INTEGRATION OF E-LEARNING SYSTEM AND ITS EFFECT TO THE STUDY HABITS AND PARTICIPATION
OF JUNIOR HIGH SCHOOL STUDENTS

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ABSTRACT

One of the crucial developments in the education paradigm is the rapid growth of Information and Communications Technology (ICT). As a result, most private schools are now at the height of infusing the E-learning system and are seen as one of their advances in the learning management system. Hence, this study tries to look into a way to examine and extrapolate the integration of e-learning system and its correlation to the Junior High School students' study habits and participation. Using a descriptive-correlation method, the researchers believe in finding a link between and among variables. The study's respondents consist of one hundred and twelve (112) Junior High School students in one private school in the district of Obando, Bulacan, Philippines. The findings of the study indicate that the E-learning system is functional, reliable, usable, and efficient. The level of study habits for high school students is high, and they often participate in class discussions. In addition, a strong link or a significant correlation was observed between the integration of the E-learning system and students' study habits and participation. It is recommended that schools continue to provide teachers with training and skills services to help achieve the adoption of the E-learning framework.

Keywords: *E-learning system, Study Habits, Participation, Junior High School Students*

INTRODUCTION

There has been a major shift in the classroom over the past few decades, especially in presenting the content of the curriculum in the most comfortable way. This is why teachers are now changing their instructional practices and methodologies from the conventional way of teaching lessons to a new way of incorporating Information and Communications Technology (ICT). ICT's exponential change has been brought a huge shift in education that empowers people to learn new skills and approaches and transform the quality of the curriculum through the E-learning framework (Caraig et al., 2020). The emergence of the E-learning framework creates new possibilities for more immersive and fun. In addition, it opens a pathway on how the learning process becomes more conducive, meaningful and fruitful for learners (Hero, 2019).

The implementation of E-learning in providing the curriculum material, as stipulated by Tanveer (2011), has opened new horizons for the teacher to provide a more engaging and learner-centered classroom environment. In response, a growing number of academicians are now utilizing and integrating the E-learning system in the teaching and learning process.

With these technical developments in education, various tools for learning management or E-learning programs are emerging as the key reform in education and jive on recent trends in the educational paradigm. Mapuva (2009) reported that the inclusion of e-learning in the implementation of the curriculum had eased the pressure of coping with an influx of students pursuing good education to develop their skills and abilities for the ever demanding job market. The results of Asad et al. (2020) found that through ICT and E-learning framework, students could learn more easily, which can also make their process simpler for teachers in the new age of technology. Dziuban et al. (2018) expressed that hybrid learning and E-learning system are widely use to provide students with their own speed, time, and place with their versatility in delivering learning opportunities. Encarnacion, Gallang, & Hallar (2020) found out that by advancing the conventional classroom environment into a network, E-learning could theoretically shape the future of education. E-learning system has been described as one factor affecting the performance of online learning because preparation can improve motivation, performance, participation and engagement (Bovermann, Weidlich, & Bastiaens, 2018).

Despite the benefits and advancement that students can get in the E-learning system, there is a paucity of studies that still reveal a problem or gap in the E-learning integration. To wit, findings from Dagada and Chigona (2013) revealed that few academics had applied the technology to their pedagogy. In addition, educational growth is also required to effectively incorporate E-learning, which affects students' participation and academic performance. Therefore, to make it more useful, particularly during the learning process, the school needs to help teachers and students develop their E-learning platforms. Students of an online curriculum should have technical expertise and comprehension in the same way. Without these, it will discourage those who do not and present challenges or maybe a fiasco in incorporating E-learning into the learning environment and students' participation and engagement (Hameed et al., 2007). E-learning tends to be ideal for students with good independent learning, persuasive capacity, and elevated research and study habits; these types of individuals are a subset of the learner population (Hameed, Badii, & Cullen, (2008). E-learning is also very useful for the tactical type; learning may not be the right toll for curriculum teaching, which is deep and wide (Beckett, 2004). Ensuring an E-learning system's success is a daunting challenge. Some concerns of introducing an E-learning framework, as Pham & Huynh (2017) explained: the high rate of failure of learning initiatives, the low adaptation and low happiness of E-learning consumers, and the inefficiency of E-learning programs on learning outcomes, weak attendance, and low research patterns. There is therefore a call for a study to evaluate factors that influence the performance of the E-learning system, especially user acceptance and learning outcomes.

