

# Development of E-Learning Material in Social Studies for Learners with Hearing Impairment: A Response to the Demands of 21<sup>ST</sup> Century Education

Pio Sandino L. Mendinueta, LPT, MASocStEd

Email address: piosandino.mendinueta@gmail.com

**Abstract** – This study is a response to the individualized and specialized needs of learners with hearing impairment. The purpose of this is to provide scaffold among learners with hearing impairment through the development of e-learning material. It sought to determine the learning materials used by teachers in teaching learners with hearing impairment, the problems they encountered in using those learning materials, and the e-learning material which may be developed in social studies for the said learners. The study utilized a case study method for the conduct of research, purposive sampling for the selection of respondents, and evaluation rating sheet and interview guide as tools for gathering data. The study revealed that the learning materials used by SPED Teachers were classified along print, non-print, and other resources. Print resources include learning activity sheets and learning modules, non-print resources include slides, maps, and globe, while other resources include flashcards. The problems encountered by SPED Teachers are lack of resources available in school, difficulty in conveying some words and concepts, limited illustrations, and absence of face-to-face classes. Thus, recorded video lessons with sign language and captions were developed as proposed e-learning material in teaching Social Studies to learners with hearing impairment. To fulfill its purpose, the study recommends the provision of seminars, workshops, and training, proper allocation of time to work on ready-made learning materials, revisiting the distribution of teaching loads, provision of additional learning materials and resources, and investing on quality resources.

**Keywords**– E-learning Material, Learners with Hearing Impairment, SPED Center.

## I. INTRODUCTION

Students are now living in the 21st century where learning experiences are no longer limited in the four corners of the classroom. The swift advancement of information and communications technology (ICT) has resulted in considerable alterations in the education sector; ranging from enabling innovative ways for individuals to learn and collaborate, to altering teaching and learning methodologies. As time goes by, there are so many innovations made in the educational system especially in the teaching-learning processes. In different schools, both teachers and students are no longer limiting themselves in the traditional ways of instruction but are already shifting into innovative ways.

One of these innovative ways is the use of e-learning which has been introduced by scholars as a tool in the learning process in most of the international universities. The term “e-learning” refers to any learning that involves the use of the internet or intranet. It also refers to anything that is being delivered, enabled, or mediated by electronic technology for the explicit

purpose of learning (El-Seoud et al., 2014). Although the term e-learning and e-learning tools have existed for over a decade, the educational research field should give attention on how they can be maximized efficiently and effectively. For e-learning to be successful, effective, and of quality, it must be designed and constructed with care, using a scientific approach which embraces well designed procedures and techniques (Colette, 2011).

E-learning has grown in significance as an educational tool just like how technology has developed and progressed over the years. Interestingly, there have been more efforts at advancing technology than on attempting to understand the needs and learning styles of individual learners and instructional design (El-Seoud et al., 2014). The 21st century has seen rapid progress with such things as the internet and online learning. Indeed, e-learning offers more opportunities for both teacher and students. It makes the work of the teacher easier while it makes the learning experiences of students more interesting.

The presence of e-learning as a means of instruction will be beneficial not only to selected learners but to all. This includes the learners with special educational needs given the fact that they are experiencing difficulties when mixed with regular learners. It can be noted that developments in e-learning and technologies are creating the groundwork for a revolution in education, allowing learning to be individualized, enhancing learners’ interactions with each other, and transforming the role of the teacher (Suresh et al., 2018). These learners with special needs experience social exclusions primarily in the rise of online learning during the pandemic. Further, most students with special needs were challenged by the limitations of assistive technologies and internet connectivity (Dianito et al., 2021).

Students with special educational needs indeed have their own learning needs which are highly individualized and specialized compared to regular students. According to UNICEF, students having special needs face different forms of discrimination leading to their exclusion from the society and school. Many children around the world are excluded from society because of disability, race, language, religion, gender, and poverty (Open Society Foundations, 2019). With this, countries all over the world are encouraged to put forward rights of everyone against all forms of discrimination. Stipulated in the Conventions on the Rights of the Child (CRC) and the Education for All (EFA) framework is to provide equal access to quality education regardless of race, religion, etc., including

disabilities (UNICEF, 2007). Most children with special needs face daily discrimination in the form of negative attitude, lack of concrete policies or legislation barring them from realizing their rights to health care, education and even survival (UNICEF, 2013).

To promote the fundamental rights of persons with special needs, the United Nations has crafted several declarations and elaborated previous efforts to promote rights of disabled persons set out in the World Programme of Action Concerning Disabled Persons of 1982 and 1993 (Department of Economic and Social Affairs Disability, 2006). In response to this UN declaration, government institutions around the world have exerted efforts to cater people with special needs. One of these efforts is providing them access to education.

In the Philippines, the Department of Education (DepEd) is already implementing programs so that all learners will have equal access to education regardless of their culture, ethnicity, and status. One of these programs is inclusive education which is mandated in RA 10533 otherwise known as Enhanced Basic Education Act of 2013. Section 8 of the said law gives emphasis on the inclusiveness of Enhanced Basic Education, which means the implementation of programs designed to address the physical, intellectual, psychosocial, and cultural needs of learners which shall include but shall not be limited to Programs for the Learners with Disabilities (Enhanced Basic Education Act, 2013). In support to this program of inclusive education, the Philippine Congress passed RA 11650 otherwise known as Inclusive Education Act of 2022. This law highlights three major reforms in the Philippine Educational System which include integration of inclusive education in both public and private schools, establishment of Inclusive Learning Resource Center (ILRC) in cities and municipalities and having a separate budget allocation (Inclusive Education Act, 2022). This newly signed law would be of great help to the learners with special educational needs as well as to their parents.

Further, RA 7277 otherwise known as “Magna Carta for Disabled Persons, and for Other Purposes” was passed by the congress to ensure that persons with disabilities have the access to education (Magna Carta for Disabled Persons Act, 1992). Learners with special educational needs who experience difficulties in learning the basic education curriculum need a modified or functional curriculum, as well as differentiated special education curriculum to help them attain their potential (Heward, 2013). For this reason, DepEd Order No. 26, s. 1997 was issued requiring all divisions to organize at least one Special Education Center (SPED Center) to cater to children with special needs (Department of Education, 1997). Special education is part of the DepEd’s basic education program. Beginning modestly in 1907, special education has evolved into a crucial component of the fundamental education curriculum in primary and secondary institutions (Bureau of Elementary Education, 2000). There are special education programs being offered in various public elementary and private schools in all the regions of the country. With this, learners with special educational needs will be given more opportunities to access individualized and specialized learning.

However, the education system in the Philippines has been beleaguered with issues and difficulties particularly on its

logistics, from the deficiency of instructional resources, facilities and even schools to underpaid but overworked teachers (Garcia, 2017). Not all Special Education Centers (SPED Center) in the Philippines can cater the different learning needs of the students with special needs (Briones et al., 2016). They still need teachers who are specialized and skilled in teaching those learners. They also need more facilities and materials to cater the different learning interests of those learners. By proliferating and integrating e-learning technology in the Philippine educational system especially in SPED Centers, the transformation of teaching and learning process will increase the academic achievements of learners. It is because e-learning technology can promote the inclusion of students with various special needs in education (Bjekec et al., 2014). Additionally, the incorporation of technology seems to be an effective approach in instructing students with special requirements, whether the technology is in software or hardware formats (Balmeo et al., 2014). Indeed, the use of e-learning has been proven to offer an alternative teaching and learning platform for students and teachers to engage on an academic level. This has been widely used for tertiary course delivery, to the extent that some universities offer their courses purely online. However, e-learning can also be used in teaching learners with special needs.

Department of Education aims to promote quality education to all learners. However, not all learners are able to experience this. Among these are learners with special educational needs. Despite the mandate of RA 10533 otherwise known as Enhanced Basic Education Act of 2013, there are still learners with special educational needs experiencing difficulties in learning because of their individualized and specialized learning needs. Fortunately, the presence of Special Education Centers (SPED Centers) is a great help for these learners since they offer individualized and specialized instruction.

To respond to the individualized and specialized needs of learners with special educational needs, this study was conducted. The purpose of this study is to provide scaffold among learners with special educational needs, specifically learners with hearing impairment through the development of e-learning material. This e-learning material will be a great help to these learners especially in this time where asynchronous modality is often employed. Since the e-learning material is developed based on the individualized and specialized needs of the learners, there will be a higher chance of learning compared to the use of modules. This study firmly believes that the employment of e-learning material in delivering the lesson to learners with hearing impairment is one of the ways to give them quality education in the 21<sup>st</sup> century. To prove this belief, the researcher took the first step by conducting the research in Legazpi City SPED Center.

## II. STATEMENT OF THE PROBLEM

This study focused on the development of e-learning material in social studies for learners with hearing impairment. It sought to determine the learning materials used by the teachers engaged in teaching the said learners as well as the problems they encountered in using those learning materials. The data gathered from this was used to come up with an e-

learning material which is individualized and specialized. Specifically, this study aimed to answer the following:

1. What are the learning materials used by teachers in teaching Learners with Hearing Impairment along:
  - a. print resources;
  - b. non-print resources; and
  - c. other resources?
2. What are the problems encountered by teachers in using the learning materials to Learners with Hearing Impairment along:
  - a. print resources;
  - b. non-print resources; and
  - c. other resources?
3. What e-learning material may be developed in social studies subject for Learners with Hearing Impairment in Grades 4, 5, and 6?

### III. METHODS AND PROCEDURES

#### *Research Design*

The research focused on studying a specific subject which cannot be generalized. It was the development of e-learning material in social studies for learners with hearing impairment. To gain an in-depth knowledge about this specific subject, the researcher utilized a case study method of research. A case study method is often referred as a detailed study about a specific subject, such as a person, group, place, event, organization, or phenomenon. It is good for describing, comparing, evaluating, and understanding different aspects of a research problem. Case study usually involves qualitative methods, but quantitative methods are sometimes used. (McCombes, 2019).

