Levels of Technology Integration of MARHS HUMSS Faculty in Blended Learning Using SAMR Framework: A Basis for an Enhancement Program

Mark Lester C. Cuayzon

Master Teacher II, DepEd-Manila-Manuel A. Roxas High School

Email: mark.cuayzon@deped.gov.ph

Abstract — The study was intended to identify the levels of technology integration of MARHS Senior High School HUMSS faculty during the conduct of the blended modular learning. The action research was a descriptive study where it determined and identified the level of familiarity of MARHS HUMSS faculty to different online applications and the levels of technology integration using SAMR model. The most appropriate conceptual tool to identify the level of integration is the SAMR Model developed in 2010 by Dr. Ruben Puentedura. This model was used to determine the levels of technology integration of the teachers. The study involved five HUMSS Senior High School Teachers of Manuel A. Roxas High School as the subject of the research which were identified through purposive sampling technique. They were asked to answer the survey through Google Forms since physical or face to face interaction is still prohibited. The actual administration of the research took place on the second semester of the School Year 2020-2021. The study was done at Manuel A. Roxas High School, Paco, Manila. Researcher-made structured survey was developed to gather the desired data. The survey-questionnaire was validated by the Master Teachers of Manuel A. Roxas Senior High School. This study revealed the varied compositions of the respondents with different teaching experience and mastery of handling different subjects. The findings discovered that the teachers manifested high level of familiarity with the following: MS word, in in lecture or note taking, online websites like Academia, Britannica Encyclopedia, and National Geographic in research works, PowerPoint presentation in lesson discussion/ presentation, and Google Forms, Facebook Messenger Polls, and PDF Reader in assessment activities. In terms of the level of integration using SAMR Model, Google Classroom, Edmodo, Schoology, Facebook Groups were the most integrated applications in lecture or note taking activities. It was also in the level of Redefinition. The most commonly integrated applications were Stanford, Britannica, Khan Academy, and other educational video recordings platforms, PDF, and the traditional modules provided by the school in terms of research works. The levels of integration demonstrated by the teachers were Substitution, Augmentation, and Modification.

PowerPoint Presentations, Prezi, and other similar presentation, and YouTube were used in lesson presentation where they were identified in levels of Substitution and Augmentation. In assessment activities, the teachers frequently integrated Google Forms which can be found in the level of Augmentation. For consistency of the level of technology integration, an enhancement program was proposed based from the findings or results of the study.

Keywords— Blended Learning, Integration, SAMR Framework, Technology

I. INTRODUCTION

Technology is the collection of techniques, methods or processes used in the production of goods or services or in the accomplishment of objectives, such as scientific investigation (What is Technology, n.d.). It can be also known as knowledge of techniques, processes, or it can be embedded in machines, computers, devices, and factories, which can be operated by individuals without detailed knowledge of the workings of such things (Barthakur, 2019). With these definitions, it is imperative for educators to integrate technology in the classroom since we cater the learners in the 21st century possessing the skills honed by the present environment. Educational technology has been part of the curriculum of teacher education so the crucial role of technology in the teaching-learning has been analyzed for so long. While it is true, Stosic (2015) recognized the development and application of new technologies in education is evolving, the teachers' capacity to manipulate these technologies is being questioned and often subject for research and study.

In the Philippines where the integration of technology in the educational system is a work-in progress especially in the public-school system, different trainings, seminars, and workshops through the initiative of Department of Education and other stakeholders had been undertaken. With the pandemic situation because of the COVID-19 last 2020, the shift to the new normal was certain. Schools and community learning centers are closed for physical or face to face classes and physical distancing and other community quarantine

measures are undertaken. With these situations, the department issued Adoption of the Basic Learning Continuity Plan for School Year 2020-2021 in Light of the COVID-10 Public Health Emergency. The order devised a Learning Continuity Plan which contains education learning interventions to respond to basic education while the Philippines is battling to COVID-19 (D.O No. 12 s. 2020). With these parameters, the Department of Education also instructed different Learning Delivery Modalities such as Face to Face, Blended Learning, Distance Learning and Homeschooling. Also, nationwide seminar-workshop through Learning Action Cell had been cascaded to train the teachers in these new modalities in teaching-learning process. In the division level, the select teachers and Master Teachers were identified to craft localized SLMs or Self-Learning Modules to be distributed to the learners who have a limited internet or data connectivity. Blended learning as a modality has been utilized in the school year. In the school level, the teachers of Manuel A. Roxas High School had gone series of training for conducting online classes. Seminars such as Google Classroom and utilization of other application were initiated by the school administrators through the help of the ICT Teachers to help the teachers cope with this new normal set-up in education.

