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The Utilization of RTU Flexible Learning System (E-RTU) In Relation To the Academic Performance

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ABSTRACT: The official Learning Management System of the Rizal Technological University is called "E-RTU". This framework gives roads to learning through the usage of proper flexible methods of learning delivery and accessible educational resources and instructional materials. What's more, they focus on being served as the spine to help and address the advancing educational programs, curriculum, and instructional delivery lined up with the changing education scene and adapting to the needs of the society through flexible learning arrangements (Rizal Technological University, 2020). This research aims to determine the utilization of E-RTU in relation to the academic performance of Third Year Social Studies Students in the College of Education, Rizal Technological University – Mandaluyong Campus.

In this study, the researchers used the correlation research method to determine the relationship between the implementation of E-RTU and the academic performance of Third Year Social Studies students in the Rizal Technological University Mandaluyong Campus in the 1st semester year 2020-2021. According to the findings, the researchers concluded that most of the respondents experiencing difficulties in dealing with the utilization of E-RTU there are times got disconnected from the class because of the quality of mobile phones that they are using though some of their instructors give or use learning platforms that are easy to access and easy to use. The respondents also considered their mental stability because some of them become less motivated in doing things related to their academics. The respondents also proposed a suggestion that can help to improve the use of E-RTU as the new learning modality.

Keywords: Flexible Learning, Online Class, Academic performance, Synchronous class, Utilization

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1. INTRODUCTION

Change is the only constant in our life, and we recently experienced one of the most significant shifts we have yet to witness. Reduced risk to the academic community has been a primary priority in the Philippines, and traditional learning techniques such as face-to-face sessions are no longer available due to community quarantines. CHED Memorandum Order (CMO) No. 4, series of 2020, also known as Guidelines on the Implementation of Flexible Learning, was established and promulgated by the Commission on Higher Education (CHED). Both public and private higher education institutions (HEIs) must adhere to it. Education and learning are the main concepts and the most pivotal keystone of a growing economy, yet the educational academic system needs extreme transformations and consequential technological reforms. Mobile learning, commonly known as a new form of e-learning, is combining as a stepping stone towards generating insurgence in the educational sector and furnishing hands-on solutions to the appertaining problems (West, 2013). The Rizal Technological University constantly offers its projects and executes learning through the utilization of E-RTU. The system provides avenues of learning through the utilization of appropriate flexible modes of learning

delivery and available educational resources and instructional materials. "E-RTU" is Rizal Technological University's official Flexible Learning Management System. This framework builds learning routes by combining appropriate flexible learning delivery modes with readily available educational resources and instructional materials. RTU is also dedicated to serving as a foundation for establishing educational programs, curricula, and instructional delivery that are aligned with changing educational trends and respond to society's expectations through flexible learning arrangements. Rizal Technological University is a university in the Philippines, located in National Capital Region, Mandaluyong City (Rizal Technological University, 2020)

This form of instruction will be used to both keep the learning continuing and to provide directions. Throughout the semester, all classes are taken online and outside of the University until limited face-to-face learning is approved. There are two types of online classes available. The first is a synchronous class, in which the instructor and students are both present at the same time, while the second is the polar opposite, an asynchronous class. Students will be responsible for organizing their own study time, with the teachers only providing a video lecture or resources. All normal subjects have a weekly session length of 4 hours and 30 minutes to 6 hours. Each subject is allotted a week's worth of synchronous and asynchronous sessions.

The goal of this study is to determine how using RTU Flexible Learning Management System (E-RTU) influences the academic performance of Third Year Social Studies students in the College of Education at Rizal Technological University, Mandaluyong Campus.

2. CONCEPTUAL FRAMEWORK

The purpose of this study's conceptual framework is to examine the association between the impacts of using E-RTU and the academic performance of Third Year Social Studies students at the Mandaluyong Campus. The succeeding conceptual illustration shows the hypothesized relation between variables about the utilization of E-RTU in students' academic performance. The dependent variable is represented by the middle circle, which is influenced by independent variables such as demographic profile, challenges in using E-RTU, how academic performance is affected, and the significant relationship between E-RTU implementation and academic performance of Third Year Social Studies students – Mandaluyong Campus, and possible interventions.