In this study, both qualitative and quantitative methods are present. To get the needed data in the first and second statement of the problems, the researcher utilized an interview guide. On the other hand, to deepen the discussion on the third statement of the problem, the researcher utilized an evaluation rating sheet adapted from the Learning Resources Management and Development System (LRMDS) of the Department of Education (DepEd). To be precise, in the first statement of the problem, the researcher identified and examined the learning materials used by teachers in teaching social studies to learners with hearing impairment. This was done to have an in-depth understanding about those learning materials. Meanwhile, in the second statement of the problem, the researcher determined and described the problems encountered by the teachers in using those learning materials to come up with e-learning material that responds to the gaps of the existing materials and to the problems encountered by the teachers in using those materials. Lastly, in the third statement of the problem, the researcher determined the e-learning material which may be developed for learners with hearing impairment based on the gaps of the existing learning materials as well as the problems encountered by teachers in using those materials. The developed e-learning materials were evaluated and validated through the evaluation rating sheet for non-print resources by a seven (7) panel of experts who specialized in Special Education. This was done to have a deeper discussion of the developed e-learning material.

The instruments utilized to answer the statement of the problems in the study were interview guide which was validated by three (3) panel of experts and evaluation rating sheets which were adapted from the Learning Resources Management and Development System (LRMDS) of the Department of Education (DepEd). The interview guide was used to gather the needed data for the first statement of the problem which focuses on identifying the learning materials used by teachers in teaching social studies to learners with hearing impairment and the second statement of the problem which focuses on determining the problems encountered by teachers in using those materials. On the other hand, the evaluation rating sheet was used to deepen the discussion on the third statement of the problem. It was used by seven (7) panels who are experts in the field of special education to evaluate and validate the developed e-learning material. Therefore, the methods employed in collecting the necessary data utilize a case study research approach.

#### *Participants*

The respondents of the study were composed of three (3) teachers from the Special Education Center (SPED Center) of Legazpi City who are handling learners with hearing impairment. Among these three (3) respondents, one is teaching Grade 4, the other one is teaching Grade 5, and the last one is teaching Grade 6. The respondents were selected through purposive sampling, a type of nonprobability sampling which identifies respondents based on their knowledge about the study and population (Glen, 2015).

#### *Instrument*

The study utilized interview guide and evaluation rating sheet as tools in gathering the needed data. The interview guide was constructed by the researcher and validated by panel of experts. The panel of experts were composed of three members and were selected based on their field of specialization as well as degree of education. In terms of field of specialization, the panel of experts were involved in the field of education wherein two are teaching social studies while the other one is teaching subjects under professional education. In terms of degree of education, one possesses PhD, the other possesses MAEd, and the last possesses MPE. The interview guide is composed of open-ended questions about: (1) the existing learning materials being used by teachers in teaching social studies to learners with hearing impairment; (2) the existing learning materials which have been modified by the teachers; (3) the learning needs being addressed by the modified learning materials; (4) the characteristics of a good learning material in social studies for learners with hearing impairment; (5) the considerations to be observed in developing learning materials in social studies for learners with hearing impairment; (6) the problems encountered by teachers in using the existing learning materials; (7) the characteristics of a good e-Learning material in social studies for learners with hearing impairment; and (8) the considerations to be observed in developing e-Learning materials in social studies for learners with hearing impairment. All these open-ended questions were related to the statement of the issues in order to collect the necessary data for the study.



On the other hand, the evaluation rating sheet for non-print resources was adapted from the Learning Resources Management and Development System (LRMDS) of the Department of Education (DepEd). It was used to evaluate and validate the developed e-Learning material in social studies for learners with hearing impairment in Grades 4, 5, and 6. The evaluation rating sheet for non-print resources is composed of four factors which include content quality (Factor 1), instructional quality (Factor 2), technical quality (Factor 3), and other findings (Factor 4). Under each of these factors are set of criteria to ensure that the jurors who evaluate and validate will be guided accordingly. The developed e-learning materials were evaluated based on these factors. For a particular e-learning material to pass in terms of content quality (Factor 1), it must score at least 30 points out of a maximum 40 points. In terms of instructional quality (Factor 2), it must score at least 30 points out of a maximum 40 points. Further, in terms of technical quality (Factor 3), it must score at least 39 points out of a maximum 52 points. Lastly, in terms of other findings (Factor 4), it must score 16 out of a maximum 16 points. The evaluation and validation of the developed e-learning material were done to deepen the discussion in the third statement of the problem and most importantly, to ensure that the developed e-learning material would be useful to the teachers and learners involved.

#### *Procedures*

As soon as the research methodology was decided, the researcher prepared the materials needed. First, the researcher constructed a request letter and then it was forwarded to the Schools Division Office of Legazpi City to ask permission on conducting the study in Legazpi City SPED Center. While the letter was still in the process of approval, the researcher constructed an interview guide and looked for a standardized research instrument suitable in the study to be used as instruments in gathering the needed data. Next, the research instrument, primarily the interview guide together with a rating scale was sent to three (3) jurors who have expertise in the field of study for validation.

Upon validation of the interview guide and receipt of approval for the letter, the researcher assembled the resources required to carry out the study. During the conduct of the study, the researcher provided copies of request and consent letters to the participants. Upon their approval, the researcher distributed the interview guide to be answered by the participants. Distribution of interview guides was observed instead of having interviews due to their busy schedule. Although, it should be noted that additional data were asked from the participants virtually during their free time. The data gathered through the interview guide were used to answer the first and second statement of the problems. The data gathered were also used to strengthen the e-learning material developed.

After gathering the needed data, the researcher began the preparations for the development of e-learning material. Upon the development of e-learning material, it was forwarded to seven (7) experts in the field of Special Education for evaluation and validation. After the evaluation and validation, the researcher arranged all data according to the statement of the

problems. Then, it was followed up by critical analysis and interpretation to provide objective discussions. After the researcher finished the analysis and interpretation, the data was presented systematically in the study. Lastly, findings, conclusions, and recommendations were drawn based on the data presented in study.

#### *Ethical Considerations*

Ethical considerations are critical in the conduct of a research. With this, the researcher observed utmost considerations in conducting the study. First, only the truth was included in the discussion. Second, interview with the respondents were only done upon their approval of the request and consent letters. Simple and careful questions were indicated in the interview processes. The researcher also reassured the participants that no damage will be inflicted in their professional and personal life. Lastly, the researcher swore to take responsibility and accountability to guard the respondents from whatever harm that could happen or anything that could place them at a disadvantage.

#### **RESULTS AND DISCUSSION**

##### *Learning materials used by teachers in teaching Learners with Special Educational Needs*

The teachers of Legazpi City SPED Center teaching Araling Panlipunan 4, 5, and 6 to learners with hearing impairment are utilizing various learning materials. Among the learning materials they use include learning activity sheet (LAS), learning module, slides or PowerPoint presentation, map, globe, and flashcards. These learning materials were classified along print resources, non-print resources, and other resources. Learning activity sheet and learning module fall under print resources while slides or PowerPoint presentation, map, and globe fall under non-print resources. Meanwhile, flashcards fall under other resources.

Utilizing varied learning materials is essential to the learning of learners especially in the case of learners with hearing impairment. To help these learners learn meaningfully, teachers should not just focus on using specific learning material but explore a variety of it. This should be done since a particular learning material could not always fit all learners. According to Buenaventura (2015), Special Education Centers should have enough facilities, training of teachers to handle specific development cases, and instructional materials to deliver special education to offer quality SPED programs. Ensuring that there are enough learning materials is essential for teachers to be ready in handling various learners and situations. For instance, during asynchronous classes, print resources which include learning modules and learning activity sheets are the primary learning materials being used. Non-print resources including slides, map, and globe as well as other resources including flashcards were set aside. This reminds teachers that having enough instructional materials would enable them to become ready in facing different learners and situations. Further, some learning materials fit a particular group of learners and situations while some fit others. Thus, teachers should be able to know these varied learning materials

and familiarize their strengths and weaknesses so that they could be able to maximize their potential.

Further discussion is presented below to determine the existing learning materials along print, non-print, and other resources being used by the teachers in teaching Araling Panlipunan 4, 5, and 6 to learners with hearing impairment as well as to have a deeper understanding about each one of them.

*a. Print Resources.* For print resources, the researcher found out that there are two learning materials being used in teaching Araling Panlipunan to learners with hearing impairment. These are the learning activity sheets and learning modules. The former is being used by Teacher 1 in teaching Araling Panlipunan 4 while the latter is being used by Teacher 2 and Teacher 3 in teaching Araling Panlipunan 5 and 6 respectively.

#### Teacher 1

Teacher 1 identified learning activity sheet (LAS) as one of the learning materials she is using in teaching Araling Panlipunan 4 to learners with hearing impairment. Learning activity sheet is the only learning material under print resources which she is using. According to her, *"I am using LAS as an alternative learning material during asynchronous classes."* This implies that absence of face-to-face classes gives teachers certain limitations as to what learning materials they could use in teaching Araling Panlipunan and even other subjects to learners with hearing impairment. According to Melron (2020), unavailability of gadgets and poor internet connection were among the factors that conflicted with the delivery of quality education to the learners during distance learning. Therefore, teachers at Legazpi City SPED Center turn to learning activity sheets and learning modules.

The learning activity sheet being used by Teacher 1 during asynchronous classes is a substitute to the learning module since it caters the needs of learners with hearing impairment compared to the latter. According to Teacher 1, *"We have standardized learning modules, but I do not adapt these since I am using LAS. Although, the content and activities I included in the LAS are taken from the modules. It is just that, I am simplifying them."* Teacher 1 added, *"I am using LAS because it is difficult for HI learners to understand the modules given by DepEd."* This implies that the decision of the government to call off face-to-face classes during unexpected circumstances becomes a great challenge for many schools to operate as well as for teachers to maximize the learning materials they have.