After almost a year of dealing with the online blended learning, the question lies whether the teacher fully integrated the available teaching resources, applications, and in their conduct of online classes is a matter of concern especially in teaching Humanities and Social Sciences subjects. The most appropriate conceptual tool to identify the level of integration is the SAMR Model developed in 2010 by Dr. Ruben Puentedura, an educator, and a recipient of Phi Beta Kappa Teaching Award in 1991 (Terada, 2020). The SAMR model or an abbreviation for Substitution, Augmentation, Modification, and Redefinition are laid into four layers to the transformation of traditional materials to digital ones. The model can be seen in this framework.

Figure 1: The SAMR model can help educators think about the role of technology in supporting learning. Retrieved from https://search.creativecommons.org/photos/5cf97c34-3545-457a-9651-8583fd929b2e

II. METHODOLOGY

Sampling/Participants

The sampling technique used in this action research was simple random sampling. As emphasized by Parreño and Jimenez (2006), purposive sampling is a sampling technique in the researcher depends on his/her own judgment upon the selection of the population that will participate in the study. It is a non-probability sampling method because there was no mathematical computation in determining the respondents. It also the most appropriate sampling technique considering the nature of the study with respect to time and resources available.

Data Collection

The primary instrument for the study was the structured survey questionnaire. The survey was validated by the two Master Teachers of SHS in Manuel A. Roxas High School. Their comments were considered in the creation of a valid survey questionnaire to be administered with the teachers. The administration of the survey questionnaire was done through Google Forms that was sent though their email. The respondents were given two days to accomplish the forms. After the days set for accomplishment, they were gathered automatically and computed for analysis.

Data Analysis

Responses were tallied, tabulated, subjected to statistical treatment, and then interpreted. Weighted Average. The weighted average was used in all of the questions in the questionnaire to compute the data. The formula used on computing the weighted average is WA= TW/N

Where: TW is Total Weight

N= Number of Respondents

The weighted average is given the following verbal description.

Average Weight	Weighted Average	Description
5	4.20 - 5.00	EXTREMELY FAMILIAR/ ALWAYS
4	3.41 - 4.20	MODERATELY FAMILIAR/ OFTEN
3	2.61 - 3.40	SOMEWHAT FAMILIAR/ SOMETIMES
2	1.81 - 2.60	SLIGHTLY FAMILIAR/ RARELY
1	1.00 - 1.80	NOT AT ALL FAMILIAR/ NEVER

Ethical Issues

In the course of the study, the only ethical issue seen is the consent of the respondents to disclose their identities with respect to the findings of the study. Other than that,

there were no ethical issues considered in the course of the implementation of the research.

II. RESULTS

The arrangement of data was also in accordance to the organization of the problems. Primarily, data were derived from the retrieved responses from the questionnaire. Data were analyzed and tabulated for better perception and sequence of answering the problem.

Years of Teaching

Table 1. Table of Years of Teaching of the Respondents

Years of Teaching	Number	Percentage
0-5	2	40%
6-10	1	20%
16-20	1	20%
20 & above	1	20%

Table 1 shows the years of teaching of the respondents. It can be gleaned from the Table 1 that two out of five or 40 % of the respondents or 40% are teaching for 0-5 years. One teacher is teaching for 6-10 years or 20%, the other one is 16-20 years, and the last respondent is teaching for 20 years respectively.

As seen in the table, the respondents are composed of seasoned and neophyte teachers and all are using technology in delivering their lesson in different online platforms. Interestingly, it is a good composition of respondents to analyze if the age has relationship with the usage of technology in teaching. As a result, to teach people about new technology, workshops, collaboration, and interaction are needed. Teachers and administrators must realize that integrating technology with pedagogy is not a utopian goal. Technology integrated strategies must be used when planning a lesson. Technology alone will not lead to successful results. Administrators must understand the imperatives of technology in order to initiate educational changes. This environment will assist our digital immigrant learner in transitioning into digital native teachers.

