongly suggests that the implementation of blended learning in terms of curriculum assessment and instructional design have a significance that will tend to null hypothesis to be rejected pertaining to the relationship across or among different ages. This means that the null hypothesis to be rejected pertaining to these relationships.

Students' Academic Performance

Table 10. *Student Academic Performance based on the grade point average*

GPA	*Frequency*	*%*
90.00 and above	97	33.789
85.00-89.99	109	57.975
80.00-84.99	65	22.648
75.00-79.99	11	3.832
74.99 and below	5	1.742
Total	287	100

Table 10 presents the students' academic performance during the 2nd quarter of the school year 2022-2023 based on the grade point average reflected in the report card wherein blended learning has been implemented. It showed that respondents under advanced level generated 33.798% of the total number of respondents; respondents under proficiency generated 57.975% of the total number of respondents. Moreover, respondents under approaching proficiency generated 22.648% of the total number of respondents; respondents under developing level generated 3.823% of the total number of respondents; and the respondents under beginning level generated 1.742% of the total number of the respondent. Generally, most of the respondents were under proficiency level as it generated the highest percentage and the beginning level generated the lowest percentage of the academic performance of the respondents. With this, it showed that respondents have an average level of academic performance based on their grade point average.

Relationship between the Student's Blended Learning Implementation Experience and Academic Performance

Table 11. *Correlation between academic performance and implementation of blended learning*

Variables	*Pearson r*	*Sig.*	*Remarks*	*Decision*
Content vs. Academic Performance	- 0.004	0.941	Not significant	Accept Null
Curriculum vs. Academic Performance	0.011	0.858	Not significant	Accept Null
Instructional Designs vs. Academic Performance	- 0.036	0.543	Not significant	Accept Null

a = 0.05

Table 11 presents the relationship between academic performance of the students and the levels of the implementation of blended learning. The respondents' academic performance, the relationship on the level of implementation of blended learning is not significant in all areas namely, content, curriculum and instructional designs having negative correlations and no significant at that because the p values are 0.941; 0.858 and 0.543 respectively. This means that the null hypothesis pertaining to these relationships is accepted. There is no significant difference between the levels of implementation of blended learning with the students' academic performance. Therefore, there is a considerable no relationship between the level of implementation of blended learning in terms of content, curriculum, and instructional design on the academic performance of junior high school. This means that regardless of the method of teaching, students' academic performance may vary on several factors and not the blended learning method alone. Numerous research has been published that blended learning was reported that it could contribute to higher learning achievements than traditional approaches (Bazelais & Doleck, 2018). Moreover, blended learning could give rise to significantly higher academic achievements than traditional face-to-face learning in Canada. However, it is worth noting that some studies have reported negative effects on student engagement when using a blended learning approach (Botts et al., 2018). In addition, according to the study of Cao (2023) entitled "A meta-analysis of effects of blended learning on performance, attitude, achievement, and engagement across different countries" the enhanced student performance observed in blended learning can be attributed to several factors. He mentioned that one crucial factor is that students receive instruction in both physical and online environments.

Moreover, in the classroom setting, students can ask questions and interact with their peers and teachers about academic issues. They also receive more individualized attention from their instructors, which encourages them to be more engaged in the learning process. By having been asked to answer questions and focus on the course material, students are able to improve their performance (Huang et al., 2016).

Furthermore, according to Kintu (2017) none of the independent variables has been identified as significant predictors of student performance. These gaps are open for further investigation in order to understand if they can be significant predictors of blended learning effectiveness in a similar or different learning setting. According to the study of Ali et.al. (2023) entitle "A Comparative Study

on the Impact of Online and Blended Learning", in certain educational scenarios; online learning platforms did not comprehensively provide learners with sufficient and credible information and resources. For instance, online learning has been revealed incapable of executing a reliable and automated diagnosis to overcome specific educational challenges. Moreover, certain teachers could not effectively implement online learning due to the lack of technology education in conventional academic activities.

Lastly, according to Cao (2023), publication bias in a meta-analysis refers to the systematic exclusion or underrepresentation of studies with negative or non-significant results from the analysis. This occurs when studies that report significant or positive findings are more likely to be published in academic journals, while studies with null or negative findings are less likely to be published.

Conclusion

The following conclusions were drawn based on the findings of the study. The analysis of the gathered data resulted to the following findings:

The profile of the respondents in terms of age falls under the standard age level in all grade levels of junior high school, parallel to the discussion paper on the enhanced K-12 Basic Education Program (2010). The age profile of the students falls mostly at the younger bracket, which implies that their generation is more adopted to technology. Moreover, at early age they were exposed how to interact socially and able to learn and adapt new things and situation (Panagouli, 2021).

The unparalleled result of the assessment under content level only implied that blended approach is helpful to students, as they did not find online class alone helps them more to understand the lessons. With this, it showed that most students have unique learning styles and blended approach is more likely to cater their needs than a traditional classroom teaching experience alone or online class alone. In terms of the curriculum assessment and instructional design assessment, it implied that most of the students able to adapt with the type of curriculum and instructional design the blended learning could offer to them.

The implementation of blended learning when their profile is taken as a test factor showed that blended learning helps cater the needs of the learners as it improves the teacher-students interaction together with self-learning and attitudes. It has also the capability to provide effective and flexible ways of delivering the learning to students and its effectiveness partly based on the quality and variety of learning materials.

According to DepEd, the level of proficiency based on the numerical grades earned by the students in a particular quarter. The academic performance of the students during the 2nd quarter of school year 2022-2023 implied that students under blended learning approach had an average level of understanding the content. Moreover, students are well adapted with the curriculum and the blended learning approach, able to cater their needs with availability of various blended learning instructional designs where they gained skills and performed well in their subject areas.

The levels of blended learning implementation with the students' academic performance area implied that nevertheless of the teaching strategy and teaching approaches, and learning modality, students' academic performance might vary on several factors and not the blended learning method alone.

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