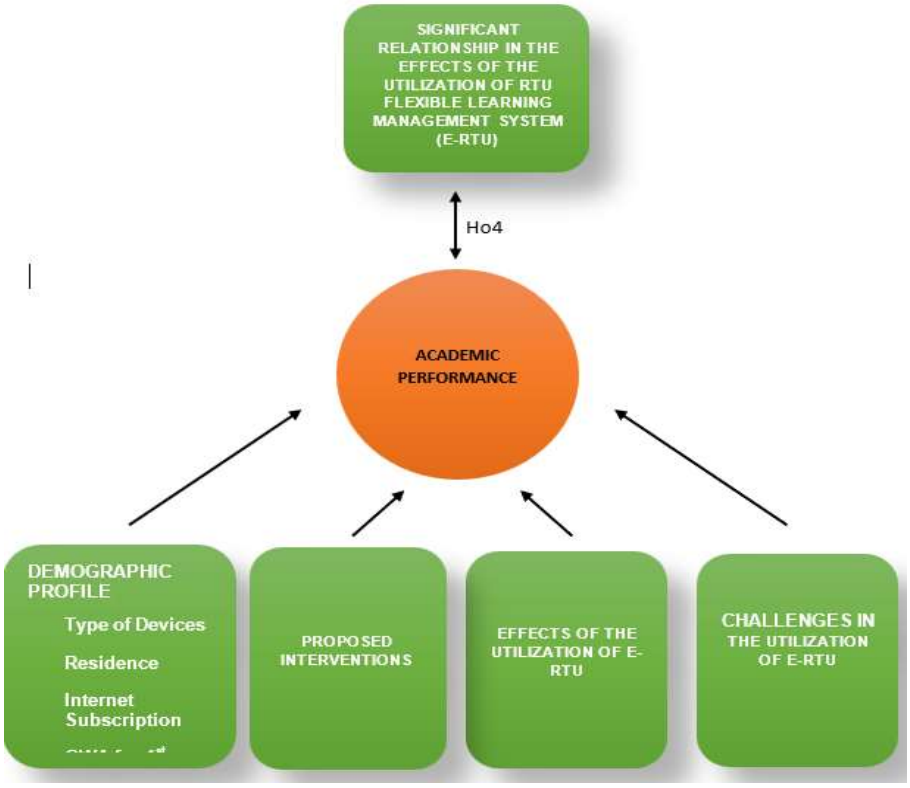

Figure 1. Research Paradigm for the Utilization of RTU Flexible Learning Management System (E-RTU) in Relation to the Academic Performance

3. RESEARCH METHODOLOGY

Correlational research design, according to McCombes (2019), is used to measure the link between two variables without the researcher's control. It aims to determine whether a positive, negative, or zero connection exists. To acquire data, the researchers utilized simple random sampling. Simple random sampling is a common sampling strategy in which researchers select a sample of respondents from a wider population for study, according to Easton and McColl's Statistics Glossary.

Ethical Consideration

While conducting the study, the researchers looked into its various ethical considerations and made assured that all of the respondents' personal information were kept private and secure. The gathered data were professionally recorded, and the outcomes, methods, and procedures were obtained and completed without any modification to generate legitimate results.

The Data Privacy Act, officially known as Republic Act 10173 of 2012, aims to protect people's privacy while enabling the free flow of information to promote innovation and growth. Personal information were gathered, recorded, organized, saved, updated, or amended, as well as retrieved, consulted, used, consolidated, blocked, erased, or destroyed. Finally, the Philippine National Privacy Commission checked the country's adherence to international data protection standards. The researchers hope that by addressing this issue, people will be encouraged, empowered, and informed that the information gathered would only be used for research purposes.

Statistical Treatment of Data

The data treatments that were used in the study are the following:

1. **Percentage**. The percentage was used to determine the scoring frequency. This is a useful indicator for determining which items in a group were favored least by the respondents of a research study (Garcia, Nuevo, and Sapa, 2007).

2. **Weighted Mean (WM)**. The mean is a metric for determining central tendency. It denotes the moment at which the majority of respondents respond to a question. It indicates the majority of respondents' reaction to a phenomenon or issue, as well as the general public's impression of it (Garcia, Nuevo, and Sapa, 2007).