Subjects Handled

Table 2. Table of Subjects Handled by the Respondents

Subjects	Responses
INTRO TO PHILO	5
UCSP	4
CPAR	4
PER DEV	3
IWRBS	1
PPG	1
DISS	1
DIASS	1
TNCT	1
CESC	1

Table 2 shows the subjects handled by the teachers. It can be observed from the Table 2 that all of the teachers handled or taught Intro to Philo. Four of them handled UCSP and CPAR while three of them handled Per Dev. Also, it can be seen that there is only single response for IWRBS, PPG, DISS, DIASS, TNCT, and CESC subjects.

It can be analyzed that Intro to Philo, UCSP, CPAR, Per Dev garnered the highest frequencies because they are the core subjects and offered to all strands in Senior High School. While IWRBS, PPG, DISS, DIASS, TNCT, CESC are subjects only offered to HUMSS. Also, it can be noted that the years of teaching have an effect in the subject handled by the respondents. Fakeye (2012) concluded that teachers' teaching experience is related to mastery of subject matter. This factor contributes to students' achievement. Since the respondents are varieties of experienced and new teachers, it can be interpreted that those teachers who have a significant number of years of teaching handled several subjects compared to the new ones.

Level of Familiarity of the Teachers with The Different Online Applications as Integrated in Classroom Activities

Lecture/ Note Taking

Table 3. Online Applications in Lecture/ Note Taking

Lecture/ Notes Taking	Total Weight	Weighted Average	Rank	Verbal Description
MS Word	24	4.80	1	EXTREMELY FAMILIAR
Apple Notes	15	3.00	2.5	SOMEWHAT FAMILIAR
Ever Note	15	3.00	2.5	SOMEWHAT FAMILIAR
MS Publisher	14	2.80	4	SOMEWHAT FAMILIAR
Adobe Photoshop	13	2.60	6	SLIGHTLY FAMILIAR
Microsoft One Note	13	2.60	6	SLIGHTLY FAMILIAR
Google Keep	13	2.60	6	SLIGHTLY FAMILIAR

Table 3 shows the online applications used by the teachers in terms of lecture or note taking and their levels of familiarity with them. It shows that MS Word gained a weighted average of 4.80 with a verbal description of extremely familiar. It was followed by Apple Notes and Ever Note both garnered a weighted average of 3.00 with a verbal description of somewhat familiar. The MS Publisher obtained a weighted average of 2.80 with a verbal description of somewhat familiar as well.

Adobe Photoshop, Microsoft One Note, and Google Keep similarly gained a weighted average of 2.60 with a verbal description of slightly familiar. It can be analyzed from the data from Table 3 that the teachers are extremely familiar with MS Word since it is the most-widely used application in terms of writing or note taking. Also, most of the documents in school are in word format resulting for the teachers to use this application most of the time.

Significantly, there are teachers who are still familiar with other applications such as Apple Notes and Evernote. Salehi and Amiri (2019) indicated that Microsoft Word was indeed beneficial in delivering their language and writing lessons. Though MS Publisher is also part of the MS Office, the teachers are slightly familiar with it because of its other function and usability. Also, the teachers are slightly familiar with Adobe Photoshop, Microsoft One Note, and Google Keep implying that the varieties of these applications are still recognizable.

Research Works

Table 4. Online Applications in Research Works

Research Works	Total Weight	Weighted Average	Rank	Verbal Description
Academia	22	4.40	2	EXTREMELY FAMILIAR
Britannica Encyclopedia	22	4.40	2	EXTREMELY FAMILIAR
National Geographic	22	4.40	2	EXTREMELY FAMILIAR
Ted Talks	20	4.00	4	MODERATELY FAMILIAR
Google Scholar	19	3.80	6	MODERATELY FAMILIAR
Philippine E-Journal	19	3.80	6	MODERATELY FAMILIAR
Microsoft Academic	19	3.80	6	MODERATELY FAMILIAR
Stanford Encyclopedia of Philosophy	18	3.60	8	MODERATELY FAMILIAR
Khan Academy	16	3.20	9	SOMEWHAT FAMILIAR
[BASE]	12	2.40	10	SLIGHTLY FAMILIAR

Table 4 shows the online applications used by the teachers in terms of research works and their levels of familiarity with them. It shows that Academia, Britannica Encyclopedia and National Geographic all gained a weighted average of 4.40 with a verbal description of extremely familiar.