It can be noted that schools are given the option to resort on synchronous or asynchronous modality during unexpected circumstances (*ex. rise of heat index*). However, many public schools including Legazpi City SPED Center usually resort to asynchronous modality. As a result of this, the teachers depend on the use of print resources. In the case of Teacher 1, she tends to utilize learning activity sheet as a substitute to the learning module since she believes that it is more efficient and effective compared to the latter. According to Narvekar (2020), the closure of schools disrupts the learning process of students. Pupils and teachers are not required to go to school to carry out the teaching and facilitation process as usual. Thus, there is a process of distance learning, where teachers supply teaching and training materials to students from their homes. The implementation of asynchronous modality together with the

limited resources have left some teachers no other choice but to resort to the use of print resources like learning activity sheets and learning modules.

It can be noted that in the preceding paragraph, Teacher 1 mentioned that she is using a learning activity sheet instead of a learning module since learners with hearing impairment have trouble in understanding and manipulating the latter. According to Teacher 1, *"The LAS which I am using is just a simplified version of the modules provided by DepEd. I just removed some words, concepts, activities, and assessments which are difficult to convey to HI learners and replaced some of them with the ones which are suitable with their level."* This implies that Teacher 1 is doing certain modifications in the print resource to accommodate the learning needs of learners. Instead of just using the standardized learning module provided by DepEd, Teacher 1 created her own learning activity sheet supported with discussions, activities, and illustrations suited to the said learners. The said learning material is created to ensure that it is not only aligned with the learning competencies but also with the learning needs and interests of the learners. As a result, it would help the learners to learn even during asynchronous learning. However, appropriate guidance from the parents must be considered. According to Harnoso (2017), materials should consider that learners differ in learning styles. Not all learners have the same learning styles. Hence, considering the learning style of learners with hearing impairment by providing discussions, activities, and illustrations suitable to them would help them learn meaningfully.

#### Teacher 2

Teacher 2 identified learning module as one of the learning materials he is using in teaching Araling Panlipunan 5 to learners with hearing impairment. Learning module is the only learning material he is using under print resources. When Teacher 2 was asked about the learning material he is using under print resources, he said, *"What I am using during asynchronous classes are modules."* This implies that asynchronous modality offers limitations as to what learning materials can be used by the teachers.

Like the learning activity sheets, learning modules in Araling Panlipunan 5 are being used during asynchronous classes. These modules were provided by the Division office of Legazpi. When the teacher was asked why he is using a learning module instead of a learning activity sheet, he answered that modifying learning modules consumes so much time. According to him, *"I just use the modules provided to us instead of LAS. This is because modifying it consumes so much time."* This implies that there are teachers, including Teacher 2, who prefer to use a learning module rather than learning activity sheet during asynchronous classes. This might be because of certain reasons like the number of preparations they have. It can be noted that Teacher 2 handles all subjects in Grade 5. This means that if he is going to use a learning activity sheet, he must prepare for all the subjects in the said grade level. So, working on it would consume so much time. According to Rosanes (2020), teachers saddled with an excessive workload in their careers are more likely to have their positive classroom management methods derailed. Hence, instead of devising a more effective and responsive learning material, Teacher 2 just

decided to adapt the modules provided by the Department of Education.

Teacher 2 added, *"We are handling all subjects in the grade level where we are assigned. If I am going to modify the modules, that means I must prepare for all subjects. It will consume much of my time because I am also a coordinator."* This implies that modification of a certain learning material is not easy for some of the teachers in the public schools because of certain factors. In the case of Teacher 2, he is having trouble modifying the learning modules and creating a learning activity sheet because of the teaching loads he has. Since he handles all the subjects in the grade level assigned to him, it becomes difficult and time consuming for him to modify the learning modules. Indeed, modification of a certain learning material is necessary to accommodate the learning needs and interest of the learners. Nevertheless, teachers must also be allotted sufficient time to focus on modifying the learning materials and to reduce their administrative responsibilities. By doing this, the needs, and interests of the learners with hearing impairment could be accommodated. According to the Center for Parent Information and Resources (2020), for numerous students with disabilities—and often for many without—success in the classroom is contingent on having suitable adaptations, accommodations, and modifications applied to instruction and other classroom activities. Adaptations, accommodations, and modifications must be tailored for students, depending on their needs as well as their individual learning styles and interests. Hence, by doing appropriate modifications in the learning materials, teachers would be able to ensure that the learners are learning, and their needs are being accommodated even in times when the modality is modular distance learning.

#### Teacher 3

Teacher 3 identified learning module as one of the learning materials she is using in teaching Araling Panlipunan 6 to learners with hearing impairment. This learning material falls under print resources. According to Teacher 3, *"What I am using during asynchronous classes is the learning module provided to us by the Division office."* This implies that the absence of face-to-face classes results in the limitations of learning resources which could be used by the teachers. For this reason, the teachers would also experience limitations as to the teaching approaches and strategies they could employ. On the other hand, the learners including learners with hearing impairment would experience limitations in terms of learning experience. Hence, the absence of face-to-face classes and the learning modality being used by different schools, have a great impact on the choice of learning materials which could be used by teachers. According to Magsambol (2020), to ensure that learning continues uninterrupted, DepEd will implement a distance learning approach – a method of delivering education where communication occurs between the educator and the learners who are spatially distant from one another during teaching. This indicates that lessons will be conducted outside the conventional face-to-face environment. It was mentioned in this study that technology and internet connectivity remain a problem for most students which become reasons why teachers experience limitations as to resources which they could use. So,

most of them resorts in the use of print materials like learning activity sheets and learning modules.

The learning module being used in teaching Araling Panlipunan 6 comes from the Schools Division of Legazpi and is being used in times when distance learning modality is being observed. According to her, *"The learning modules which the teachers in the school are using come from Legazpi City Division."* When the teacher was asked why she is using a learning module instead of a learning activity sheet, she answered that it would be time consuming because she handles all subjects in the grade level assigned to her. According to her, *"Since I am handling all subjects, it would be difficult for me to create learning activity sheets. We are also tasked to perform other duties like being a coordinator and preparing paper works."* This implies that some teachers, including Teacher 3, prefer to use the existing learning materials they have because of the amount of work they have. In the case of Teacher 3, she just adapts the existing learning material which is the learning module because she has other duties to perform in the school. Hence, teachers should be given appropriate loads so that they could also focus on preparing learning materials suitable to the learners involved. According to Jomud et al. (2021), workload also affects teachers' performance. To prevent stress and exhaustion, it is advised that each school administrator follow appropriate workload distribution. For Teacher 3, she resorts to the use of learning modules provided by DepEd because of the limited time she has for the preparation of other learning materials.

It should be noted that the learning module being used by Teacher 3 in teaching Araling Panlipunan 6 is already standardized. The teacher does not make any modifications at all. According to Teacher 3, *"I do not make any modifications in the learning modules because I am handling all subjects in Grade 6. It will become time consuming if I modify it."* She also added, *"Aside from all the subjects I am handling, I also have other duties like being a coordinator and preparing paper works."* This implies that some teachers do not modify the learning materials they use in teaching despite the advantages which it could offer towards the learning of the learners. This is not because they don't want to but because it is difficult for them. In the case of Teacher 3, she is not modifying the learning module because she is a coordinator, and she has a lot of paperwork to prepare. Indeed, modification is necessary to accommodate the various learning needs and interests of the learners. So, teachers should be given an appropriate load so that they could also give their best. According to Villamero (2014), teachers should modify the content and delivery of the lesson based on the needs of the children. The content modification must consider the use of the child's native language, and the length and level of difficulty of the assessment. Hence, doing this would allow learners to understand the lesson and learn meaningfully.

*b. Non-print resources.* For non-print resources, the researcher found out that there are three learning materials being used in teaching Araling Panlipunan to learners with hearing impairment. These are the slides, map, and globe. Slides and map are being used in teaching Araling Panlipunan 4, Slides, map, and globe are being used in teaching Araling Panlipunan



5, while only Slides is being used in teaching Araling Panlipunan 6. However, it must be noted that map and globe are being used as supplementary learning materials on teaching certain topics. These may be supplementary learning materials for visual presentations like slides or PowerPoint when discussing topics like 1. *Ang Kinalalagyan ng Pilipinas*; 2. *Hangganan at Lawak ng Teritoryo ng Pilipinas*; 3. *Ugnayan ng Pilipinas sa Heograpiya nito*; 4. *Paghubog ng Kasaysayan ayon sa Lokasyon*; at 5. *Pinagmulan ng Pilipinas*.

#### Teacher 1

Teacher 1 identified slides and map as the learning materials under non-print resources which she is using in teaching Araling Panlipunan 4 to learners with hearing impairment. Slides is being used to deliver a particular lesson. On the other hand, map is being used as supplementary material for certain topics such as: 1. *Ang Kinalalagyan ng Pilipinas*; 2. *Hangganan at Lawak ng Pilipinas*; at 3. *Ugnayan ng Pilipinas sa Heograpiya nito*. According to Teacher 1, "*Aside from LAS, I am using PowerPoint and map.*" This implies that there are certain learning materials which are more useful and effective in teaching particular students in face-to-face classes. For instance, slides are more useful and effective in teaching learners with hearing impairment in face-to-face classes since most of the said learners are visual learners. According to Monash University (2021), learners with hearing impairments are proficient visual learners who can mentally retain and manipulate visual information. Hence, with the aid of slides especially the large texts and illustrations in it, learners would be able to understand the lesson. On the other hand, map is more useful in face-to-face classes since the teacher could be able to guide the learners on how to use it at the same time the teacher could ensure that the learners would be able to understand the lesson by providing sign language. According to Murray, Hall, and Snoddon (2020), early immersive exposure to a natural language plays a critical role in the neurocognitive and linguistic growth of every child. For the majority of deaf children, access to a signed language meets this essential requirement, given that unrestricted access to spoken language is not feasible. Hence, these learning materials are more useful and effective in face-to-face classes since the teacher could ensure that the learning needs of the learners are being accommodated.

