

Research Article

21st CENTURY SKILL-BASED ELECTRONIC MODULE FOR ELEMENTARY SOCIAL STUDIES: ANALYSIS, DESIGN, AND DEVELOPMENT

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ABSTRACT

This developmental research aimed to design and develop a 21st Century skill-based electronic module for elementary social studies based on the analysis of learners' least-learned competencies. Twenty-five Grade 5 social studies teachers from Iloilo City, three information technology experts, and two curriculum experts participated in the study. The instruments were the researcher-made survey checklist and the interview questionnaire. Out of the 11 competencies, three competencies for the first quarter and 2 for the second quarter were the basis of the electronic module development. The electronic module may, among other teaching tools, be useful for addressing the social studies learners' least-learned competencies. Teachers were pleased with the extra electronic module and credited its numerous components, features, and incorporation of 21st-century skills, including creativity, teamwork, critical thinking, and communication. It is proposed that DepEd produce this electronic module in another language, such as Filipino, to accommodate more learners and schools in the teaching of social studies. The Department of Education may also hold technology-enrichment courses, training sessions, and seminars for educators to increase their familiarity with digital tools and educational software and help them facilitate learning more effectively. This will produce inventive and creative learners who can adopt new technologies.

Keywords: 21st Century Skills, Analysis, Development, electronic module, social studies

INTRODUCTION

It is believed that education is a strong force that may bring about the desired changes in a nation's social and cultural life. As a result, the Enhanced Basic Education Act of 2013 was passed. Its goals included helping learners develop into lifelong learners, giving them adequate time to master key ideas and skills, and preparing graduates for postsecondary education, middle-level skills, work, and entrepreneurship (K to 12 – Curriculum Guide, December 2013). The curriculum for each topic evolved along with the fundamental educational system in the Philippines. For instance, the K to 12 Philippine Basic Education Curriculum Framework and the aim of Education for All 2015 are the foundations of the Araling Panlipunan Curriculum, which is used in the social studies course of the K to 12 Basic Education Curriculum. With the help of this curriculum, Filipinos will be raised to be functionally literate, developed adults who will continue to learn long after they complete their formal schooling. In addition, many educational institutions are worried about how to conduct lessons or programs without endangering the health and safety of both learners and teachers in the wake of the COVID-19 pandemic. With the same mindset that it employed to run the Philippine education system before COVID, the Department of Education cannot handle the current problem. In times of disruption, the current school system's face-to-face delivery platform is worthless. Whatever the school's preferred method of education is, teachers should use self-directed instructional material to aid learners' learning in times of the pandemic (Sagge, *et al.*, 2023). On the other side, the pandemic offers the DepEd a great chance to transform the educational system into one that is more robust and ready—not just for the current outbreak but for the future pandemic as well. This calls for fresh thinking and a different perspective on education. As the cornerstone of the educational system and the designer of human

society, teachers should therefore be given the most significant tasks (Raizada, 2012). Teachers are being forced by this pandemic to think not just outside the box but to shatter it. They must also use their collective creativity to come up with new ideas that will reach every learner in a variety of settings. The researchers commonly hear from learners that social studies is a boring topic that makes them lose concentration on the lesson being taught, and this is despite the fact that she was a former Grade 5 social studies teacher. The social studies component of the school curriculum is not valued or thought to be fascinating by learners today, according to Tomarong *et al.*, (2018). According to the study, learners dislike social studies because it is either too abstract, too thorough, or too monotonous in comparison to their personal experiences. These justifications point to the necessity of more variety in the classroom, the utilization of cutting-edge and inventive educational resources, and the expansion of chances for student achievement. A 2019 research by the Southeast Asian Ministers of Education Association (SEAMEO) and the United Nations Children's Fund (UNICEF) showed that just a small proportion of Filipino learners in Grade 5 succeeded in the fundamental academic subjects of math, reading, and writing. The report encouraged educators to "inspire and modify" educational goals by using technologies discovered during the epidemic, which led to the closure of some schools and a move to online learning (Southeast Asia Primary Learning Metrics, 2019; Marquez, 2020). The Department of Education has also streamlined the curriculum to include only the most crucial lessons, according to GMA News Online (2020). The department takes into account various forms of education along with student and teacher safety, program continuity, and other factors. Therefore, according to Trilestari and Almunawaroh (2018), online learning and electronic learning are currently the finest solutions for teaching and learning from home. A digital module containing just one or two learning ideas with a variety of teaching and evaluation technologies, including video clips, direct instruction, gaming components, and social media, is an illustration of an e-learning platform (the University of Nebraska Medical Center, 2020).