It was followed by Ted Talks with a weighted average of 4.00, Google Scholar and Philippine E-Journal and Microsoft Academic all garnered a weighted average of 3.80 and Stanford Encyclopedia of Philosophy with a weighted average of 3.60 all of them with a verbal description of moderately familiar.

Khan Academy gained a weighted average of 3.20 with a verbal description of somewhat familiar. Lastly, BASE garnered a weighted average of 2.40 with a verbal description of slightly familiar.

It can be examined from Table 4 that the teachers are very familiar with Academia, Britannica Encyclopedia, and National Geographic. It is good to note that teachers are acquainted with various online resources with credibility and integrity. It can be also analyzed that other websites or learning portals such as Ted Talks, Google Scholar, Philippine E-Journal, Microsoft Academic, and Stanford Encyclopedia of Philosophy were familiar with the teachers.

It can be deduced that recognizing and familiarizing with these websites are very helpful especially in meeting the demands of a highly-cognitive subject like Humanities and Social Sciences.

Dowell and Small (2011) suggested that integrating online environments like research journals affected positive change in the grades of the students.

Also, the results implied that self-learning strategies through research journals and resource-rich online environments is helpful to both teachers and students.

Presentation

Table 5. Online Applications in Presentation

Lesson Presentation	Total Weight	Weighted Average	Rank	Verbal Description
YouTube	25	5.00	1	EXTREMELY FAMILIAR
MS PowerPoint	24	4.80	2.5	EXTREMELY FAMILIAR
Haiku Deck	24	4.80	2.5	EXTREMELY FAMILIAR
Google Slides	23	4.60	4	EXTREMELY FAMILIAR
CANVA	20	4.00	5	MODERATELY FAMILIAR
Key Notes	19	3.80	6	MODERATELY FAMILIAR
Prezi	18	3.60	7.5	MODERATELY FAMILIAR
LinkedIn Slideshare	18	3.60	7.5	MODERATELY FAMILIAR
Visme	14	2.80	9	SOMEWHAT FAMILIAR
Slidebean	13	2.60	10	SLIGHTLY FAMILIAR

Table 5 shows the online applications used by the teachers in their lesson presentation and their levels of familiarity with them. It shows that Youtube gained a weighted average of 5.00, MS PowerPoint and Haiku Deck both gained a weighted average of 4.80, and Google Slides with a weighted average of 4.60 all similarly with a verbal description of extremely familiar.

CANVA obtained a weighted average of 4.00, Key Notes with a weighted average of 3.80, Prezi and LinkedIn SlideShare both with a weighted average of 3.60 all with a verbal description of moderately familiar. Visme gained a weighted average of 2.80 with a verbal description of somewhat familiar. Lastly, Slidebean with a weighted average of 2.60 with a verbal description of slightly familiar.

It can be studied in Table 5 that the teachers are very familiar with Youtube, MS PowerPoint, HaikuDeck, and Google Slides. MS PowerPoint encourages and supports staff by facilitating the professional structure of a presentation. The templates have been designed with good presentation criteria in mind, such as the number of lines of information per slide and the appropriate font sizes and types (Jones, 2015).

It can be noted also that these applications were utilized prior to the online learnings set up resulting to high level of familiarity of the teachers. Also, the teachers demonstrated average level of familiarity with CANVA, Key Notes, Prezi, LinkedIn SlideShare, in their lesson presentation. Lastly, some teachers are still familiar with Visme and Slidebean. The data revealed that the teachers utilized various online applications in presenting their lesson or topic. These variations are important because it allows the students to be more engaged and participative in the discussion.