In the Philippines, the E-learning system was implemented to ease the challenges, problems, and complexities, particularly in the deficiencies of instructional materials and distribution of curriculum content. In the current situation in the educational climate of the world and in the country, most private schools have used the E-learning framework as their learning management tool to resume the activities for this Curriculum Year in order to continue the education of learners due to the threat of Corona Virus (2019). Hence, the purpose of this study is to catechize the integration of the E-learning system and the study habits and participation of the students in an online distance learning mode. In addition, this research also aims to determine whether the integration of the E-learning system will create a sound connection with Junior High School students' study habits and participation. Furthermore, the researchers aim to use the report results to develop the school's current E-learning environment through a proposed action plan to enrich the study further.

Purpose of the Study

This study examined the integration of the E-learning system and determined the study habits and participation of Junior High School students, especially in the new normal education. This study thus describes and evaluates the integration of E-learning in technology-enhanced education. This analysis's conclusions could serve as a framework for further implementing, strengthening, and reviewing the school's E-learning tool as an instructional innovation.

METHODOLOGY

Research Design

This study employed a descriptive-correlational design to determine the relationship of integration of the E-learning system on Junior High School students' study habits and participation. Correlational research is a design that aims to determine the existence of a relationship or association between and among variables and to ascertain the nature and degree of relationship further. More so, the study used a quantitative research approach to analyze and understand the study's variables. The researchers utilized a standardized questionnaire as the primary data gathering tools.

Respondents of the Study

The study respondents were one-hundred and twelve (112) Junior High School students at one private institution in the district of Obando, Bulacan. The study respondents were currently enrolled in the said institution for this Academic Year 2020-2021. The researchers used the universal sampling procedure as the study's sampling technique since all of the Junior High School students were the survey's chosen respondents.

Instrument of the Study

The researcher adopted and used a standardized questionnaire as the primary data gathering tools to gather the data needed for this study. The survey-questionnaire for this study was divided into three parts, namely: assessment on the integration of the E-learning system, students' study habits, and students' participation. For the first part of the survey-questionnaire, the researchers adopted the survey tool, Integration of E-learning Scale, from the study of Caraig et al. (2020), which comprises the following domains: functionality, reliability, efficiency, and usability. The scale is a 30-item questionnaire that measures the students' assessment of the E-learning system's integration. The respondents rated the survey questionnaire using a five-point Likert Scale ranging from 1 (Strongly Disagree/Not Functional/ Not Reliable/ Not Usable/ Not Efficient) to 5 (Strongly Agree/ Highly Functional/ Highly Reliable/ Highly Usable/ Highly Efficient).

The second part of the survey tool pertains to the students' study habits. The researchers adopted the Study Habit Questionnaire (SHQ) from Abe (2016) that analyze and measure the Junior High School students' study habits. It is composed of six sub-constructs, namely: time management, study environment, exam preparation and test-taking skills, note-taking, reading skills, writing skills, and math skills. The SHQ Scale is a 48-item questionnaire that measures students' study habits. The respondents rated the survey-questionnaire using a five-point Likert Scale ranging from 1 (very low) to 5 (very high).

The last part of the survey tool pertains to students' assessment of their class participation in the E-learning system. The researchers adopted the Student Participation Questionnaire (SPQ) from Finn and Zimmer's (2012) study to evaluate the students' participation as to the following sub-scale: effort, initiative, non-participatory behavior, and value. The SPQ Scale is a 29-item that measures students' participation with E-learning integration. It is reliable, as evidenced by Cronbach's alpha of 0.85. The respondents rated the survey-questionnaire using a five-point Likert Scale ranging from 1 (never) to 5 (always).