As mentioned in the preceding paragraph, slides and map are being used by Teacher 1 in teaching Araling Panlipunan 4 to learners with hearing impairment in face-to-face classes. Slides are being used as primary learning material while map is being used as supplementary learning material. When Teacher 1 was asked for the reasons on why she is using the said learning materials, she answered, "*PowerPoint is convenient in teaching HI learners especially if you are presenting topics which need illustration. On the other hand, I use map in discussing some topics which need its use.*" This implies that slides offer more convenience compared to other learning materials in teaching Araling Panlipunan 4 to learners with hearing impairment since most of them are visual learners. On the other hand, map aids in achieving certain learning competencies in the lesson. Without a map, the said learners would have trouble in achieving those competencies. Hence, slides and map should be

recommended in teaching Araling Panlipunan to learners with hearing impairment. However, slides should consider using illustrations and large texts while map should consider using large print to accommodate the said learners. According to Inverso (2021), to support students with hearing impairment, it is necessary to use lots of pictures, graphics, and text labels since many of students with hearing impairment are visual learners. Hence, considering the use of illustrations and large prints in the said learning materials would enable the learners to learn the concepts being presented.

It should be noted that in teaching learners with hearing impairment, modifications are necessary. When the teacher was asked if she employs modifications in the slides and map, she answered, "*I only employ modifications for PowerPoint but not for map because it is already standardized.*" Teacher 1 added, "*In the PowerPoint presentation, I incorporate large text and pictures to suit the needs of the HI learners.*" This implies that modifications in the learning materials like slides is necessary to accommodate the needs of learners with hearing impairment. It is important to take note that in the modification of slides, texts and illustrations are given emphasis. Teachers should ensure that the said learning material would feature large texts and illustrations to suit the learning needs of the learners and to help them learn meaningfully. On the other hand, teachers, including Teacher 1, should consider modifying the map which they are using. They may print a personalized map with large print to respond to the learning needs of the learners. Hence, by observing these modifications, learners would be able to learn effectively. According to Wisconsin (2019), to be effective for all students, classroom learning environments must be responsive to a broad range of needs among a diverse student population. These varied needs encompass cultural and linguistic distinctions as well as developmental stages, academic preparedness, and learning preferences. Indeed, considering the diverse needs of learners including learners with hearing impairment by doing modifications to the learning materials being used in teaching them is necessary to accommodate their learning needs and to help them learn meaningfully.

Lastly, slides and map are useful and effective inside the classroom since the teacher could be able to use sign language which is necessary for learners with hearing impairment to learn effectively. Although, one thing which must be considered by teachers is using large prints in the map to help learners recognize its content. According to UNESCO (2005), learning and teaching materials (LTM) should be age-appropriate and consider different linguistic environments, local and indigenous knowledge, skills, and materials as well as the background and needs of learners. It must also adapt and respond to the diverse needs of all learners 'in a wide range of cultural contexts, economic conditions, and educational settings', as well as personal situations. Hence, using large texts and illustrations in the learning materials as well as incorporating sign language while using them would allow learners with hearing impairment to understand the lesson clearly.

#### Teacher 2

Teacher 2 identified slides, map, and globe as the learning materials under non-print resources which he is using

in teaching Araling Panlipunan 5 to learners with hearing impairment. Slides are being used inside the classroom to deliver a lesson. On the other hand, map and globe are being used as supplementary material for certain topics in Araling Panlipunan 5 such as: 1. *Paghubog ng Kasaysayan ayon sa Lokasyon.*; at 2. *Pinagmulan ng Lahing Pilipino*. According to Teacher 2, *"In face-to-face classes, I use PowerPoint presentation to teach Araling Panlipunan 5. I also use map and globe."* This implies that there are certain learning materials which are fundamental and essential in teaching Araling Panlipunan 5 to learners with hearing impairment. These learning materials are more effective in teaching the said subject and type of learner. To be specific, most learners with hearing impairment are visual learners. This means that using slides would be convenient since the teacher could incorporate large texts and illustrations. On the other hand, Araling Panlipunan 5 covers the field of geography. So, using map and globe would be needed to help learners understand the lessons demanding for their use. Although, using large prints in the map must be considered by the teacher to make it more effective. In support of this, the research by Marschark et al. (2021) indicates the need for changes in instructional materials and methods to meet the requirements of deaf and hard-of-hearing students and to leverage their strengths. Hence, teachers should use learning materials like slides, maps, and globes which are modified.

Slides, map, and globe are being used by Teacher 2 in teaching Araling Panlipunan 5. Slides are being used as primary learning material while map and globe are being used as supplementary learning materials in teaching certain topics. According to Teacher 2, *"I am using PowerPoint presentation on a case-to-case basis. If there is an available projector, then I will use it. The same with map and globe. I also use them on a case-to-case basis like when a certain lesson needs them."* Teacher 2 also said, *"Using PowerPoint presentations is good and convenient for HI learners especially if using illustrations. It is just that we lack resources like projector. So, our use for the material is limited."* Teacher 2 added, *"In the case of map and globe, it is difficult since they have small prints. It is difficult for HI learners to understand concepts in small prints."* This implies that slides are suitable in teaching Araling Panlipunan 5 to learners with hearing impairment since most of them are visual learners. Using slides would allow teachers to incorporate large texts and illustrations that will help learners understand the lesson clearly. However, despite the advantages it offers, there are still some challenges which should be addressed to maximize its use including the lack of projectors available. If this challenge would be addressed, the teachers would be able to maximize the use of slides. On the other hand, learners would be able to have a meaningful learning experience. The study of Allam & Martin (2021) revealed that the classrooms for children with learning disabilities in Division of Ilagan at large have poor learning environment to support the SPED such as lack of budget, curriculum guide, instructional materials (IMs) and even school facilities. Indeed, slides can be considered as an effective learning material for learners with hearing impairment especially if it's used properly. However, the advantages it offers is being hindered by lack of resources which should be addressed immediately to

help them have access to quality education. In the case of map and globe, teachers should do some modifications like using large prints to maximize their use. According to Stearns (2022), many of the students who are deaf or hard of hearing are visual learners. This indicates that they truly learn new concepts more effectively when they are able to observe their thought processes. Graphic organizers and photographs are helpful tools for visual learners. These images assist many deaf pupils in structuring their thoughts and expressing themselves without the use of sound.

It should be noted that modifications and accommodations are necessary in teaching learners with hearing impairment. When Teacher 2 was asked if he does some modifications in the learning materials under non-print resources he is using, he answered, *"Yes, except map and globe. I modify the PowerPoint I am using by using large prints since HI learners have trouble in reading words in small prints."* Teacher 2 also added, *"Actually, modification of the learning material is hard because we are handling all subjects, and we also perform other functions."* This implies that modification of learning materials is necessary especially in the case of slides since it is being used as a primary learning material. This modification should revolve mainly in enlarging the texts and using illustrations to respond to the needs of learners with hearing impairment since most of them are visual learners. In terms of map and globe, teachers should also do modifications like using large print to make it suitable to the learners. Hence, modification of a learning material in Araling Panlipunan is necessary to accommodate the learning needs of the learners and help them learn meaningfully. In support of this, the Center for Literacy and Disabilities Studies (2015) argues that because every student with a disability has complex and unique needs, the strategies and tools of instruction must be constantly modified so that each student can succeed at learning.

The above-mentioned learning materials classified under non-print resources are being utilized inside the classroom. According to Teacher 2, *"I use all of those materials but on a case-to-case basis only."* Teacher 2 added, *"I use PowerPoint in delivering my lessons while map and globe are for locating places."* This implies that there are certain learning materials in Araling Panlipunan 6 which could be maximized inside the classroom. Since slides is being used in delivering a lesson, it would be necessary if it will be used inside the classroom since using it demands a teacher's presence. Teacher's presence is necessary in using slides to teach learners with hearing impairment since s/he is expected to provide sign language. It should be noted that sign language is necessary in teaching the said learners. According to the National Deaf Children's Society (2022), for many children with profound to severe hearing loss, who get little or no benefit from hearing technology, sign language provides vital access to language and communication. For many deaf children it is their first language and the language through which they are educated. On the other hand, map and globe are being used as supplementary learning materials. To maximize their use, it would be necessary that they have large print to enable learners recognize different places and understand its content. In support of this, Walsh (2018) concluded that to make students with special needs



become successful academically, teachers should promote active participation and collaboration among all students. Hence, using map and globe with large prints would enable the learners to actively participate since these materials respond to their needs.

### Teacher 3

Teacher 3 identified slides as the learning material under non-print resources which she is using in teaching Araling Panlipunan 6 to learners with hearing impairment. This learning material is being used inside the classroom to deliver a lesson. When Teacher 3 was asked about the learning material she is using under non-print resources, she answered, *"PowerPoint presentation."* This implies that slides are among the most common learning materials used inside the classroom because of the advantages it offers. Among these advantages, but not limited to, easy manipulation of the content of lesson and suitable to learners with hearing impairment since most of them are visual learners. According to Rice (2017), one of the tips for teachers who work with hearing impaired and deaf student is to use lots of pictures and graphic organizers since these kids are visual learners. With this, teachers should consider the use of slides supported with pictures in teaching the said learners. Indeed, slides is an ideal learning material in teaching learners with hearing impairment. However, maximization of this learning material is challenged by lack of resources in certain schools like projector.

The slides being used by Teacher 3 in teaching is considered as a primary learning material in delivering lessons. When Teacher 3 was asked about her reason for using slides, she answered, *"HI learners are commonly visual learners. They learn more with the aid of illustrations. So, by using a PowerPoint presentation, it is easier to incorporate illustrations."* She also added, *"The problem is the lack of a projector in the school. Which is why it is challenging to use a power point."* This implies that slides are advisable to be used in teaching Araling Panlipunan 6 to learners with hearing impairment since most of them are visual learners. With the aid of the slides, teachers would be able to incorporate large texts and illustrations which would respond to the learning needs of the learners. This suggests that they truly grasp new concepts more effectively when they can visualize their thoughts. Visual learners gain advantages from engaging with images and graphic organizers. For many deaf students, these visual aids assist them in structuring their thoughts and communicating without depending on auditory input. However, certain challenges including the lack of projectors should be addressed to maximize its use.