Assessment

Table 6. Online Applications in Assessment

Assessment	Total Weight	Weighted Average	Rank	Verbal Description
Google Forms	25	5.00	1	EXTREMELY FAMILIAR
Facebook Messenger Polls	23	4.60	2	EXTREMELY FAMILIAR
PDF Reader	22	4.40	3	EXTREMELY FAMILIAR
Kahoot	17	3.40	4.5	SOMEWHAT FAMILIAR
iMovie	17	3.40	4.5	SOMEWHAT FAMILIAR
Quiz Iz	15	3.00	6.5	SOMEWHAT FAMILIAR
Nearpod	15	3.00	6.5	SOMEWHAT FAMILIAR
Socrative	15	3.00	8	SOMEWHAT FAMILIAR
Educreations	14	2.80	9	SOMEWHAT FAMILIAR
Plickers	12	2.40	10.5	SLIGHTLY FAMILIAR
Padlet	12	2.40	10.5	SLIGHTLY FAMILIAR

Table 6 shows the online applications used by the teachers in their assessment activities and their levels of familiarity with them.

It shows that Google Forms gained a weighted average of 5.00, Facebook Messenger Polls, with a weighted average of 4.60 and PDF Reader with a weighted average of 4.40 all with a verbal description of extremely familiar.

Kahoot and iMovie both obtained a weighted average of 3.40, Quiz Iz, Nearpod, and Socrative all obtained a weighted average of 3.00, Educreations with a weighted average of 2.80 all of them have a verbal description of somewhat familiar.

Lastly, Plickers and Padlet both have a weighted average of 2.40 with a verbal description slightly familiar.

LMS Background

It can be deduced from the table that the teachers are very familiar with Google Forms, Facebook Messenger Polls, and PDF Reader. These applications are user-friendly and widely-utilized not only the teachers but the students as well. Also, the teachers familiarized themselves with applications such as Kahoot, iMovie, Quiz Iz, Nearpod, Socrative, and Educreations to differentiate assessment activities.

With the different features and offerings of these applications, they can increase engagement and participation of the students. Sari et al. (2019) concluded that assessment activities through Google Forms effectively enhance students' conceptual understanding and ability to think critically. Lastly, the teachers adapted different strategies in assessment and even Plickers and Padlet which they are slightly familiar with are used in assessment.

Table 7. Familiarity in Different LMS

LMS	Total Weight	Weighted Average	Rank	Verbal Description
G Suite	24	4.80	1	EXTREMELY FAMILIAR
Schoology	20	4.00	2.5	MODERATELY FAMILIAR
Moodle	20	4.00	2.5	MODERATELY FAMILIAR
Blackboard	18	3.60	4.5	MODERATELY FAMILIAR
Canvas	18	3.60	4.5	MODERATELY FAMILIAR
Neo LMS	12	2.40	6.5	SLIGHTLY FAMILIAR
Brightspace	12	2.40	6.5	SLIGHTLY FAMILIAR

Table 7 shows the level of familiarity of the teachers with different Learning Management System or LMS. It shows that G Suite obtained a weighted average of 4.80 with a verbal description of extremely familiar.

Schoology and Moodle both gained a weighted average of 4.00, Blackboard and Canvas both obtained a weighted average of 3.60 and all of them with a verbal description of moderately familiar.

Lastly, Neo LMS and Brightspace had both a weighted average of 2.40 with a verbal description of slightly familiar.

It can be inferred that the teachers are very familiar with G Suite as an LMS. Primarily because it is the LMS provided by the Department of Education as the online platform for the school-year 2020-2021.

Training and seminars were also conducted to be adept with G Suite.

Given the G Suite as the main LMS in DepEd, the teachers are still averagely familiar with other LMS such as Schoology, Moodle, Blackboard, and Canvas. Also, the teachers had a little knowledge with Neo LMS and Brightspace.

These data revealed that the teachers are continuously immersing themselves with other online platform to prepare themselves in the complexities of online teaching.

Schneiter (2010) suggested that as part of preparation in integrating technology in teaching, teachers must adapt to evolving technology.