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It can serve as a source of resources for learning and studying-related tasks (de Morentin, 2003). Modules are crucial because they aid in the methodical and practical acquisition of knowledge by learners. In other words, a module is a teaching tool that is fully and methodically filled with a series of planned learning experiences intended to aid learners in understanding particular learning objectives and provide opportunities for them to develop knowledge, skills, and attitudes (Nurhayati *et al.*, 2018). To create a successful learning environment, K–12 schools moving to an online classroom should concentrate on four important learning factors, or the "four C's," according to a 2018 Cisco Digital Education Platform study on integrating technology into the classroom. According to the report, the four C's—critical thinking, collaboration, creativity, and communication—are the foundation for learning achievement at any age. To realize technology's potential to improve teaching and learning, educators must understand how to use it to engage learners and support their personal development. In the modern age, using a chalkboard and chalk to teach is no longer the only option. Instead, a variety of methods are employed in the teaching and learning process. To keep up with the demands of the moment and the expectations of a rapidly changing society, teachers employ a range of materials. This includes the preference of the learners for using technology in the classroom (Bacio *et al.*, 2022). Moreover, for learners of this generation to be properly engaged and educated, teachers must incorporate technology into the classroom (Sagge *et al.*, 2023). Also, since printed materials may simulate human facilitators to teach effectively and efficiently, work text paired with multimedia presentations are said to be the finest tool for enhancing the transfer of learning (Sagge, *et al.*, 2019). Thus, considering the role of technology, online learning, and the current COVID-19 situation, the researchers came up with the concept of analyzing the learners' least-learned competencies, designing, and developing an electronic module that can act as additional enrichment and assessment material for teaching and learning social studies 5 and reach all learners from different backgrounds and locations.

Research Objectives

In particular, this study tried to provide answers to the following questions:

1. What are the least learned competencies of Grade 5 learners in elementary social studies?
2. What online educational resources, including their features, can be created to meet the skills that Grade 5 learners in elementary social studies have the least learned of?

MATERIALS AND METHODS

Research Design

In this study, a developmental research approach was used. Developmental research is described as the systematic study of creating, implementing, and assessing educational processes, products, and programs that must satisfy the requirements of internal consistency and effectiveness by Seels and Richey (1994) in Nelson (2004). Additionally, developmental research can be used to examine the methodology and effects of particular instructional design and development initiatives, to conduct instructional design, development, or evaluation tasks while simultaneously studying the process, or to examine the instructional design, development, and evaluation process as a whole or as individual process components. This research specifically pertains to Type I developmental research. According to Richey and Klein's (2005) description in Nelson *et al.* (2015), Type I developmental research focuses on a specific

educational tool, program, process, or product. The most context-specific research is type I research, which covers both design and development as well as evaluation. This Type I research also frequently included an assessment of the developed products and programs as well as a look at how learners changed after interacting with the new items. Similarly to that, this study is based on developmental research because it enables the creation of a 21st Century skill-based electronic module that can be used as an additional enrichment and assessment tool for teaching and learning social studies 5 and reach all learners from all backgrounds and locations.

Respondents

Participants in the construction of the electronic module included twenty-five (25) social studies teachers in Grade 5 from private elementary schools in the city of Iloilo, who were specifically chosen for the project. A survey checklist created by researchers was given to each teacher. The Most Essential Learning Competencies (MELCs) for Grade 5 social studies are all included on the checklist, allowing teachers to choose the top 5 least-learned competencies that served as the foundation for the creation of the electronic module. To confirm the findings of the survey checklist for the top 5 least learned competencies for the first and second quarters, five (5) educators out of twenty-five (25) who have been teaching social studies 5 for four years or more were interviewed. Ten (5) teachers were purposefully selected to validate the face and content of the electronic module, which included two (2) social studies teachers, two (2) application developers, and one (1) curriculum expert.

Instruments

The investigation was conducted with the use of two (2) validated tools. The survey checklist created by the researchers and the approved interview guide are among the tools. The competencies that learners in Grade 5 social studies have the least mastery of were determined using a validated survey checklist created by researchers. Teachers of social studies for Grade 5 examined and verified the survey checklist created by the researcher. This served as the foundation for the creation of a social studies electronic module for Grade 5. The survey checklist created by the researchers is divided into two sections. The Grade 5 social studies faculty picked the top five least learned competencies from the Grade 5 most essential learning competencies (MELCs) for the first and second quarters. In the first and second quarters, there are eleven (11) most crucial learning competencies (MELCs). The social studies teachers of Grade 5 were instructed to check the box that best describes their selection by placing a checkmark (✓) there. The second part of the instrument included questions for selected teachers to confirm the findings of the researcher-made survey checklist for the top 5 first and second-quarter least learned competencies. The feature(s) to be included in the development of the electronic module were also solicited from the Grade 5 social studies teachers.