It should be noted that among the considerations which must be observed for a certain learning material to become effective are modification and accommodations. When Teacher 3 was asked if she modifies the slides she is using, she answered, *"I do modifications in the PowerPoint in terms of text and presentation itself. I make the text larger, and I add pictures to help HI learners understand the topic."* This implies that modification in the slides is necessary to ensure that its effectiveness when used in teaching learners with hearing impairment. Since most of these learners are visual learners, teachers, including Teacher 3 should always incorporate large

text and illustration in the learning material so that they would be able to understand the lesson. In support of this, University of Texas at Austin (2022) recommended ways for working with students who are deaf or hard of hearing. One of which is the use of visual aids such as chalkboards, overhead projectors, diagrams, charts, etc.

The said learning material which is the slides is being used mainly in the classroom. According to Teacher 3, *"I am using a PowerPoint presentation in some of my discussions in AP 6. Since it tackles about history, I must present illustrations for the students to understand the lesson."* This implies that slides could be maximized in teaching learners with hearing impairment when used inside the classroom since the teacher could be able to explain the lessons clearly with the aid of large texts and illustrations. Also, these learners need the presence of teacher to do sign language so that they could understand the lesson. As noted by Fraser (2020), deaf children must utilize all the available cues to comprehend what is being communicated. Additional visual information will aid children in understanding the topic being discussed, including subtitles on a movie, text, visuals on the smartboard, and tangible examples of new and unfamiliar concepts. By implementing this approach, the requirements of learners with hearing impairments would be addressed. Hence, the said material is more effective when used inside the classroom with the presence of a teacher to do the sign language.

*b. Other resources.* Other resources used by teachers in teaching learners with hearing impairment include only Flashcards. The Flashcards being used by the teacher include National Heroes. The researcher found out that it is being utilized only by Teacher 3 in teaching Araling Panlipunan 6.

### Teacher 3

Teacher 3 identified Flashcards as one of the learning materials which she is using in teaching learners with hearing impairment. However, this learning material falls on neither print nor non-print resources. Instead, it falls under other resources. When Teacher 3 was asked about the learning material she is using which falls under other resources, she answered, *"I also use flashcards in my discussion."* Teacher 3 also added, *"The flashcards which I am using include National heroes."* This implies that the learning materials being used by Teacher 3 in teaching Araling Panlipunan 6 to learners with hearing impairment is not only limited to print and non-print resources. However, the said learning material could not be maximized during asynchronous classes. Hence, despite the advantages it could offer in teaching learners with hearing impairment, teachers will have to rely on the use of print resources.

The flashcards being used by the teacher is the one which can be bought from educational stores. When Teacher 3 was asked about her reason for using flashcards, she answered, *"Flashcards are easy to use and at the same time, HI students easily recognize what is being discussed."* This implies that the said learning material offers various advantages in teaching learners with hearing impairment. Among these advantages include: (1) easy to use; and (2) suitable to learners with hearing impairment since most of them are visual learners. In the research conducted by Akay (2021), it was found that the

incorporation of visual and audiovisual resources greatly enhances students' (a) understanding of the questions and explanations, (b) involvement in and drawing conclusions from classroom debates, and (c) grasp of new vocabulary and concepts. With this, teachers including Teacher 3 should maximize the use of flashcards in teaching certain topics in Araling Panlipunan 6 to accommodate the needs of the learners.

It should be noted that flashcards are already standardized. So, Teacher 3 does not do any modifications. Instead, she just integrates the flash card in the lesson. For instance, in discussing the National Heroes of the Philippines, she flashes the flash cards so that the learners could be able to visualize the persons being introduced. According to Teacher 3, "I am using the flashcard to support my lesson. I just flash them when I am discussing topics related to it." This implies that most of the time, flashcards are being used as a supplementary learning material to support a particular lesson. The said learning material is effective as supplementary learning material especially in teaching learners with hearing impairment since most of them are visual learners. Hence, teachers should integrate the use of flashcards in their teaching to accommodate the learning needs of the learners and to help them learn meaningfully.

#### *Problems encountered by teachers in using the learning materials for Learners with Special Educational Needs*

The teachers of Legazpi City SPED Center teaching learners with hearing impairment, stated problems they encountered in using the existing learning materials. These include lack of resources available in the school, difficulty in conveying some words and concepts, and conduct of asynchronous classes. To have a deeper understanding of these problems, each of them was discussed thoroughly.

##### *Lack of resources available in the school.*

a. Teacher 1. Learning activity sheet, slides, and map are the learning materials being used by Teacher 1 in teaching Araling Panlipunan 4. In using these learning materials, Teacher 1 encountered several problems. One of these is the lack of resources available in school. When asked about the problems encountered in using a certain learning material, Teacher 1 answered, "Limited resources like projectors to be used if you are going to use a PowerPoint presentation." This implies that resources like projectors are necessary in delivering instruction and providing scaffold to learners' learning. However, the researcher found out that there are only two (2) projectors available in the school. According to Teacher 1, "Only two projectors are available in the school." The limited number of these projectors in the school becomes a problem because there are sixteen (16) teachers in the school. So, if there are only two projectors and sixteen teachers, not all of them can have access to it. What if there will be instances when the teacher needs to use slides and yet no projector is available? The teacher might not be able to deliver her lesson. As a result, the learners would not be able to learn the lesson intended for that day and would not be able to achieve the intended learning competency. According to Ambiong (2020), quality education doesn't only mean accepting students in schools,

accommodation, true inclusion, and support must be given to the student for them to thrive. Accommodation, true inclusion, and support can be seen if the learners have the resources they need to learn and suit them. One of these resources is the projector which is really needed by the special education teachers.

b. Teacher 2. Learning modules, slides, map, and globe are the learning materials being used by Teacher 2 in teaching Araling Panlipunan 5. In using these learning materials, Teacher 2 encountered several problems. Like in the case of Teacher 1, one of these problems is the lack of resources available in the school. According to Teacher 2, "We often use Manila Paper (Traditional Visual Aids). We seldom use PowerPoint Presentations because there are only two (2) projectors available in school." Teacher 2 added, "It is also time consuming because we must borrow the projector from the office. What if we prepared a presentation but the projector is also being used by other teachers? So, we are just using Manila Paper." This implies that like in any other school, resources are highly needed in Legazpi City SPED Center. It can be noted that teachers are maximizing the resources being given to them like manila paper. However, additional resources are still needed since learners with hearing impairment have their individualized and specialized needs. Some of these resources which must be provided are projectors so that nonprint resources like slides could be used. It is not enough for the learners to be at school and have access to books, manila paper, and chalkboard. Additional supports are needed for them to learn. According to the Robosa et al. (2021), most teachers are significantly challenged by lack of resources, handling students, and submission and workloads that contribute to stress and burnout. Indeed, lack of resources is one of the problems faced by many teachers which needs to be addressed.

c. Teacher 3. Learning module, slides, and flashcard are the learning materials being used by Teacher 3 in teaching Araling Panlipunan. Like in the case of Teacher 1 and Teacher 2, Teacher 3 also encountered several problems in using those learning materials. One of these is the lack of resources, specifically projector. According to Teacher 3, "Limited projectors are one of our problems in the school. There are only two projectors." Teacher 3 added, "These projectors are for the use of sixteen (16) teachers." This implies that teachers of Legazpi City SPED Center experience limitations when it comes to resources, specifically projector. It can be noted that in delivering quality education to SPED Centers, it would be necessary to have enough resources. So, the Department of Education should do its best to provide the necessary resources needed by the teachers. As stated by De Jesus (2018), instructional resources, specialized equipment, training, and tailored curricula need to be created and provided to every SPED center.

##### *Difficulty in conveying some words and concepts.*

a. Teacher 1. The learning materials being used by Teacher 1 in teaching Araling Panlipunan 4 are learning activity sheet, slides, and map. In using these learning materials, several problems were encountered. One of these is the difficulty in conveying some words and concepts. This is evident in using both slides and learning activity sheets. However, it is more

evident in the use of learning activity sheets. It can be noted that the learning activity sheet is being used during asynchronous classes. Despite the advantages it offers as discussed in the first statement of the problem, there are still some loopholes in it. This loophole is the difficulty to convey some words and concepts. According to Teacher 1, *“Unlike the regular classes, there are some words which are very difficult to convey to learners with hearing impairment.”* It can be noted that for learners to understand a particular word or concept, the teacher should provide sign language. However, it would be impossible in the case of using a learning activity sheet since the said learning material is being used during asynchronous classes. The possible way to help the learners understand this kind of words or concepts is to use illustrations. Teacher 1 mentioned, *“There are some words in Araling Panlipunan which are difficult for the learners with hearing impairment to understand. So, teachers need to present illustrations.”* This implies that the use of illustration is important to address the problem regarding the difficulty in conveying some words and concepts. According to Rodrigues et al. (2022), vision is regarded as a primary sensory avenue for deaf and hard of hearing learners to acquire knowledge, and, as a result, they identify themselves as visual learners. Hence, using illustrations to support words or concepts which are difficult to convey would allow learners with hearing impairment to grasp the lesson.

**b. Teacher 2.** The learning materials being used by Teacher 2 in teaching Araling Panlipunan 5 are learning module, slides, map, and globe. Like in the case of Teacher 1, Teacher 2 considers difficulty in conveying some words and concepts as a problem. When asked about the problems he encounters in using the learning module, Teacher 2 said, *“There are some words that are unfamiliar which need pictures for them to grasp the topic.”* Indeed, there are words and concepts in Araling Panlipunan 5 which are difficult to convey unless otherwise sign language would be used. However, it should be noted that the learning module is being used in asynchronous classes. Therefore, during this time, the teacher could not provide sign language. The possible way to help learners understand difficult words and concepts is by providing illustrations or picture cues. According to Tacchi (2022), when teaching lessons where the new vocabulary words are essential to the content of the lesson, the teacher should provide a vocabulary list to the student ahead of time. This will enable the student to acquire the vocabulary before the class and assist with the use of speech reading. Hence, using illustrations or picture cues in the learning module would help learners visualize the word or concept which is presented.