Also, collaboration and cooperation with colleagues are essential in eyeing positive learning experience

Levels of Integration Using SAMR Framework in the Classroom Activities

Lecture/ Note Taking

Table 8. Level of Integration in Lecture/ Note Taking

	Total Weight	Weighted Average	Rank	Verbal Description
Google Classroom, Edmodo, Schoology, Facebook Groups	21	4.20	1	ALWAYS
PDF or MS Word/ Google Drive or One Drive.	20	4.00	2	OFTEN
PDF material or PowerPoint presentation	17	3.40	3	SOMETIMES
MS Word, Adobe, and other	16	3.20	4	SOMETIMES
Notebook from the module provided by the school.	15	3.00	5	SOMETIMES

Table 8 shows the level of integration of technology in terms of lecture or note taking activities. It shows that the response "I asked my students to write or comment their lecture notes through the interactive elements of Google Classroom, Edmodo, Schoology, Facebook Groups and other learning management system" ranked first with a weighted average of 4.20 and with a verbal interpretation of always. The response "I asked my students to store their PDF or MS Word lecture notes into a Google Drive or One Drive for monitoring and supervision purposes" ranked second with a weighted average of 4.00 and with a verbal description of often. The response "I asked my students to write the key concepts or lessons from the module through the PDF material or PowerPoint presentation I made during online classes" got the third rank with a weighted average of 3.40, the answer "I asked my students to write their lecture notes through MS Word, Adobe, and other applications which they can manipulate easily" obtained the fourth rank with a weighted average of 3.20, and the response "I asked my students to write the lecture notes in their notebook from the module provided by the school" ranked fifth and all responses with a verbal description of sometimes.

It can be analyzed that the teachers always utilized Google Classroom, Edmodo, Schoology, and Facebook Groups in terms of supervising the lecture notes of the students. In reference to SAMR Model, these activities are in the level of Redefinition where the teachers redefine the traditional way of lecture notes. During this level, learning activities and technology happen not as ends but as scaffolds for student learning. Though the teachers are in the level of redefinition, there are instances that they go to the level of Modification because they use Google Drive or One Drive for the stored MS Word and PDF notes of the students. In SAMR Model, it is in the level of Modification where the teachers allow significant change in the technology. The teachers allowed the students to use PDF and MS Word for their lectures and provided Google Drive or One Drive for easy monitoring. Yet the teachers go to these levels, sometimes, they go to the traditional level and also the level of substitution and augmentation. At these levels, the technology plays a little role in the learning task. In the Substitution level, technology leads to no or little change while in Augmentation, activity is not changed but the features of technology are incorporated. Evidently, teachers sometimes ask the students to write the key concepts from the module or PowerPoint presentations, or from MS Word. These adjustments are clear manifestation of the teachers' flexibility in catering the needs of the learners without compromising the quality of education they provide.

Research Works

Table 9. Level of Integration in Research Works

	Total Weight	Weighted Average	Rank	Verbal Description
Module provided by the school for research.	23	4.60	1.5	ALWAYS
PDF material or PowerPoint presentations	23	4.60	1.5	ALWAYS
Stanford, Britannica, and etc.	22	4.40	3.5	ALWAYS

YouTube, Khan Academy, and other educational video recordings platforms.	22	4.40	3.5	ALWAYS
Virtual Museums, Webinars, or other interactive online platforms.	20	4.00	5	OFTEN

Table 9 shows the level of integration of technology in terms of research works activities. It shows that the responses "I asked my students to refer to the module provided by the school for research" and "I asked my students to refer from PDF material or PowerPoint presentations which I sent" ranked 1.5th with a weighted average of 4.60, the responses " I asked my students to read and study the lessons or topics through links from online encyclopedias (Stanford, Britannica, and etc.) which I provided" and "I referred my students to watch and study video lessons from YouTube, Khan Academy, and other educational video recordings platforms" both obtained a weighted average of 4.40 and ranked 3.5th with a verbal interpretation of always. The response "I asked my students to watch, study, and participate with the lessons through Virtual Museums, Webinars, or other interactive online platforms" ranked fifth with a weighted average of 4.00 and with a verbal description of often. It can be deduced that the teachers always asked their students to refer from the module provided by the school and to the PowerPoint presentations and PDF material they've sent when asking their students for research works. In SAMR model, these activities are in the traditional and Substitution level. The PowerPoint materials and PDFs replaced the traditional source of information in doing the research and there was no significant manipulation

and integration with the technology used. Also, it can be seen that the teachers always asked their student to explore other resource portals like Stanford, Britannica, and etc. This task now is in the Augmentation level because resource portals provided the students new features in researching yet the activity is still research works. It can also be seen that the teachers always ask their students to watch and study YouTube, Khan Academy, and other educational video recordings platforms. Learning in this platform is in the level of Modification because research work is now replaced by instructional and communicative videos that still provide education and relevant information with the students. However, the last level which is Redefinition is often used by the teachers through Virtual Museums, Webinars, or other interactive online platforms. Construing the activities and learning tasks of the teachers, it can be said that they variate depends on the nature of the activity and capacity of the students. Since not all the students can cope with the demands of the online learning, different learning opportunities were given by the teachers. Moreover, educators who differentiate are teachers who consider student learning inclinations, capabilities and styles. In high school, teachers use a variety of teaching strategies to address the diverse student population's learning characteristics (Tomlinson, 2003).