Data Analysis

The researchers tabulated and analyzed the survey questionnaires data through Google Forms, using descriptive and inferential statistics. The researchers utilized Statistical Packages for Social Sciences (SPSS) v. 24 as the study's statistical software to analyze and interpret the data. Integration of the E-learning system, as the study's independent variable, and students' study habits and participation, as the study's dependent variables, was quantified using descriptive statistics such as weighted mean procedures. On the other hand, to determine the correlation between the integration of the E-learning system and students' study habits and participation, the researchers utilized the Pearson Product Moment Correlation (Pearson r).

RESULTS AND DISCUSSION

The effect of E-learning system integration on students' study habits and participation and the correlation of the variables has also been identified and addressed by a substantial research body. Thus, this section extrapolates the outcomes and discussion of E-learning system integration evaluation, study habits, and participation.

Table 1

Students' Evaluation on the Integration of E-learning System

Integration of E-learning System	Average	Interpretation
1. Functionality	4.14	Functional
2. Reliability	4.08	Reliable
3. Usability	4.17	Usable
4. Efficiency	4.20	Efficient
General Average	**4.15**	**Agree**

Table 1 presents the students' evaluation of the integration of the E-learning system. In general, Junior High School students describe their E-learning system's assessment as agreeing, as evidenced by the general weighted mean value of 4.15. Hence, the integration of the E-learning system is functional, reliable, usable, and efficient as supported by the weighted mean values of 4.14, 4.08, 4.17, and 4.20, respectively.

As far as functionality is concerned, Table 1 indicates that the integration of the E-learning system is functional, as shown by the reported mean value of 4.14. This means the information can be obtained by the current e-learning infrastructure and offers structured e-resources and other e-learning materials. It has the authenticity to safeguard both students' and faculty's accounts and protect them from any spam or malware from keeping it safe. Therefore, as the learning management tool for this Academic Year, the school's e-learning framework is functional as assessed by Junior High School students.

As far as reliability is concerned, Table 1 presents that the E-learning system's integration is reliable, as shown by the reported mean value of 4.08. this reflects that the school's E-learning framework has a low frequency system failure and can sustain its outputs standard. Junior High School students have learned that there is no flaw or malfunction encountered in the system by using the E-learning system. Therefore, the E-learning framework is reliable since the system is adequate to sustain the studies of students, especially in the midst of a pandemic.

In terms of usability, Table 1 elucidates that the E-learning system, as measured by the students, is usable as a learning medium, as demonstrated by the mean value of 4.17. This ensures that the E-learning system is easy to run each time the students need to use it. For students, the buttons are usable and simple to use, and their style is consistent. Therefore, the system is appealing to the students' eyes and desirable for them to use as their learning tool for this Academic Year constantly. Thus, in the students' studies, the integration of the E-learning system is beneficial and useful.

In terms of efficiency, Table 1 shows that, as measured by the Junior High School students, the integration of the E-learning system is as effective as the learning network, as indicated by the mean value of 4.20. It illustrates that in their learning, the E-learning system operates on the students' needs and offers an effective response as needed. Students will easily find the knowledge that they need for their projects and events through the E-learning system. Therefore, with its efficiency, learners will fulfill their duties in distance learning.

To sum up, E-learning framework integration offers an essential avenue for acquiring new learning, upgrading and enhancing their learning experience, and improving the standard of education, especially at the height of the pandemic. In conjunction, E-learning gives their studies flexibility and offers the needs of the students for their studies. Indeed, it provides visual focus, participation, and involvement by integrating the E-learning system into pedagogy and instructions.