**c. Teacher 3.** The learning materials being used by Teacher 3 in teaching Araling Panlipunan 6 are learning module, slides, and flashcard. Like in the case of Teacher 1 and Teacher 2, Teacher 3 considers difficulty in conveying some words and concepts as one of the problems in using the said materials, specifically the learning module. When asked about the problems being encountered in using the existing learning materials, Teacher 4 answered, *“Difficult words or concepts that need to be unlocked or described through a picture or illustration.”* To address this problem, it would be necessary to either use sign

language or illustration. However, in the case of a learning module which is being used during asynchronous classes, the use of sign language would not be possible. So, the teachers need to resort to the use of illustrations or visual cues. According to Media Access (2017), students who have a hearing impairment require visual cues/support in their learning to assist their understanding of content. Hence, to accommodate learners with hearing impairment, it would be necessary to consider their needs and strengths. One of the possible ways to do this is by using illustrations in times when using sign language is not possible.

*Conduct of asynchronous classes.*

**a. Teacher 1.** Teacher 1 considers the conduct of asynchronous classes as one the problems she encountered in using the learning materials. Indeed, Teacher 1 utilizes various learning materials such as learning activity sheets, slides, and maps. However, the conduct of asynchronous classes makes it difficult to use the said learning materials to their full extent. According to Teacher 1, *“Aside from what I have mentioned, the conduct of asynchronous classes for me is considered a problem.”* Teacher 1 added, *“The students we are handling are HI learners which learn primarily with the help of sign language.”* This implies that the use of sign language is very important to enable learners with hearing impairment learn. However, because of the conduct of asynchronous classes, it becomes difficult for teachers to help learners with hearing impairment learn. As stated by UNICEF (2021), sign language aids deaf children in their linguistic, cognitive, and social-emotional growth. In fact, utilizing sign language would be advantageous in instructing learners with hearing challenges. However, since sign language is a need for learners with hearing impairment but is not possible because of the conduct of asynchronous classes, teachers should think of other ways to overcome this difficulty. One of these ways is to devise a learning material that would enable learners learn using their strength. It could be done by using a recorded video lesson with sign language and caption. With this, learners could have access to a lesson with sign language embedded on it. Hence, by using this learning material, learners with hearing impairment could understand the lesson. If ever a particular part of the lesson is not clear to the learners, they could still return to that part.

**b. Teacher 2.** Like in the case of Teacher 1, Teacher 2 also considers the conduct of asynchronous classes as a problem. This is because the learning materials which he is using such as the learning module, slides, map, and globe could not be utilized to their full extent considering that the learners being catered are learners with hearing impairment who learns primarily using sign language. According to Teacher 2, *“Conduct of asynchronous classes gives us difficulty in teaching HI learners. They need actual classes for them to learn more because their medium is Sign Language.”* This implies that the use of sign language has a great impact in the learning of learners with hearing impairment. However, this is challenged by the conduct of asynchronous classes. According to Virtual Lab School (2021), classroom materials should be culturally relevant and anti-biased. Cultural relevance indicates that your selection of resources should mirror the backgrounds, community, knowledge, and experiences of the students in your



classroom. An anti-biased approach signifies that you advocate for and appreciate the differences within everyone. By selecting resources that affirm and empower children of all racial, ethnic, and social backgrounds, you will create a connection between children's home and school environments that will offer a robust basis for learning. Virtual Lab School (2021) has given emphasis on the idea that classroom materials should be culturally relevant and anti-biased. It can be noted that learners with hearing impairment tend to learn more using sign language. So, teachers should consider this need especially in times when asynchronous modality is being employed. One of the possible ways to ensure that classroom materials are culturally relevant and anti-biased is using recorded video lessons with sign language. This material is responsive to the background and needs of learners with hearing impairment. It also showcases features such as sign language.

**c. Teacher 3.** Like in the case of Teacher 1 and Teacher 2, Teacher 3 considers the conduct of asynchronous classes as a problem since the learning materials which she is using such as learning module, slides, and globe could not be utilized in their full potential. According to Teacher 3, *"Face-to-face class is very important for all students with special educational needs including HI learners since most of them rely on hands-on learning experience."* Teacher 3 added, *"For example, HI learners need sign language to understand a particular lesson."* This implies that almost all learners with special educational needs rely primarily on hands-on learning experience. In the case of learners with hearing impairment, they rely on the use of sign language to maximize their learning experience. However, with the conduct of asynchronous classes, the said learners would not be able to access hands-on learning experiences. According to Nasco Education (2017), sign language is the primary language and one of several communication options used by people who are deaf or hard-of-hearing. Signing is a necessary communication tool for those with lost or reduced hearing. Indeed, the use of sign language is a crucial factor to enable learners with hearing impairment maximize their learning. However, because of the conduct of asynchronous classes, hands-on learning experience with the use of sign language would not be possible. In this case, teachers should think of an alternative to cater the needs of the said learner. One of these alternatives is the use of recorded video lessons with sign language. Since, a sign language is already embedded in the recorded video lesson, learners would be able to understand the lessons being discussed. They could also return to the part of the lesson which is not clear for them since it is in a form of soft copy. Thus, the said learning material would be able to respond to the problem of teachers as well as to the needs of the learners.

*e-learning material developed in social studies subject for learners with hearing impairment in Grades 4, 5, and 6*

Based on the analysis of the existing learning materials which include print resources, non-print resources, and other resources used by the teachers of Legazpi City SPED Center, the problems they encountered in using those learning materials, as well as the needs and strengths of the learners, recorded video lesson with sign language and caption was developed as the proposed e-learning material in teaching

Araling Panlipunan 4, 5, and 6 to learners with hearing impairment.

The recorded video lesson which was developed feature not just sign language but also caption to ensure that learners who are not yet familiar with sign language can understand the lesson. Also, audio was not removed for the benefit of the parents or any persons who are with the learner while having the lesson so that they could easily guide the learner in learning. Further, the recorded video lesson with sign language and caption would be advantageous since it could be useful not just for learners with hearing impairment who are enrolled in Special Education Centers but also for those who are enrolled in the regular classes or part of the so called *"Mainstreaming"*.

Below is the summary of the proposed e-learning material which shows the type, grade level, topic, competency, features, and link.

TABLE 1. Summary of Proposed e-Learning Material

Type	Grade Level	Topic	Competency	Features	Link
Recorded Video Lesson with Sign Language and Caption	Grade 4	Konsepto ng Bansa	Natatalakay ang konsepto ng bansa.	<ul style="list-style-type: none"> <li>Content Quality <ul style="list-style-type: none"> <li>✓ Lessons were aligned with MELCs.</li> <li>✓ Learning Competencies were unpacked.</li> <li>✓ Content was accurate and up-to-date.</li> <li>✓ Difficult words were unlocked.</li> <li>✓ Varied activities were integrated to help in the achievement of learning competency.</li> </ul> </li> <li>Technical Quality <ul style="list-style-type: none"> <li>✓ Powerpoint presentation was presented in the e-Learning material together with audio, sub-title, and sign language.</li> <li>✓ Illustrations were incorporated.</li> </ul> </li> </ul>	<a href="https://tinyurl.com/AP4Lesson01">https://tinyurl.com/AP4Lesson01</a>
Recorded Video Lesson with Sign Language and Caption	Grade 5	Paghubog ng Kasaysayan ayon sa Lokasyon	Naipaliwanag ang kaugnayan ng lokasyon sa paghubog ng kasaysayan.	<ul style="list-style-type: none"> <li>Content Quality <ul style="list-style-type: none"> <li>✓ Lessons were aligned with MELCs.</li> <li>✓ Learning Competencies were unpacked.</li> <li>✓ Content was accurate and up-to-date.</li> <li>✓ Difficult words were unlocked.</li> <li>✓ Varied activities were integrated to help in the achievement of learning competency.</li> </ul> </li> <li>Technical Quality <ul style="list-style-type: none"> <li>✓ Powerpoint presentation was presented in the e-Learning material together with audio, sub-title, and sign language.</li> <li>✓ Illustrations were incorporated.</li> </ul> </li> </ul>	<a href="https://tinyurl.com/AP5Lesson01">https://tinyurl.com/AP5Lesson01</a>
Recorded Video Lesson with Sign Language and Caption	Grade 6	Epekto ng Kaisipang Liberal sa Pag-usbong ng Damdaming Nasyonalismo (Part I)	Nasusuri ang epekto ng kaisipang liberal sa pag-usbong ng damdaming nasyonalismo.	<ul style="list-style-type: none"> <li>Content Quality <ul style="list-style-type: none"> <li>✓ Lessons were aligned with MELCs.</li> <li>✓ Learning Competencies were unpacked.</li> <li>✓ Content was accurate and up-to-date.</li> <li>✓ Difficult words were unlocked.</li> <li>✓ Varied activities were integrated to help in the achievement of learning competency.</li> </ul> </li> <li>Technical Quality <ul style="list-style-type: none"> <li>✓ Powerpoint presentation was presented in the e-Learning material together with audio, sub-title, and sign language.</li> <li>✓ Illustrations were incorporated.</li> </ul> </li> </ul>	<a href="https://tinyurl.com/AP6Lesson01-1">https://tinyurl.com/AP6Lesson01-1</a>

The recorded video lesson with sign language and caption was developed as proposed e-learning material to be used in

teaching Araling Panlipunan 4, 5, and 6 to cater the needs of learners with hearing impairment. Although, the instructional design of the proposed e-learning material suggests that it can be used in mainstream classes or regular classes since it features presentations, together with audio and sign language. In the development of the e-learning material, a careful process was followed.