Lesson Presentation

Table 10. Level of Integration in Lesson Presentation

	Total Weight	Weighted Average	Rank	Verbal Description
I used PowerPoint Presentations, Prezi, and other similar presentation application	24	4.80	1	ALWAYS
I integrated video lessons from YouTube or other video recording platforms during online classes.	21	4.20	2	ALWAYS
I screen shared the pdf module provided by the school during synchronous classes.	20	4.00	3	OFTEN

I integrated Quizz Iz, Nearpod, Kahoot! in the Google Classroom	17	3.40	4.5	SOMETIMES
I asked my students to create Vlogs or Educational Video Recorded Discussions from the topics	17	3.40	4.5	SOMETIMES

Table 10 shows the level of integration of technology in terms of lesson presentation. It shows that the response "I used PowerPoint Presentations, Prezi, and other similar presentation applications to discuss the lessons from the module during synchronous classes" ranked first and obtained a weighted average of 4.80, the response "I integrated video lessons from YouTube or other video recording platforms during online classes" ranked second and got a weighted average of 4.20 and both have a verbal description of always. The answer "I screen shared the pdf module provided by the school during synchronous classes" ranked third and garnered a weighted average of 4.00 and a verbal interpretation of often. Lastly, the responses "I integrated Quizz Iz, Nearpod, Kahoot! in the Google Classroom to engage learners in my presentation of lesson or topic" and "I asked my students to create Vlogs or Educational Video Recorded Discussions from the topics I presented during lesson which can be used as a reference material for other students with guidance and supervision" both ranked 4.5th with a weighted average of 3.40 and a verbal description of sometimes.

It can be analyzed that in terms of lesson presentation, the teacher always used PowerPoint Presentations, Prezi, and other similar presentation applications to discuss the lessons from the module. This is in the level of Substitution because such application replaced the traditional method of delivering the lesson. Also, the teachers always used YouTube or other video recording platforms during their online classes. It integrating these videos, it reached the level of Augmentation because YouTube videos or any video-recording platforms also served as aids in delivering the lessons. It can also be observed that sometimes, the teachers integrated Quizz, Nearpod, and Kahoot in presenting the lesson which is in the level of Modification. Lastly, the teachers sometimes ask their students to create Vlog or Educational videos as reference materials. This level however is in the Redefinition level. It can be analyzed that the teachers' high level of familiarity with presentation applications like YouTube and PowerPoint presentations is evidently seen in terms of utilizing them to deliver their respective lessons or topics. Also, the teachers attempted to go in higher level of technology integration in their lesson presentation by means of integrating interactive online platforms and even asking the students to create their own vlog for educational purposes. Petersen and Gorman (2014) mentioned that the teachers must assess and understand first the nature of their learners. After which, they can decide what kind of strategies they can give to the students. Meaningful, challenging, and experiential learning are essentials in achieving positive learning outcome of the students.

Assessment Strategies

Table 11. Level of Integration in Assessment Strategies

	Total Weight	Weighted Average	Rank	Verbal Description
I used Google Forms to administer assessment activities to my students.	23	4.60	1	ALWAYS
I asked the students to answer the PDF materials and activity sheets which they will submit online.	19	3.80	2.5	OFTEN
I maximized the grading mechanism Google Forms with synchronized submission.	19	3.80	2.5	OFTEN
I asked the students to answer the activities from the module in their notebooks and upload the picture of them for checking.	17	3.40	4	SOMETIMES

I used Google Forms, Quizz Iz, Kahoot or other similar applications to administer assessment activities	16	3.20	5	SOMETIMES