Procedure

The researcher-made survey checklist, which has been validated, was given to the twenty-five (25) teachers of Grade 5 social studies in various private schools in the city of Iloilo after receiving consent from the relevant school authorities. In addition to being questioned about the feature(s) they wished to include in the electronic module, the Grade 5 social studies teacher picked and identified the top 5 least learned competencies in the first and second quarters of Grade 5 social studies. Eight (8) of the eleven (11) most crucial learning competencies are covered in the first quarter of social studies 5 and three (3) in the second. The data were collected, processed further

for data analysis, and then the researcher-made survey checklist and other supporting documentation were retrieved. The results for the top 5 least learned competencies in the first and second quarters were also confirmed by five (5) social studies teachers who have been teaching social studies 5 for at least four years. In designing the electronic module the following steps were followed:

Determining initial data. In determining the initial data for the development of the electronic module, the gathered data and suggestions from the analysis stage served as the basis and a blueprint, as well as the suggestions of the board of panelists that it should be engaging, have readings, make creative use of technology, and 4C's integration.

Determining the content. After the initial design plan had been identified, the researchers proposed the following content and features for the electronic module: Home, The Teachers' Corner, About the Social Studies subject, Grade 5 Learning Competencies and the seven (7) lessons, The Table of Contents, the Top 5 Least learned Competency Topics, a Glossary, an Index, Contacts, About the Author, and a Feedback Form. These were presented to the board of panelists, and they also suggested some parts they considered necessary in the electronic module.

Design creation. To place the content on the website, a prototype of a 21st Century skill-based electronic module was designed and created. The researchers used WEBNODE, a free online website builder, to design and create the electronic module website, where the 4Cs skills, such as creativity, collaboration, communication, and critical thinking, were integrated through learning content and formative assessments. It comes with a number of templates, features, and tools that you can customize in a matter of minutes. It also has additional pages, and the fonts, colors, and backgrounds can be changed according to the designer's choice. It gives the designer more room to express themselves and represent their ideas. Some of the tools available are text, photos, columns, videos, and portfolios.



Figure 1. The Electronic Module Prototype

Design finalization. Finally, after determining the initial data as well as the proposed content and creating a prototype website as seen in Figure 1, the researchers finalized the planning and design phases. These proposed parts and features of the electronic module had also been presented and discussed during the proposal defense, and panelists' suggestions were also considered. Improvements to the development of the electronic module were made based on the ideas and recommendations of the validators, evaluators, and panel members of the study. For the development, the researchers established and developed the proposed 21st Century skill-based electronic module. Some of the contents of the electronic module were based on the information gathered using the researcher-made survey checklist in the analysis stage and the suggestions of the

board of panelists. The researchers ensured that there would be readings, discussion, and formative assessment from reliable sources and that the 4Cs skills such as collaboration, creativity, communication, and critical thinking would be integrated. The researchers designed the format and content of the electronic module and integrated some of the suggestions made by the participants in the survey. The researchers also anchored the method used to create the electronic module for 21st Century skills on Tuscano's 5Ds for the Meaningful and Purposeful Integration of Technology in the Classroom (2016). The learning procedures in this study are discussed in depth in the paragraphs that follow.

Dip. The researchers will permit participants in this procedure to DIP or take a brief swim into the activity. Introduce the activity's objectives and expectations gradually, and then give the class a chance to create a set of agreed objectives that, when achieved, will foster cooperation and communication. This could be the ideal moment to play with and learn more about your devices and apps. The researchers list of learning goals takes into account the psychomotor, emotional, and cognitive aspects of learning.

Deepen. To investigate, acquire, and absorb what they are learning at this stage, the researchers lets learners interact and use technology. Engaging and interactive activities, discussions, and presentations may indeed aid in improving the understanding of assessment.

Do. Following the discussion, it was determined that technology may improve education and provide learners the freedom to think of original solutions to problems. The most effective ways for learners to show that they understand are to compare and contrast ideas, respond to quizzes, share their thoughts and knowledge, and practice a skill they are learning.