The process of developing the e-learning material began with the selection of learning competencies. The researcher selected the first learning competency in the curriculum guide of Araling Panlipunan 4, 5, and 6 to serve as baseline. The selection of learning competencies was followed by the selection of topics, construction of lesson plans, creation of PowerPoint presentations, and video recording of the lessons. After the video recording, editing followed. The video recording of lesson was done through Zoom Meeting Application while the video recording of sign language was done through iPhone 11. On the other hand, the editing of audio and video were done through Wondershare Filmora Application. The researcher has done all the processes mentioned except for the sign language. To make the e-learning material more reliable, the researcher tapped a Licensed Interpreter to do the sign language in the lesson.

Other than a careful process, certain considerations were observed in the development of recorded video lesson with sign language and caption. These considerations include the gaps of the existing learning materials such as the small texts and illustrations in the learning module, map, and globe, the lengthy concepts presented in the learning module, and the absence of sign language if asynchronous modality would be implemented. Another consideration is the various problems encountered by the teachers in using the existing learning materials such as lack of resources available in school, difficulty in conveying some words and concepts, limited illustrations, and absence of face-to-face classes. Further, the strengths and needs of the learners were considered in the development of e-learning material. Among these are the use of illustrations and sign language. According to Watson (2019), there are certain considerations or steps which a teacher can take to address the needs of a hearing-impaired student. Among these are the use of 'close captioning' feature in videos, use of visual approaches, providing visual outlines/graphic organizers, and providing visual materials and demos. Hence, upon bearing in mind these considerations, the developed e-learning material would be of help to the learners.

To establish the authenticity of the developed e-learning material, it was validated by seven (7) panel of experts.

Table 2 shows the Jurors' validation on the developed recorded video lessons with sign language and caption to be used in teaching Araling Panlipunan 4, 5, and 6 to learners with hearing impairment. The researcher selected the first learning competency stipulated in the Grade 4, 5, and 6 Araling Panlipunan curriculum guide to serve as baseline.

From the validation held by the Jurors, the developed e-learning material in Araling Panlipunan 4 acquired a total mean score of 38.4 out of 40 points, the developed e-learning material in Araling Panlipunan 5 acquired a total mean score of 38.8 out of 40 points, and the developed e-learning material in Araling

Panlipunan 6 acquired a total mean score of 38.4 out of 40 points along content quality (*Factor 1*).

TABLE 2. Developed Recorded Video Lessons with Sign Language and Caption in Grades 4, 5, and 6

Developed Recorded Video Lesson with Sign Language and Caption 1		
Grade Level 4		
Learning Material	Mean	Descriptive Interpretation
Factors		
Content Quality	38.4	PASSED
Instructional Quality	37.8	PASSED
Technical Quality	50.0	PASSED
Other Findings	16.0	PASSED
Developed Recorded Video Lesson with Sign Language and Caption 2		
Grade Level 5		
Learning Material	Mean	Descriptive Interpretation
Factors		
Content Quality	38.8	PASSED
Instructional Quality	38.6	PASSED
Technical Quality	50.0	PASSED
Other Findings	16.0	PASSED
Developed Recorded Video Lesson with Sign Language and Caption 3		
Grade Level 6		
Learning Material	Mean	Descriptive Interpretation
Factors		
Content Quality	38.4	PASSED
Instructional Quality	38.6	PASSED
Technical Quality	50.2	PASSED
Other Findings	16.0	PASSED

The statistical data shows that the developed e-learning materials passed in terms of content quality. This implies that the content of the lessons is consistent with learning competencies stipulated in the K-12 Araling Panlipunan curriculum guide. In the developed material for Grade 4, the learning competency states, "AP4AAB-1A-1: *Matalakay ang konsepto ng bansa.*", for Grade 5, "Naipaliliwanag ang kaugnayan ng lokasyon sa paghubog ng kasaysayan.", and for Grade 6, "Nasusuri ang epekto ng kaisipang liberal sa pagusbong ng damdaming nasyonalismo.". Alignment of the lessons' content to the said learning competencies is necessary in the development of foundational skills which are needed by the learners. According to the Department of Education (2020), essential learning competencies are what the students need, considered indispensable, in the teaching-learning process to build skills to equip learners for subsequent grade levels and consequently, for lifelong learning. Hence, aligning the content of the lesson to the curriculum guide would ensure that learners would receive the instruction they need to develop the skills necessary for the next grade levels and for lifelong learning. Although, it is important to note that learning process does not end with identifying the learning competencies and aligning the lessons to them. Providing scaffold to achieve these learning competencies is necessary. With this, several activities were integrated in the lessons to achieve the above-mentioned learning competencies. For developed e-learning material in Araling Panlipunan 4, these include: 1. *Pagbibigay ng kahulugan sa mga salitang may kaugnayan sa konsepto ng bansa tulad ng "Bansa, Kultura, Pamana, Wika, at Lahi";* and 2. *Pagsagot sa mga Gawain patungkol sa konsepto ng bansa kung saan ito ay hinati sa Panimulang Pagsubok, Pagyamanin 1, at Pagyamanin 2.* For developed e-learning material in

Araling Panlipunan 5, these include: 1. *Pagsagot sa mga Gawain patungkol sa kaugnayan ng lokasyon sa paghubog ng kasaysayan kung saan ito ay hinati sa Pagsasanay 1, Pagsasanay 2, at Pagtataya; at 2. Pagsagot at pagproseso sa mga Gabay na tanong.* For developed e-learning material in Araling Panlipunan 6, these include: 1. *Pagbibigay kahulugan sa mga salitang may kaugnayan sa paksa tulad ng “Galyon, Kaisipang Liberal, Damdaming Nasyonalismo, at Suez Canal; 2. Pagsagot sa mga Gawain patungkol sa paksana nahahati sa Panimulang Pagsubok, Pagsasanay, at Pagtataya; at 3. Pagsagot at pagproseso sa mga Gabay na tanong.* The presence of these activities in the lessons would stimulate and promote critical thinking among learners since these are varied. It can be noted that the learning activity sheet and learning module which are among the learning materials used by the teachers in teaching Araling Panlipunan to the learners with hearing impairment also ensure alignment of the lessons’ content to the curriculum guide and provides activities to scaffold their achievement. However, these learning materials are purely print. Although several illustrations were added to support the text, it would still be difficult to convey the content and activities to the learners. In the research conducted by Jameel and Bibi (2016), it was discovered that sign language serves as a crucial and advantageous tool to enhance classroom learning for deaf students. The study also added that, full access to educational opportunities is only possible when instructional methods match the needs of deaf students. With this, the use of sign language which is not seen in the existing learning materials is necessary for the learners involved to understand the concepts and the activities integrated in the lessons. Since the learners which would be catered by the learning material are learners with hearing impairment, sign language and caption, aside from audio, were embedded. Doing this would ensure that the language used to deliver the content of the lesson is appropriate to the learners. Hence, the sign language included in the proposed learning material would contribute to the enrichment, reinforcement, and mastery of learning competency. It would also enable the learners to understand the concepts and to work on the activities provided. As a result of these, learners would be able to receive instruction which would enable them to develop foundational skills which are necessary for the next grade level and for lifelong learning. Aside from those, the content of the lessons was accurate and up to date since the books, learning modules, and online resources utilized as references were updated and reliable. Hainsworth (2016) discussed the general principles which educators should consider before selecting or developing instructional materials to ensure their effectiveness. One of which emphasized that instructional materials must be accurate, valid, authoritative, up-to-date, appropriate, unbiased, and free of any unintended content. Since the content of the lesson included in the proposed learning material is accurate, valid, and up-to-date, the teacher could ensure that the learners would be able to receive reliable information and at the same time, the teacher could ensure that the learning material possesses the qualities which can be seen on effective instructional materials. Lastly, the content of the lesson is free from cultural, gender, racial, or ethnic bias. According to a report prepared by Comprehensive Center

According to Network (2020), advocating for instructional materials that appreciate or emphasize diversity enables students to recognize themselves as part of the learning process and aids in establishing an inclusive community, which is a vital step in fostering social justice and equity within a school environment. Since, the proposed learning material ensures that the content of the lesson is free from any biases and recognizes diversity, learners would be able to realize that they are valued and part of an inclusive as well as non-discriminatory learning environment. Thus, it would lead to the promotion of positive values that support formative growth among learners with hearing impairment.

In terms of instructional quality (*Factor 2*), the developed e-learning material in Araling Panlipunan 4 acquired a total mean score of 37.8 out of 40 points, the developed e-learning material in Araling Panlipunan 5 acquired a total mean score of 38.6 out of 40 points, and the developed e-learning material in Araling Panlipunan 6 acquired a total mean score of 38.6 out of 40 points. The statistical data shows that the e-learning materials passed in terms of instructional quality. This implies that the purpose of the proposed learning material is well defined, and the learning objectives are clearly stated. It can be noted that in the preceding paragraph, it was mentioned that the lessons included in the learning materials were aligned to the learning competency stated in the curriculum guide. To ensure that the learning competency would be specific, measurable, attainable, realistic, and time-bound (SMART), they were unpacked into specific learning objectives. To be precise, in the developed e-learning material for Araling Panlipunan 4, the learning competency states “*AP4AAB-1A-1: Matalakay ang konsepto ng bansa*”. This learning competency was unpacked into specific learning objectives which include: 1. *natutukoy ang apat na elemento ng pagkabansa; 2. naipaliliwanag ang bawat elemento ng pagkabansa; at 3. napahahalagahan ang bawat elemeto ng estado sa tulong ng mga gabay na tanong.* For developed e-learning material in Araling Panlipunan 5, the learning competency states, “*Naipaliliwanag ang kaugnayan ng lokasyon sa paghubog ng kasaysayan*”. This learning competency was unpacked into specific learning objectives which include: 1. *natutukoy ang mga bansa at katubigan na nakapaligid sa Pilipinas; 2. naipaliliwanag ang kauganayan ng lokasyon sa paghubog ng kasaysayan ng isang lugar o bansa; at 3. naiuugnay ang kahalagahan ng lokasyon sa paghubog ng kasaysayan sa mamamayan nito.* For developed e-learning material in Araling Panlipunan 6, the learning competency states, “*Nasusuri ang epekto ng kaisipang liberal sa pag – usbong ng damdaming nasyonalismo*”. This learning competency was unpacked into specific learning objectives which include: 1. *naipaliliwanag ang kahalagahan ng pagbubukas ng Suez Canal sa pandaigdigang kalakalan; 2. atutukoy ang epekto ng pagbubukas ng Suez Canal sa pandaigdigang kalakalan; at 3. nakagagawa ng isang graphic organizer tungkol sa kahalagahan ng pagbubukas ng Suez Canal sa Pandaigdigang Kalakalan at ang epekto nito sa pag – usbong ng damdaming nasyonalismo.* Unpacking these learning competencies into specific learning objectives would enable them to be measurable since the teacher could be able to devise concrete assessments and activities to be included in the