Table 1: Likert Scale, Range, and Verbal Interpretation A

Scale	Range	Verbal Interpretation (VI)
4	3.45-4.00	Strongly Agree (SA)
3	2.45-3.44	Agree (A)
2	1.55-2.44	Disagree (D)
1	1.00-1.54	Strongly Disagree (SD)

3. **Pearson's Correlation.** The correlation coefficient is a measure of the strength of a link between two variables (Glen, 2021). Pearson's correlation coefficient is a test statistic that analyzes the statistical relationship between two continuous variables.

4. **Computation of GWA**.

Grade x number of units then summation= / total number of units. For the qualitative phase, the researchers used text and content analysis. Interviews, open-ended questions, field study notes, dialogues, or nearly any occurrence of communicative languages, such as books, articles, presentations, newspaper headlines, speeches, media, and historical documents, according to Columbia University (2019). In a single study, various types of text can be examined. To use content analysis, the text must first be broken into manageable code groups for examination, such as codes. After the text has been categorized into code categories, the codes can be further classified into "code categories" to further summarize data.

Content analysis is a method of determining the existence of specific words or concepts in texts or groups of texts. Researchers quantify and assess the presence, meanings, and relationships of such words and concepts,

drawing inferences about the messages contained in the texts, the writers, the audience, and even the culture and period in which they exist (WAC Clearinghouse, 2020).

4. DISCUSSION

Table 2: Demographic Profile: Devices

Device	Frequency	Percentage
Mobile Phone	23	57.5%
Laptop	1	2.5%
Mobile Phone and Laptop	16	40%
Total	40	100%

As shown in Table 2, most of the respondents are using a mobile phone which obtained the highest percentage of 57.5% and 2.5% for the respondents that are using laptops only and 40% for those using both mobile phones and laptops.

Habits make smartphone use more pervasive (2012), according to Oulasvirta et al (2012), who studied how people use their cell phones and PCs. The participants in this survey spent twice as much time on their phones as they did on their laptops each day. Moreover, in relation to some LMS such as Moodle, features are for proficient users with smartphones/tablets who prefers to stay at home (Gumiran, 22).

Table 3: Demographic Profile: Residences

Residence	Frequency	Percentage
Metro Manila	35	87.5%
Provinces	5	12.5
Total	40%	100%

Table 3 shows the residence of the respondents. Metro Manila obtained the highest percentage of 87.5% and 12.5% of the respondents came from the provinces.

When a student is denied essential needs, according to Johnston et al. (2005) and Ali et al. (2013), the student may perform poorly in schoolwork. It was also discovered that most low-income households in metropolitan areas cannot afford the cost of water, resulting in pupils from low-income households being sent on long treks in search of water, frequently having to stand in long lines, and being late or missing from school as a result. As a result, their perspective is that student well-being at school is a determinant of child retention and academic performance. Environmental factors such as peers, family, school, religion, and other factors, according to other experts, can either stimulate or discourage children's academic achievement. Academic failure begins with the three variables that intervene in education, according to Diaz, A.L (Eds). The learning environment and the student's settings play a vital role in the academic success of the students.

Table 4: Demographic Profile: Internet Subscription

Internet Subscription	Frequency	Percentage
Wi-Fi	15	37.5%
Mobile Data	12	30%
Wi-Fi and Mobile Data	13	32.5%
Total	40	100%

As shown in Table 4, most respondents use Wi-Fi as their internet subscription which obtained the highest percentage of 37.5%, Mobile Data obtained 30% and 32.5% for both mobile data and Wi-Fi as their internet subscription. The Internet's requirements are growing in tandem with the advancement of technology and the proliferation of mobile phones. Many devices, such as iPads, tablets, e-readers, and others, may work with 3G, but the bulk of them require a Wi-Fi connection to perform at their best.

According to a Wakefield survey from 2008, 90% of students say that Wi-Fi is just as vital for education as a regular classroom or a traditional computer. According to studies, up to 73 percent of teachers utilize mobile devices for teaching and learning, but this is only possible if the internet connection is good. At higher education levels, there is a greater reliance on readily available internet connections. Wi-Fi is critical for university students who live on campus and has an indirect impact on students. According to a Wakefield poll, 48% of students would choose Wi-Fi over other amenities, and the International Association of Privacy Professionals reported that 75% of students claimed that having Wi-Fi access on campus helped them earn better marks.