Table 2

Study Habits of Junior High School Students

Junior High School Students' Study Habits	Average	Interpretation	Rank
1. Time Management	3.88	High	1st
2. Study Environment	3.74	High	2nd
3. Exam Preparation and Test-taking Skills	3.69	High	3rd
4. Math Skills	3.67	High	4th
5. Reading Skills	3.63	High	5th
6. Note Taking	3.60	High	6th
7. Writing Skills	3.52	High	7th
General Average	**3.67**	**High**	

Table 2 elucidates the level of study habits of Junior High School students. In general, Junior High School students describe their study habits as high as gleaned from the general weighted mean value of 3.67. Analysis on the seven sub-constructs, Junior High School students rated the study habits as high in terms of time management, study environment, exam preparation and test-taking skills, math skills, reading skills, note-taking, and writing skills provided with its general weighted mean values of 3.88, 3.74, 3.69, 3.67, 3.63, 3.60, and 3.52 respectively.

In the description of the level of study habits of Junior High School students in Table 2, it appears that the highest weighted mean value of 3.88, interpreted as high, was reported by the time management. This shows that in online learning delivery, Junior High School students can monitor their time, build a comprehensive timetable for their studies, and maintain their personal and professional life as a student. They should schedule time on time and consistently for their studies and leisure to attend their online class, and most notably, they know when and how to

allocate their time to finish their seatwork and activities on time. This online mode of learning delivery seems to teach them how to be more responsible.

On the other hand, of the seven sub-constructs of study habits reported the lowest weighted average, as seen by the weighted mean value of 3.52. Although it is classified among the seven sub-constructs as the lowest, the level can still be viewed as high. It means that with the proper grammar, punctuation, and pronunciation, Junior High School students can still write English phrases and other similar phrases. Moreover, in their online class discussion, they will also incorporate what they have already acquired from last year's writing activities. Finally, using their writing skills, they can also interact appropriately in an online class.

All in all, the results show that considering the pandemic, it is not considered an excuse for them to be more productive and partaking in an online class. The findings thus reflect that Junior High School students are responsive to their studies in the middle of a pandemic, contributing to their academic achievement.

Table 3

Participation of Junior High School Students

Junior High School Students' Participation	Average	Interpretation	Rank
1. Value	3.88	Often	1st
2. Effort	3.84	Often	2nd
3. Non-Participatory Behavior	3.81	Often	3rd
4. Initiative	3.78	Often	4th
General Average	**3.82**	**Often**	

Table 3 reiterates the students' participation in an online learning modality. In general, Junior High School students describe their class participation as often, as shown by the general weighted mean values of 3.82. Junior High School students often manifest active involvement in the following key areas: value, effort, non-participatory behavior, and initiative, as evidenced by the general weighted mean values of 3.88, 3.84, 3.81, and 3.78, respectively.

From the overview of the overall weighted average class participation of Junior High School students in Table 3, it can be deduced that value has the highest weighted average among the four main class participation areas. This suggests that students in Junior High School also feel that learning is essential, and they believe that it can optimize their skills and abilities. If they support education, particularly at this pandemic rate, they are conscious of the positive improvements and success it might bring to their lives. If they manage to immerse themselves with others in school, they will also improve their social skills. Its positive effect can be used to complete their studies and to become a successful human being in the future.

Although the initiative reported the lowest weighted mean value of 3.78, students often display this activity in online class discussions. It should be clarified that the E-learning system is fresh in the minds of students as a learning management tool, and they do not have adequate

experience to a very significant degree to use this platform. While it is in the lowest rank of the four means, students of Junior High School in the online class also regularly engage in the class discussion, do their job profoundly and well, exercise more time to put their best into doing what they are assigned to work. They still have the initiative to ask questions to explain any specifics as the distribution mode is online to include feedback that will enable the conversation to get more facts on the topic more constructive and substantive for the good of the majority.

Overall, the results suggest that, even though it is an online mode, Junior High School students engage actively in the class discussion. As it is fresh to their eyes, using this E-learning framework as a learning delivery method for the Academic Year motivates the students to join and engage in the online class. More so, it jives with their curiosity as generations of technology savvy.