Discern. Learners can use technology during this phase to document their learning, develop or generate goods related to the subject addressed, and creatively create digital portfolios. The learners are asked to create group performance tasks and/or paired performance tasks after the lesson has been presented. Rubrics, time, and space will be given to the learners so they can critically assess and enhance their work. To help foster 21st century abilities like critical thinking, communication, teamwork, and creativity, cooperative activities are strongly encouraged.

Distribute. This phase gives learners the chance to redo and enhance their final output. With the use of technology, learners may share their work with a larger, worldwide audience. In the study, learners are required to show their work to the class, as well as to other sections and classmates, and then ask for significant takeaways from it.

After the electronic module was finished, it underwent face and content validation with two teachers of social studies for Grade 5 as well as two application developers and one curriculum specialist.

RESULTS AND DISCUSSION

The Least Learned Competencies in Elementary Social Studies

The rank and frequency counts were used to determine the least learned competence in social studies 5 for the first and second quarters, according to the teachers' analysis. The findings showed that two of the first quarter's learning competencies and three of the second quarter's learning competencies were the least learned.

Table 1 lists the five (5) least-learned competencies of learners in 5th grade as determined by the social studies 5 teachers.

The five least learned competencies were the following: In rank 1 "The origin of the Philippines can be explained based on: a. Theory (Tectonic Plate Theory); b. Myth; and c. Religion" (f=17) , "The impact of colonial policies implemented by Spain in the country is analyzed: A. Economic policy (Example: Taxation, Bandala System, Galleon Trade, Tobacco Monopoly, Royal Company, Forced Labor, and others); and B. Political policy (colonial government)" (f=16) in rank 2, Rank 3 "The relationship of location in the shaping of history is explained" (f=15) , "The methods of subjecting the native population to power are analyzed in Spain: a. Military force/ divide and rule; and b. Christianization" (f=14) in rank 4, and rank 5 "The reasons for Spanish colonialism can be explained" (f=12).

In order to confirm the findings of the survey checklist for the top five least-learned competencies in the first and second quarters, five (5) teachers were also questioned. The top five selections made by the five teachers who were interviewed all had at least four years of experience teaching social studies 5 and at least two of the top five least-learned learning competencies. Based on the responses of Teacher Mae, there are three least-learned competencies, such as those ranked second, fourth, and fifth in Table 3. Teacher Nica similarly responded that the second- and fourth-placed competencies were the least learned by learners. Additionally, Teacher Oda identified three least-learned competencies, which were ranked first, third, and fifth in the table. Teacher Paula also believed that learners had the least mastery of the second, third, and fourth-placed competencies. Lastly, Teacher Queen also identified three least-learned competencies, which were rated first, second, and third in the table.

Table 1: The Least Learned Competencies in Elementary Social Studies for the First and Second Quarter

The Least Learned Competencies	f	Rank
The origin of the Philippines can be explained based on: a. Theory (Tectonic Plate Theory); b. Myth; and c. Religion	17	1
The impact of colonial policies implemented by Spain in the country is analyzed: A. Economic policy (Example: Taxation, Bandala System, Galleon Trade, Tobacco Monopoly, Royal Company, Forced Labor, and others); and B. Political policy (colonial government)	16	2
The relationship of location in the shaping of history is explained	15	3
The methods of subjecting the native population to power are analyzed in Spain: a. Military force/ divide and rule; and b. Christianization	14	4
The reasons for Spanish colonialism can be explained	12	5

In order to help learners address the competences required of them, it is necessary to address this through offering instructional resources (Sagge *et al.*, 2023; Sagge *et al.*, 2022b). The findings of Bacio *et al.*, (2022a) that the least learned competencies demonstrate that certain learners still have low mastery of particular abilities, despite having taken the subject, confirmed the study's findings. This poor retention may hinder the learners' learning. Based on the revealed least learned competencies, the researchers opted to develop a 21st century skill-based electronic module as an online instructional material to serve as an enrichment and assessment material for teaching and learning elementary social studies. It serves as an additional teaching tool to reach all learners from different backgrounds and learning environments. The University of Nebraska Medical Center (2020) defines an electronic module as an e-learning platform that combines a variety of teaching and evaluation technologies, some of which may include video clips, direct instruction, gaming components, and social media. An instructional

module, according to Bolivar (2019), designates space for examples, tasks, and exercises. Aguirre and de Cadiz (2013) in Bacio *et al.*, (2019), state that modules work effectively as educational material because they respect the idea of individual differences and let each student grow at his own rate. The practical implementation of modules in classroom education leaves much to be desired, despite the fact that they have been generally embraced as desirable pedagogical practices. Therefore, the suggested electronic module aims to develop and encourage 21st Century abilities, including creativity, teamwork, critical thinking, and communication, in the learners. The proposed electronic module is expected to be dynamic, rapid, and innovative, allowing educators to provide learners with engaging and interactive instructional material. As a result, this electronic module would be beneficial and