Table 5: General Weighted Average

GWA	Frequency	Percentage
1.41	1	2.5
1.44	1	2.5
1.47	3	7.5
1.48	1	2.5
1.5	7	17.5
1.53	1	2.5
1.56	4	10
1.58	1	2.5
1.59	5	12.5
1.6	1	2.5
1.61	3	7.5
1.63	1	2.5
1.64	1	2.5
1.65	1	2.5
1.66	1	2.5
1.7	1	2.5
1.72	2	5
1.75	1	2.5
1.81	2	5
2.00	1	2.5
2.25	1	2.5
Total	40	100%

Standard Deviation		**Mean**	
Utilization of RTU FLEXYS	GWA	Utilization of RTU FLEXYS	GWA
0.406	**0.156**	**2.815**	**1.608**

Table 5 shows the General Weighted Average of the respondents in the 1st semester of the year 2020-2021 with the GWA of 1.5 obtaining the highest percentage of 17.5%.

Online course structure had a significant association with both course persistence and grade. According to the study by Di Xu and Shanna Smith Jaggars' (2013) entitled, "The influence of online learning on students' course outcomes: Evidence from a large community and technical college system," the researchers suggest that gaps between online and face-to-face outcomes may be stronger among less-advantaged populations—particularly among ethnic minorities and students with below-average prior GPAs.

Table 6: Effects of the Utilization of RTU's Online Distance Learning Management System, E-RTU

Questions	WM	VI
Asynchronous classes make me less productive in completing my tasks.	2.58	Agree
I get pressured by the online recitation.	2.95	Agree
I am having a hard time doing my assigned tasks, activities, and quizzes online.	3.03	Agree
I am motivated to attend classes on time because of the flexibility of my schedule.	2.88	Agree
My instructor responds quickly to my needs and is easy to communicate with and it improved our teacher-student relationship.	2.9	Agree
My instructor uses learning platforms that are easy to access and easy to use.	3.43	Agree
My anxiety level increased because school works were piled up.	3.35	Agree
My instructor uses learning platforms that are easy to access and easy to use.	2.43	Disagree
The E-RTU learning system works perfectly for me as a learning modality because I have the perfect learning environment at home to study.	2.05	Disagree
The E-RTU learning program improved my self-discipline in studying.	2.8	Agree
Overall Mean	2.84	Agree

Table 6 shows the list of ten (10) items about the effects of the utilization of RTU's online distance learning; E-RTU. Item number 1 with a weighted mean of 2.58 indicates that the respondents answered "Agree" on this item. Item number 2 with a weighted mean of 2.95 indicates that the respondents answered "Agree" on this item. Item number 3 with a weighted mean of 3.03 indicates that the respondents answered "Agree" on this item. Item number 4 with a weighted mean of 2.88 indicates that the respondents answered "Agree" on this item. Item number 5 with a weighted mean of 2.9 indicates that the respondents answered "Agree" on this item. Item number 6 with a weighted mean of 3.43 indicates that the respondents answered "Agree" on this item. Item number 7 with a weighted mean of 3.35 indicates that the respondents answered "Agree" on this item. Item number 8 with a weighted mean of 2.43 indicates that the respondents answered "Disagree" on this item. Item number 9 with a weighted mean of 2.05 indicates that the respondents answered "Disagree" on this item. And item number 10 with a weighted mean of 2.8 indicates that the respondents answered "Disagree" on this item.

According to Barnes and Lowery (1998), referred from Contreras-Castillo et al., (2004); Haythornthwaite, 2001, referenced from Hrastinski (2006), this strategy has both benefits and cons. Sporadic and irregular attendance may arise as a result of students' active participation in learning activities. Moreover, even though distance education offers, recognizes, and even encourages flexibility in terms of time, learning style, and speed, it is commonly viewed and experienced as a lonely mode of learning (Anderson, 2008; Duffy & Kirkley, 2004).