Table 4

Test of Significant Correlation between Integration of E-learning System and Junior High School Students' Study Habit

Computed R-value	t-value	Critical t-value	Decision	Interpretation
0.85	16.91	0.250	Reject the Null Hypothesis	Significant

α = 0.05   *d.f. = 110*

Integration of the E-learning system and junior high school students' study habits are the study's significant variables. Hence, this study aimed to ascertain whether the evaluation of the integration of the E-learning system correlated significantly to students' study habits. The data collected were subjected to the Pearson Product Moment Correlation to determine the link between and among variables.

The result of Pearson's r in Table 4 reveals that integration of the E-learning system is correlated to Junior High School students' study habits to a varying extent, as shown by the non-zero r-value. The nature correlation is positive as can be gleaned from the r-value, which means that the better E-learning integrated into the school's learning management system, the better study habits may be perceived. Conversely, with the lesser integration of E-learning, it is expected that study habits will also be lessened. The degree of magnitude of the correlation is very high, as can be gleaned from the r-value of 0.85. This means a very high correlation between integrating the E-learning system and Junior High School students' study habits.

Furthermore, the result of the analysis of the t-test for the significance of r reveals a computed t-value is equaled to 16.91 at 0.05 alpha where d.f. is equals to 110; the critical t-value was registered at 0.250. Comparing the computed and critical values reveal that the computed value exceeded the critical value, giving the researchers reason to reject the null hypothesis. It

may be safely concluded that there is a significant correlation between the integration of the E-learning system and Junior High School students' study habits.

Based on the analysis and comparison of data, it was found out that there is a significant correlation exists between the integration of the E-learning system to the study habits of Junior High School students. This implies that better study habits with an integrated E-learning system show a precise learning performance and are motivated to study further, even though it is a synchronous learning delivery type. More so, due to being technology savvy, and improving can be seen since it aligns with their interest and is new to what they experienced before learning the content of the curriculum. Integration of the E-learning system in their studies shows a good indication of improving learning performance. High academic success on the part of the learners may be predicted. As Wang, Iwata & Jarrell (2018) discussed, it is clear that when e-learning is integrated, and learning habits should be considered since it may produce an optimal result on the students' learning performance.

Table 5

Test of Significant Correlation between Integration of E-learning System and Junior High School Students' Participation

Computed R-value	t-value	Critical t-value	Decision	Interpretation
0.72	10.88	0.250	Reject the Null Hypothesis	Significant

α = 0.05   d.f. = 110

Integration of the E-learning system and Junior High School students' participation are the study's significant variables. Hence, this study aimed to ascertain whether the evaluation of the integration of the E-learning system correlated significantly to students' participation. The data collected were subjected to the Pearson Product Moment Correlation to determine the link between and among variables.

The result of Pearson's r in Table 5 reveals that integration of the E-learning system is correlated to Junior High School students' participation to a varying extent, as shown by the non-zero r-value. The nature correlation is positive as can be gleaned from the r-value, which means that the better E-learning is integrated as the school's learning management system, the better that the students participate in a synchronous discussion. Conversely, with the lesser integration of E-learning, it is expected that students' participation will also be lessened. The degree of magnitude of the correlation is very high, as can be gleaned from the r-value of 0.85. This means a very high correlation between the integration of the E-learning system and Junior High School students' participation.

Furthermore, the result of the analysis of the t-test for the significance of r reveals a computed t-value equals 10.88 at 0.05 alpha where d.f. is equals to 110; the critical t-value was

registered at 0.250. Comparing the computed and critical values reveal that the computed value exceeded the critical value, giving the researchers reason to reject the null hypothesis. It may be safely concluded that there is a significant correlation between the integration of the E-learning system and Junior High School students' study participation.

Based on the findings shown above, it was found out that there was a significant correlation exists between E-learning integration and students' participation. This implies that with E-learning system integration, students participate and interact better in the class discussion. However, it is held via the synchronous mode of learning delivery. They become more interactive and participative in the discussion because they are excited and motivated since the lesson of the delivery is new to their eyes. Also, it jives in their interest since they are technology savvy, and technology was used as its main mobility in acquiring learning and developing their skills and capabilities.