The Developed 21st Century Skill-based Electronic Module for Elementary Social Studies

The 21st Century skill-based electronic module was created as a supplement and monitoring resource for social studies 5 instruction and learning. It is an additional learning resource that is based on the Department of Education's implementation of the K–12 Curriculum's Most Essential Learning Competencies. All schools, divisions, and regional offices across the nation use the Most Essential Learning Competencies, or MELCs, as their main source of guidance for putting learning delivery strategies into practice. The MELCs will allow DepEd to concentrate instruction on the most crucial and important competencies as part of the department's effort to build resilient educational systems, especially during catastrophes like the COVID-19 pandemic. MELCs give teachers the ability to concentrate their lessons on the most crucial skills that all learners must master in order to become lifelong learners. The gathered data from the analysis stage served as the basis and a blueprint for the development of the electronic module, as well as the suggestions of the board of panelists that it should be engaging, have readings, make creative use of technology, and 4c's integration. The researchers used WEBNODE, a free online website builder, to design the electronic module website, where the 4Cs skills, such as creativity, collaboration, communication, and critical-thinking, were integrated through learning content and formative assessments. It comes with a number of templates, features, and tools that you can customize in a matter of minutes. It also has additional pages, and the fonts, colors, and backgrounds can be changed according to the designer's choice. It gives the designer more room to express themselves and represent their ideas. Some of the tools available are text, photos, columns, videos, and portfolios. The Top 5 Least Learned Competencies in Elementary Social Studies in the first and second quarters are included in the 21st Century skill-based electronic module. This information was gathered through a poll of several social studies teachers in various private schools in Iloilo City. The researchers intended that learners studying Philippine history using this electronic module will develop the following learning competencies:

- 1) The relationship of location in the shaping of history is explained;
- 2) The origin of the Philippines can be explained based on: a. Theory (Tectonic Plate Theory); b. Myth; and c. Religion;
- 3) The reasons for Spanish colonialism can be explained;
- 4) The methods of subjecting the native population to power are analyzed in Spain: a. Military force/ divide and rule; and b. Christianization;
- 5) The impact of colonial policies implemented by Spain in the country is analyzed: A. Economic policy (Example: Taxation, Bandala System, Galleon Trade, Tobacco Monopoly, Royal Company, Forced Labor, and others); and B. Political policy (colonial government). When using the electronic module, it is encouraged to use laptops rather than mobile phones. Some photos, when clicked, contain supplemental videos

and readings about the content. Furthermore, the 5Ds model for integrating technology into the classroom by Tuscano (2016) was utilized as a format in the development of the electronic module to help make learning with technology more meaningful, purposeful, and authentic. This 5D model includes the following parts: Dip, Deepen, Do, Discern, and Distribute. However, these were labeled differently to guide the learners and to suit their context and grade level. The following are the new terms used: Let's Get This Started; Let's Understand This; Let's Get This Done; Let's Challenge Ourselves; and Let Me Share. It is also important to note that no copyright infringement is intended. The photographs, music, videos, and interactive games utilized in the module do not belong to the author. They are the property of their rightful owners. The name of the owner and/or organization, as well as the website address from where it was taken, was recognized and included in the electronic module's reference list. The developed electronic module website is a non-profit organization and is for educational purposes only. The developed 21st Century skill-based electronic module can be accessed using this URL: <https://araling-panlipunan-5.webnode.co.uk/>. Lastly, teachers and parents are strongly advised to communicate, collaborate, and supervise learners in their social media navigation and browsing, including the use of this electronic module. Table 4 displays an outline of the competencies, topics, and necessary parts of the developed electronic module, whereas Table 2 shows the parts of the lesson in the electronic module following the 5Ds model for integrating technology into the classroom by Tuscano (2016).