Table 7: Challenges in the Utilization of E-RTU

Questions	WM	VI
My internet connection burdens me when doing activities because the internet connection where I live is not very accessible.	3.1	Agree

I get disconnected from class because of the quality of the mobile phone that I'm using.	3.2	Agree
I am demotivated in learning because I prefer a collaborative environment.	2.83	Agree
My family and I are forced to buy gadgets and loan money for me to continue studying	2.5	Agree
I am having a hard time doing my assigned tasks, activities, and quizzes online.	3.05	Agree
I am not able to attend all of my classes due to a lack of money to purchase a prepaid load.	2.1	Disagree
My financial stability affects my academic performance.	2.85	Agree
I have a personal functioning gadget to use for my classes.	3.1	Agree
I am much more motivated to study in the E-RTU learning program.	2.28	Disagree
I saved money through the E-RTU learning program because I don't need to travel anymore.	2.75	Agree
OVERALL MEAN	2.78	Agree

Table 7 shows the list of ten (10) items about the challenges in the utilization of E-RTU. Item number 1 with a weighted mean of 3.1 indicates that the respondents answered "Agree" on this item. Item number 2 with a weighted mean of 3.2 indicates that the respondents answered "Agree" on this item. Item number 3 with a weighted mean of 2.83 indicates that the respondents answered "Agree" on this item. Item number 4 with a weighted mean of 2.5 indicates that the respondents answered "Agree" on this item. Item number 5 with a weighted mean of 3.05 indicates that the respondents answered "Agree" on this item. Item number 6 with a weighted mean of 2.1 indicates that the respondents answered "Disagree" on this item. Item number 7 with a weighted mean of 2.85 indicates that the respondents answered "Agree" on this item. Item number 8 with a weighted mean of 3.1 indicates that the respondents answered "Agree" on this item. Item number 9 with a weighted mean of 2.28 indicates that the respondents answered "Disagree" on this item. And item number 10 with a weighted mean of 2.75 indicates that the respondents answered "Agree" on this item.

According to Hrastinski, synchronous e-learning is defined as learning/teaching that occurs simultaneously via an electronic form (2008). Teacher-student and student-student contact are possible in synchronous voice or text chat rooms. Video-conferencing, in addition to chat, allows for face-to-face contact. Surveys, polls, and question-and-answer sessions can make web conferences more participatory than video conferencing. Some of the limitations of synchronous education include the need for students to be available at a specific time and the requirement for a high-bandwidth Internet connection. Due to technical difficulties, participants may feel disappointed and thwarted. Furthermore, because pedagogy is more important than technologically aided media, a carefully developed instructional design is essential.

Table 8: Suggestions to Improve the Utilization of E-RTU

RAW DATA	Question: What suggestion/s you may propose to improve the utilization of E-RTU? Verbatim answers: None None None None None

	None “As of now, I don't see any problem with the utilization of E-RTU.” “Reduce the synchronous time. Let us rest during weekends. Provide a virtual platform that is easy for everyone to access. I am pertaining to the use of Moodle which not all of us don’t have the access to it. Have real consideration for the mental health of the students who struggle with this kind of system.” “Teachers are all doing their best to improve in online learning though they are also adjusting themselves to this new normal, I propose that teachers will ask their students first about their access to internet connection stability for a better understanding of the situation of the students.” “Use a convenient platform for the student, considerations, don't give too many workloads and always give clear instructions to the activities.” “Don't rely on the presentation of the lessons or topics to the students, because not all of them are ready and prepared for this kind of learning setting.” “The teachers must be considerate in making activities and think for an easy way that could help both students capable studying in E-RTU and those who not.” “Provide e-learning materials for every student. Yes, information is now very easy to access but for me, it is not enough. Because some references are hard to find like pdf and other articles related to the lessons.” “Since Flexible Learning System consists of various modes of learning, E-RTU should offer various modes as well in accordance to the adapted system.” “Using a friendly software application to use in an online class and effective and efficient instructional materials...” “Consider all the students, yung kakayanan ng bawat estudyante na maka attend sa mga online classes.” “Just have clear instructions for the students so they understand the situation for them to adjust and give ample time for the submission because we all know that not all the students have resources.” “I think E-RTU is a very good response to a new normal education but there are still problems and issues that RTU students are experiencing especially those who are struggling financially. The best thing that I can recommend is that the school also make more educational assistance programs that will help the students to perform well in class.” “nothing, because I’m not into it” “Sana mas maconsider ng mga prof yung effort na ginagawa ng students.” “In this time of crisis, mga students na nakaka-experience ng struggles in many ways such as academic support, technical assistance, at mental health needs. To address that, they must identify and support struggling students because in that way this will help them to become motivated to continue their studies despite difficulties they may face.” “Giving motivations of professors to students as well as considering any outcome possibilities when someone can’t attend to synchronous class to still maintain his/her learning” “Considerations from teachers especially for those students that struggling on attending class due to poor connection and some unexpected problems” “Teachers/Professors should become much considerate and patient when it comes to the problems that students face, especially those things that students can't control or change.” “Avoid the use of reporting if the subject requires someone professional to teach it.” “In terms of technicalities such as resources, none but maybe communication or relation with professors as there are inconsiderate professors. I'm saying this on