Further, integration of the E-learning system is one way around to seize the moment to deliver more the curriculum content. Students' participation was much higher and more frequently when the school integrated the E-learning system on their academic success. Thus, the integration of the E-learning system effectively encourages the students to participate and interact in the online class discussion. Therefore, integrating the E-learning system can be considered a factor that might prompt the students to participate and interact in the online class discussion. As Coined by Zheng and Warschauer (2015), a well-designed e-learning system or online class discussion among students can increase participation and interaction, leading to language and literacy development.

Proposed Action Plan

Table 6 presents the proposed action plan strategies to sustain the existing E-learning system's success for the Junior High School Department of Obando Montessori, Inc.

Table 6
Proposed Action Plan for Obando Montessori, Inc.

Objectives	Strategies	Expected Outcome
To formulate a Long-Term ICT Modernization Plan for the success of E-learning System Integration	The school should conduct a comprehensive review and assessment of its capability to implement the ICT Modernization Plan. Conduct a benchmarking for other schools' best practices on the successful ICT integration; seek guidance and regular consultation on the academic experts regarding a successful integration of E-learning system as the school's central learning management platform.	A concrete ICT Modernization Plan that lasts in the Long-Term produces a well-designed E-learning system that further caters to students' needs in an online learning delivery mode.

To conduct an ICT and E-Learning System Capability Program and Skills Enhancement for the Faculty, School Administrator and Students	The school can seek help from the affiliated publishing company as the training sponsor of the capability program and skills enhancement. Conduct comprehensive in-house training and workshops to strengthen the ICT proficiency and literacy of the faculty. Conduct a training program for the student to use E-learning as the school's learning platform properly; and lastly, secure and allocate enough budget for the teacher's training regarding ICT and E-learning Integration.	The School Administrators, Faculty, and most especially the Students capacitated and skills enhanced on ICT and E-learning System. High proficiency and literacy on E-learning System Integration are expected to demonstrate in the given Academic Year.
To formulate implementing guidelines on the proper utilization of E-learning in the teaching and learning process.	Conduct research and seek guidance from the academic expert in formulating concrete guidance on E-learning's proper use as the school's central learning platform.	Formulated Guidelines on the Successful Use of E-learning system in the school
To monitor and evaluate the plans, programs, and activities related to the E-learning system.	The school should delegate a monitoring team to assess and supervise the E-learning system that the school used. Revisit and revise the plans and projects if needed and for further improvements.	The plans and programs are well monitored and supervised. Improvement can be raised and addressed for the betterment of the system.

CONCLUSIONS AND RECOMMENDATIONS

Based on the objectives raised in this study and from the findings presented, this study concluded that the integration of E-learning as evaluated by Junior High School students are functional, reliable, usable, and efficient to use. The level of study habits of Junior High School students is high. Junior High School students often participate in distance learning online, giving them a practical and fruitful interpretation of the lesson. The integration of the E-learning system significantly correlates to the students' study habits. Also, this study found out that the integration of E-learning significantly correlates with students' participation. As the outcome of this study, findings raise a proposed action plan that may help the school to further strengthen the existing E-learning system in the long run.

It is recommended that teachers with the touch of E-learning or technology-based instructional methodologies can now shift and elevate their teaching strategies. The school should perform daily capacity-building exercises and capabilities enhancement to integrate E-learning to make this problem a reality successfully. E-learning programmers should also involve teachers in the creation of the E-learning framework to ensure useful and practical learning using

E-learning, as they are the one that acts as the education sector's front liner. The school can also use Research-based knowledge and values to develop technical and pedagogical standards in teaching using the E-learning platform. Future researchers should also undertake a similar study using elementary pupils as the survey respondents to evaluate E-learning's effectiveness at the elementary level. Future researchers, who may be interested in the same parameter of the study, may undertake a similar survey utilizing other variables related to student factor further to ascertain the E-learning integration's effectiveness in academic achievement.

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