Table 11 shows the level of integration of technology in terms of assessment strategies. It shows that the response "I used Google Forms to administer assessment activities to my students" ranked first and obtained a weighted average of 4.80 with a verbal description of always. The responses "I asked the students to answer the PDF materials and activity sheets which they will submit online" and "I maximized the grading mechanism Google Forms with synchronized submission as seen in Google Calendar and with organized and regular feedbacking system and fully integrated in a learning managements system" both ranked 2.5th and got a weighted average of 3.80 with a verbal description of often. The responses "I asked the students to answer the activities from the module in their notebooks and upload the picture of them for checking" ranked fourth and got a weighted average of 3.40 and the response "I used Google Forms, Quizz Iz, Kahoot or other similar applications to administer assessment activities with provisions to time limiting, grading, scheduled posting and other mechanisms" ranked fifth and obtained a weighted average of 3.20 both with a verbal description of sometimes.

It can be analyzed that the teachers always used Google Forms as an assessment strategy. In the SAMR model, it can be categorized in the Augmentation level because the features of Google Forms were utilized yet the activity is still an assessment work. It is very evident because of the high-level of familiarity of the teachers in G Suite as the official learning platform of DepEd. Also, it can be noted that oftentimes, the teachers asked the students to answer the PDF format of the module. PDF materials were in the level of Substitution and replaced the printed learning modules of the school. Similarly, when the teachers attempted to maximize the features of Google Forms through grading system and Google Calendar, it reached the level of Redefinition. Lastly, teachers sometimes integrated Quizz Iz, Kahoot as assessment strategies turned to be in the level of Modification where interactive elements can be manipulated. Though the teachers' level of integration of technology variate, sometimes, they still used the traditional assessment method where the students will use their notebooks in responding to the assessment activities. It is good to note that these circumstances are understandable because of the pandemic situation where the teachers provide necessary assistance to the students especially those who are left behind. Mcknight et al. (2016) observed that teachers used technology to make more resources available, to keep the content current,

and to provide greater depth and "richness" not otherwise available. Students with disabilities could receive individualized instruction because their needs had been met with new facilities in instruction.

IV. DISCUSSIONS/CONCLUSIONS

This study highlighted the varied compositions of the respondents. They possessed years of teaching and experience and mastery of handling different subjects as seen in the number of subjects they've handled in teaching in the senior high school. In terms of lecture or note taking, the teachers manifested high level of familiarity with MS word. While in research activities, they've shown are all familiar with online websites like Academia, Britannica Encyclopedia, and National Geographic. In terms of presentation, all of the respondents are extremely familiar with PowerPoint presentation since it is part of training provided by the school. Also, this is the most commonly-used application though the teachers are still familiar with other applications. In assessment, the teachers are very familiar with Google Forms, Facebook Messenger Polls, and PDF Reader because of its usability and convenience. In lecture or note taking activities, the study revealed that Google Classroom, Edmodo, Schoology, Facebook Groups are the most integrated applications. These integrations were in the level of Redefinition where the learning activities and technology happen not as ends but as scaffolds for student learning. When assigning the students in research works, the most commonly integrated applications were Stanford, Britannica, Khan Academy, and other educational video recordings platforms, PDF, and the traditional modules provided by the school. Interestingly, the levels manifested by the teachers were Substitution, Augmentation, and Modification. Modification is the level where the teachers allow significant change in the technology. In the Substitution level, technology leads to no or little change while in Augmentation, activity is not changed but the features of technology are incorporated. These responses revealed the variation and adjustments of the teachers in presenting their lesson. In terms of lesson presentation, the most commonly used applications were PowerPoint Presentations, Prezi, and other similar presentation, and YouTube. These integrations are in the level of Substitution and Augmentation. Lastly, in doing assessment activities, the teachers frequently integrated Google Forms. Consequently, it is in the level of Augmentation.

With the results and findings of the study, an enhancement program was proposed.

DISSEMINATION / UTILIZATION ACTIVITIES	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Revisitation of Online Applications in Used for the Last SY	Last Week					
Identification of the Appropriate Online Applications for Classroom Activities		First Week				
Alignment of Online Applications to Classroom Activities		Second Week				
Block Plan/ Lesson Plan Making		Weekly	Weekly	Weekly	Weekly	Weekly
Online Demo Lesson			First week			First Week

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