	behalf of other students experiencing inconsideration from their professors hehe." "1.) Free load every month. 2.) New strategies" "Proper align or connect the standards/objectives of E-RTU in accordance to what is necessary and what can everybody do who were using it." "Strict compliance to the program" "Giving a high consideration from the professors boost the morale of the students who found FLEXYS hard for them in some aspects." "Free wifi or load to those that can't reach stable signal, and consideration is a must." "There are tons of suggestions to write." "Do what things will be accessible for all, for both students and teachers. Set a schedule that the students will attend virtual class." "Get the opinion of the students when planning in this kind of system" "More collaborative teaching strategy" "Build a student-teacher relationship." "Please do consider such students whose having been troubled about their internet connection, especially when doing such reports." "Baka pwedeng hindi araw araw ang klase" "My suggestion for E-RTU is having pagiging matiyaga at masipag para maipag patuloymo ang iyong pangarap kahit ang hirap ng ating sitwasyon" "Make the website or page accessible for the learning of the students especially the platforms that will gonna use"
CATEGORY SUB-THEMES	Interventions that can be proposed to improve the utilization of the RTU's online distance learning management system, E-RTU?
EMERGING THEME	The suggestions that were proposed by the respondents to improve the utilization of E-RTU include: Be considerate as much as possible in all areas; giving ample time to comply and being patient maybe in dealing with late submissions and connectivity issues. Educational assistance programs may be utilized so that they could get help when it comes to having internet and even gadgets to use for learning. Teachers should be cautious in dealing with the mental health of their students and not put too much workload; lessen the class meetings and do not pass the burden of teaching to the students.
MEANING UNIT/INTERP RETATION	Several suggestions deal with the improvement of the utilization of E-RTU.

Table 8 reveals the different proposed suggestions by the respondents. The suggestions that were proposed by the respondents to improve the utilization of E-RTU fell on literally being flexible, being considerate as much as possible in all areas, giving ample time to comply, and being patient maybe in dealing with late submissions and connectivity issues. They also suggested that some educational assistance programs be implemented so that they could get help when it comes to having internet and even gadgets to be used for learning. Some also said that the teachers should be cautious in dealing with the mental health of their students and not put too many workloads; lessen the class meetings and do not pass the burden of teaching to the students.

The findings of Dr. Mahnaz Moallem's study, "The Impact of Synchronous and Asynchronous Communication Tools on Learner Self-Regulation, Social Presence, Immediacy, Intimacy, and Satisfaction in Collaborative Online Learning," highlight the limitations of asynchronous communication for aspiring entrepreneurs. Due to delayed feedback, trouble managing team members' interactions, and offering an organized approach for

problem-solving activities, teams had trouble using the asynchronous technique to solve problems, all of which were aggravated by a lack of emotional connection. Individuals were able to automatically construct a structured method that fostered higher levels of participation among members during synchronous team meetings, resulting in members' diverse viewpoints during team discussion and interaction converging.

5. CONCLUSION AND RECOMMENDATION

Conclusions

1. Most of the respondents are experiencing difficulties in dealing with the utilization of E-RTU. There are times that they get disconnected from the class because of the quality of mobile phones that they are using though some of their instructors give or use learning platforms that are easy to access and easy to use.
2. The respondents also increase their anxiety level because of school works that are piled up, and activities that are not submitted on time.
3. Respondents are having difficulties completing their online tasks, activities, and quizzes. Some are even ranting that they are no longer learning because their goal has changed to regular task completion.
4. The respondents also considered their mental stability because some of them become less motivated in doing things related to their academics.
5. In addition, the respondents recommended further enhancement of the use of E-RTU as a new learning modality.