Table 2: The Outline of the Competencies, Topics, and Necessary Parts of the Developed 21st Century Skill-based Electronic Module

Topics		Top 5 Least Learned Competencies	
I.	Topics	Units and Lessons	
Unit 1:		The Philippines	The relationship of location in the shaping of history is explained
Lesson 1:		The Location of the Philippines	
Lesson 2:		The Philippines' Climate and Weather	
Lesson 3:		The Origin of the Philippines	The origin of the Philippines can be explained based on: a. Theory (Tectonic PlateTheory); b. Myth; and c. Religion
Unit 2:		Spaniards in the Philippines: Changes & Systems	The reasons for Spanish colonialism can be explained
Lesson 1:		Spanish Occupation of the Philippines	
Lesson 2:		Spanish Strategies in Conquering the Philippines	The methods of subjecting the native population to power are analyzed in Spain: a. Military force/ divide and rule; and b. Christianization
Lesson 3:		Political Changes During the Spanish Period	The impact of colonial policies implemented by Spain in the country is analyzed: A. Economic policy (Example: Taxation, Bandala System, Galleon Trade, Tobacco Monopoly, Royal Company, Forced Labor, and others); and B. Political policy (colonial government)
Lesson 4:		Economic Changes During the Spanish Period	
II.	Parts and Features of the	a. Home (Dear Learners) b. The Teachers'	g. The Five Least Learned Competencies and its Units and Lessons

electronic module	Corner	h. Glossary
	c. About the Social Studies subject	i. Index
	d. Learning Competencies	j. About the Author
	e. Tips for Understanding Icons	k. Contacts
	f. Table of Contents	

CONCLUSIONS

The following conclusions were reached in light of the findings presented above:

The results showed that social studies 5 teachers perceived that there were still competencies least learned by the learners. They are now more challenged by how to make their learners understand social studies concepts, how to deliver engaging lessons, how to present lessons when there are various types of learners and races in their classroom, and how to reach learners in various places due to limitations brought about by the COVID-19 pandemic. Since children represent the future, teachers' creativity in teaching plays an integral role in nurturing learners' skills and knowledge and empowering them for the challenging future of an advanced society. As facilitators of learning, it is vital that teachers provide engaging, collaborative, and real-life tasks and activities that learners can understand and relate to in order to produce citizens adequately prepared for 21st Century society. In addition, among the various instructional materials, this electronic module may be an effective instructional material to address the least learned competencies of learners in social studies. The supplemental electronic module received positive feedback from teachers, attributing it to the various parts and features and the integration of 21st Century skills such as creativity, collaboration, critical thinking, and communication into the electronic module. These 4Cs are timeless, relevant, and highly valued, not only in the classroom but also in other professions, and thus could greatly contribute to and assist learners to thrive in today's world. Finally, the developed electronic module may be an effective instructional material that provides resources, support, and directions to both teachers and learners and provides them with enrichment and assessment tools for learning social studies 5, equipping them with the knowledge and skills they need to succeed in today's digital society. It also highlights the relevance and significance of the developed 21st Century skill-based electronic module, which, when used, may supplement knowledge and cultivate skills. Overall, the electronic module intends to cultivate a collaborative classroom climate, empower learners to think critically, fortify learners' sense of creativity through technology integration, and develop communication skills needed for 21st Century society.

Recommendations

This research aims to raise new perspectives on the development of a 21st Century skill-based electronic module for teaching and learning social studies. In view of this, the following recommendations are advanced: To keep up with the changes, the Department of Education may have to revisit traditional educational paradigms with a futuristic approach. To accommodate more schools and learners in the teaching of social studies, DepEd may also produce this electronic module in another language, such as Filipino. Learners should also be adept at the skills set by fast-changing technology. The Department of Education may also conduct technology enrichment programs, seminars, and training for educational

members in order to supplement their knowledge of technological equipment and online applications and become effective facilitators of learning, resulting in learners who are innovative and creative future citizens, capable of adapting to the use of new technologies. Teachers who work closely with learners and young people may help them develop and achieve their goals by ensuring that they have access to high-quality education, advanced technology-integration for teaching and learning processes, and guidance services. Teachers who can model creative ways of thinking, engage with content in a playful manner, and express their ideas will positively produce creative learners. It is important to provide learners with interactive and collaborative tasks and activities they need to perform in order for them to demonstrate what they know and are able to do. Thus, teachers may use a variety of teaching methods to instill necessary skills, knowledge, and values in future leaders, professionals, and innovators in a fun, engaging, and creative manner. They may also explore other effective teaching strategies for transmitting learning by attending seminars, workshops, or continuing education. A follow-up study may also be conducted on the vague parts of this study to glean a holistic view of this phenomenon. Other researchers may use the same topic in other institutions to verify, amplify, or negate the findings of the study. Further studies on the same topic, but adding or using other variables, may be undertaken.

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