Recommendations

1. The study may be a basis for the school administration to have synchronized virtual classes to allocate the students' data availability.
2. The study may be used by the school administration to provide an educational assistance program like scholarships and Student Assistance Programs so the students could have equal opportunity when it comes to having an internet connection and even gadgets to be used for learning.
3. The study may be a basis for the teachers to be cautious in dealing with the mental health of their students; thus, they should not put too much workload.
4. The study may guide parents to be aware of the learners' situation during online classes.
5. The study may be a basis for future researchers to perform mixed-method research for them to understand more about the utilization of flexible learning.

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6. REFERENCES

A. E-books / Books

1. Creswell, J.W. (2013). Qualitative Inquiry & Research Design: Choosing Among the Five Approaches. Thousand Oaks, CA: SAGE Publications, Inc. (pp. 77-83).
2. Graham, C. R., & Misanchuk, M. (2004). Computer-mediated learning groups: Benefits and challenges to using groupwork in online learning environments. In T. S. Roberts (Ed.), online collaborative learning: Theory and practice. 181–202. Hershey, PA: Idea Group.
3. Lehman, R. M., & Conceição, S. C. O. (2010). Creating a sense of presence in online teaching: How to "be there" for distance learners. San Francisco: JosseyBass.

B. Journals/Published Books

1. Abisado, M. (2020). A flexible learning framework implementing asynchronous course delivery for Philippine local colleges and universities. *International Journal of Advanced Trends in Computer Science and Engineering, 9*(1,3). DOI: 10.30534/ijatcse/2020/6591.32020.

2. Alsondos, J. A. (2006). The impact of applying IT and e-learning in an economic information systems. doi:10.3844/ajassp.2006.1722.1725.
3. Anderson, T. (2004b). Toward a theory of online learning. In T. Anderson & F. Elloumi (Eds), theory and practice of online learning. *Journal of Learning Design*. *10*(1), 33-60. doi:10.5204/jld.v9i3.293.
4. Asterhan, C. S. C., & Schwarz, B. B. (2010). Online moderation of synchronous argumentation. *International Journal of Computer-Supported Collaborative Learning, 5*(3), 259–282. doi:10.1007/s11412-010-9088-2.
5. Benson, R., & Brack, C. (2010). Online learning and assessment in higher education: A planning guide. *Journal of Learning Design. 10*(1). doi:10.5204/jld.v9i3.293.
6. Blackley, S., & Sheffield, R. (2015). Digital andragogy: A richer blend of initial teacher education in the 21st century. *Issues in Educational Research, 25*(4), 397–414. doi:10.5204/jld.v9i3.293.
7. Boateng, S., Asare, D., Manu, P., Sefah, E., & Adomako, J., (2020). Relationship between students' home background and their academic performance: A case of some selected senior high school students in rural districts in Ashanti region, Ghana. *Journal of education, 1-9.* DOI: 10.1177/0022057420904370.
8. Boling, E. C., Hough, M., Krinsky, H., Saleem, H., & Stevens, M. (2012). Cutting the distance in distance education: Perspectives on what promotes online learning experiences. Internet and Higher *Education. ScienceDirect, 15,* 118–126. DOI: 10.1016/j.iheduc.2011.11.006.
9. Davidson, R. (2015). Wiki use increases communication and collaboration motivation. *Journal of Learning Design, 8*(3), 94–105. DOI: http://dx.doi.org/10.5204/jld.v5i2.110.
10. Duffy, T. M., & Kirkley, J., R. (2004). Introduction: Theory and practice in distance education. In Duffy, T. M., & Kirkley, J. R. (Eds.). Learner-centered theory and practice in distance education: Cases from higher education. *Routledge*. 3-13. doi=10.1.1.471.3355.
11. Folkins, J. W., Friberg, J. C. & Cesarini, P. A. (2015). University classroom design principles to facilitate learning: The instructor as an advocate. *Planning for Higher Education Journal, 43*(2), 45-62. Retrieved from https://www.questia.com/library/journal/1G1-410400828/university-classroom-design-principles-to-facilitate.
12. Friday, E., Friday-Stroud, S. S., Green, A. L., & Hill, A. Y. (2006). A multi-semester comparison of student performance between multiple traditional and online sections of two management courses. Journal of Behavioral and Applied Management, 8(1), 66-81.
13. Garrison, D. R., & Cleveland-Innes, M. (2005). Facilitating cognitive presence in online learning: Interaction Is not enough. *American Journal of Distance Education, 19,* 133–148. doi:10.1207/s15389286ajde1903_2.
14. Gumiran, I. C. Moodle Learning Management System Utilization Assessment: Lenses on Its Accessibility, Security, and Usability.
15. Liem, G.A.D. (2019). Academic Performance and Assessment. *An International Journal of Experimental Educational Psychology, 39*(6), 705-708. doi:10.1080/01443410.2019.1625522.
16. Lingyi, M., Oulasyirta, A., Raita, E., Rattenbury, T., (2012). Habits make smartphone use more pervasive. *Journal of Personal and Ubiquitous Computing, 16*(1),105-114. DOI:10.1007/s00779-011-0412-2.
17. Han, H. (2013). Do nonverbal emotional cues matter? Effects of video casting in synchronous virtual classrooms. *American Journal of Distance Education, 27*(4), 253–264. doi:10.1080/08923647.2013.837718.
18. Horne-Martin, S. (2002). The classroom environment and its effects on the practice of teachers. *European Journal of Educational Research, 8*(4), 1159-1173. doi.org/10.12973/eu-jer.8.4.1159.
19. Jaques, D., & Salmon, G. (2007). Learning in groups: A handbook for face-to-face and online environments. *Routledge*. doi.org/10.4324/9780203016459.
20. Kirkwood, A., & Price, L. (2014). Technology-enhanced learning and teaching in higher education: What is 'enhanced' and how do we know? A critical literature review. Learning. *Media and Technology, 39*(1), 6–36. doi:10.1080/17439884.2013.770404.
21. Li, X., Yuqin, Y.,Chu, S. K. W., Zainuddin, Z., & Zhang, Y. (2020). Applying blended synchronous teaching and learning for flexible learning in higher education: an action research study at a university in Hong Kong, *Asia Pacific Journal of Education*, DOI: 10.1080/02188791.2020.1766417.

22. McAllister, K., &Hadjri, K. (2013). Inclusion and the special educational needs (SEN) resource base in mainstream schools: physical factors to maximize effectiveness. *ResearchGate, 28*(2), 57-65. DOI: 10.1111/1467-9604.12019.
23. Miller, C.et al, (2018), Learning Effectiveness and Students' perception in a flexible learning course. ResearchGate, DOI: 10.2478/eurodl-2018-0006.
24. Moskal, P., Dziuban, C., & Hartman, J. (2013). Blended learning: A dangerous idea? *The Internet and Higher Education, 18*, 15–23. doi:10.1016/ j.iheduc.2012.12.001.
25. Napier, N. P., Dekhane, S., & Smith, S. (2011). Transitioning to blended learning: Understanding student and faculty perceptions. *Journal of Asynchronous Learning Networks, 15*(1), 20–3. Retrieved from https://eric.ed.gov/?id=EJ918216.
26. Omar, M., Yasin, A., Ibrahim, H., Ghazali, O., & Khamis, S., (2016). WiFi usage and student performance: Examining the interrelations for UUM students, *Article of AIP Conference Proceedings, 2*. https://doi.org/10.1063/1.5055517.
27. Orlando, J., & Attard, C. (2015). Digital natives come of age: The reality of today's early career teachers using mobile devices to teach mathematics. *Mathematics Education Research Journal, 28,* 107–121. doi:10.1007/s13394-015-0159-6.
28. Ratnasari, D., & Haryanto. (2019). Analysis of Utilization of Gadgets as Effective Learning Media in Innovation Education to improve Student Learning Achievement. DOI: 10.18502/kss.v3i17.4671.
29. Rucker, R., & Downey, S. (2016). Faculty technology usage resulting from institutional migration to a new learning management system. *Online Journal of Distance Learning Administration, 19*(1). Retrieved from http://www.westga.edu/~distance/ojdla/spring191/rucker_downey191.html.
30. Yildiz, C.D., Tatik, R.S. (2019). Impact of Flexible and Non-flexible Classroom Environments on Learning of Undergraduate Students. *European Journal of Educational Research, 8*(4), 1159-1173. Retrieved from https://www.eu-jer.com/impact-of-flexible-and-non-flexible-classroom-environments-on-learning-of-undergraduate-students.
31. Zapalska, A., & Brozik, D. (2006). Learning styles and online education. *Journal of Campus-Wide Information Systems, 23*(5), 325–335. DOI: 0.1108/10650740610714080.

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