lesson. According to Blaschko (2020), SMART objectives can help determine what information is needed to present and what sorts of activities are needed to have the students engage in, and what to prioritize in the distribution of class time for any given meeting. It can also help structure concrete assessment mechanisms. Hence, the lessons in the proposed learning material were supported by various activities and assessment as mentioned in the preceding paragraph to achieve the identified learning competencies. Also, the activities provided in the proposed learning material were simplified. This was done to ensure that the difficulty level of the activities is suitable to the learners being catered and to respond to their specialized needs. In the research conducted by Parmigiani et al. (2021), it was discovered that successful e-inclusion relies on technology, family relationships, teacher collaboration, and online instructional methods; specifically, educators were required to design tailored activities using both asynchronous and synchronous interactive approaches for students to participate in, ideally in small groups and one-on-one. By ensuring that the activities included in the lessons are personalized and responsive to the needs of the learners involved, the said learners would be able to engage themselves in the lesson. However, existing materials like learning activity sheet and module did not consider the importance of color since the said materials were printed in grayscale. It should be noted that color is also an essential element of a learning material to catch the interest of the learners. According to Dewar (2017), integrating color properly can make or break your PowerPoint presentation. Using compatible colors is a must. Since colors were properly used in the presentation, the proposed learning material would be able to catch the attention of the learners and contribute to making the lesson enjoyable, stimulating, and challenging for the learners. With that said, the learning material, recorded video lesson with sign language and caption achieves its defined purpose.

Along technical quality (*Factor 3*), the developed e-learning materials in Araling Panlipunan 4 and 5 acquired a total mean score of 50.0 out of 52 points, and the developed e-learning material in Araling Panlipunan 6 acquired a total mean score of 50.2 out of 52 points. The statistical data shows that the e-learning materials passed in terms of technical quality. This implies that the screen displays are uncluttered and aesthetically pleasing. It can be noted that the screen display has a separate portion for the presentation and interpretation. Aside from the presentation, which is mainly composed of a PowerPoint and caption, sign language interpretation was embedded in the proposed learning material in a manner that is pleasing to the learners. Compared to the existing learning materials used by the teachers such as learning activity sheet, module, slides, and map, the proposed learning material already has an embedded sign language interpretation to respond to the learners' needs. Embedding sign language interpretation is one of the strengths of the learning material. The presence of the sign language allows the lessons to sustain the interest of the learners. According to Gala (2022), schools and teachers must be prepared to act in the teaching of sign language both as a first language for deaf children, and as a second language for hearing children. So, diversifying the teaching methodology is

necessary. Indeed, embedding sign language interpretation in the proposed learning material would be a great help for the learners. It fills out the gaps of the existing learning materials in terms of usability during the absence of teachers brought by uncalled circumstances and most importantly, it provides learners more opportunity to understand what is being presented in the presentation since the language used, sign language, responds to their needs. Further, with the design of the learning material allowing the learners to have a soft copy of it, parents can guide them towards meaningful learning even at home.

For other findings (*Factor 4*), developed e-learning materials in Araling Panlipunan 4, 5, and 6 acquired a total mean score of 16.0 out of 16 points. The statistical data shows that the e-learning materials passed in terms of factor 4 and that there are no conceptual, factual, grammatical, and typographical errors present. It can be noted that in the learning activity sheet and learning module, which are used by the teachers, some typographical and conceptual errors are found. These errors are crucial to learning since they could be grasp by the learners. With this, the researcher made sure that no errors would be seen in the presentation to provide learners with correct information which are essential in their learning and skills development. In the study of Bugler et al. (2017), it was mentioned that accuracy and visual appeal are important criteria for selecting instructional material. If errors are found — *such as grammatical errors, spelling errors, inaccurate information, or wrong answer sheets to problems* — in instructional materials, they should be eliminated quickly. Hence, ensuring that any of the errors mentioned in the preceding sentences are not present in the proposed learning material is necessary to provide learners with accurate information which is essential to learning.

## IV. FINDINGS, CONCLUSION, AND RECOMMENDATION

The findings are as follows:

1. The teachers of Legazpi City SPED Center teaching learners with hearing impairment utilize various learning materials in Araling Panlipunan 4, 5 and 6. These materials were classified along print, non-print, and other resources. Print resources include learning activity sheet and learning module. The learning activity sheet is being used in teaching Araling Panlipunan 4 while the learning module is being used in teaching Araling Panlipunan 5 and 6. On the other hand, non-print resources include slides, maps, and globe. Slides and maps are being used in teaching Araling Panlipunan 4, slides, maps, and globe are being used in teaching Araling Panlipunan 5, and slides alone is being used in teaching Araling Panlipunan 6. Lastly, other resources include flash cards which is being used in teaching Araling Panlipunan 6.
2. The teachers of Legazpi City SPED Center teaching learners with hearing impairment encountered several problems in using the existing learning materials in Araling Panlipunan 4, 5 and 6. There were three (3) problems encountered by the teachers which include lack of resources available in school, difficulty in conveying some words and concepts, and conduct of asynchronous classes.

3. As a result of the analysis on the existing learning materials used by the teachers of Legazpi City SPED Center in teaching Araling Panlipunan 4, 5, and 6, as well as the problems they encountered in using those materials, recorded video lesson with sign language and caption was developed as proposed e-learning material. There were three e-learning materials, one per grade level, developed which will serve as prototypes. These developed e-learning materials were validated by jurors who are experts in the field of special education, and they were evaluated based on content quality (*Factor 1*), instructional quality (*Factor 2*), technical quality (*Factor 3*), and other findings (*Factor 4*). The results of the validation revealed that the proposed e-learning material passed all factors.

Based on the findings, the following conclusions are given:

1. The teachers of Legazpi City SPED Center used various learning materials in teaching Araling Panlipunan 4, 5, and 6 to learners with hearing impairment.
2. The teachers of Legazpi City SPED Center encountered several problems in using the existing learning materials in Araling Panlipunan 4, 5, and 6.
3. The recorded video lesson with sign language and caption as proposed e-learning material to be used in teaching Araling Panlipunan 4, 5, & 6 would be a great help for learners with hearing impairment and would give the special education teachers of Legazpi City SPED Center ideas on how to devise their own learning materials in Araling Panlipunan.

Based on the conclusions, the following recommendations were formulated:

1. Provision of seminars, workshops, and training on the development of learning materials which are individualized and specialized to cater the needs of learners with hearing impairment.
2. Allocation of time, probably before the start of the school year, to work on ready-made learning materials so that the SPED teachers are ready upon the start of the school year up to the end.
3. The distribution of teaching loads to the teachers may be revisited and carefully planned to ensure that the teachers can be able to do the duties and responsibilities assigned to them effectively. In connection with this, the school may request additional teachers from the Schools Division Office if found out that additional teachers are needed.
4. Provision of additional resources such as textbooks, projectors, and computers by the Schools Division Office to Legazpi City SPED Center to support the learning of learners with special educational needs, specifically learners with hearing impairment.
5. There should be available learning materials intended for special education.
6. Provision of seminars, workshops, and training related to e-learning and special education to help the teachers in having a wider idea on how e-learning can be integrated in teaching Araling Panlipunan.
7. "Investing in quality resources means ensuring quality outputs". The Legazpi City SPED Center, through the help of the Division office, may invest in appropriate resources

such as, but not limited to, computers, laptop, and application software.

## REFERENCES

- [1]. Akay, E. (2021). The use of audio-visual materials in the education of students with hearing loss. *International Education Studies*, 14(7). <https://doi.org/10.5539/ies.v14n7p1>
- [2]. Allam, F. C., & Martin, M. M. (2021). Issues and challenges in special education: A qualitative analysis from teacher's perspective. *Southeast Asia Early Childhood Journal*, 10(1), 37-49. <https://doi.org/10.37134/saecj.vol10.1.4.2021>
- [3]. Ambiong, J. (2020). Obtaining quality education for students with disabilities in the Philippines. <https://www.ruhglobal.com/barriers-and-challenges-of-obtaining-quality-education-for-students-with-disabilities-in-the-philippines/>
- [4]. Balmeo, M. L., Nimo, E. M. A., Pagal, A. M., Puga, S. C. Quino, A. D., & Sanwen, J. L. (2014). Integrating technology in teaching students with special learning needs in the SPED schools in Baguio City. *The IAFOR Journal of Education*, 2(2), 149-178. <https://files.eric.ed.gov/fulltext/EJ1080370.pdf>
- [5]. Bjekec, D., Obradovic, S., Vucetic, M., & Bojovic, M. (2014). E-teacher in inclusive e-education for students with specific learning disabilities. *Procedia - Social and Behavioral Sciences*, 128 (22): 128-133, <http://dx.doi.org/10.1016/j.sbspro.2014.03.131>
- [6]. Blaschko, P. (2020). Are your lesson-level learning objectives S.M.A.R.T.? <https://teaching.temple.edu/edvice-exchange/2020/02/are-your-lesson-level-learning-objectives-smart>
- [7]. Briones, A. Y., Domalaon, J. P., Gonzales, E., Lagrimas, N. A. (2016). First day low: Lack of teachers, facilities welcome PWD students as school starts. Vera Files. <https://verafiles.org/articles/first-day-low-lack-teachers-facilities-welcomes-pwd-students-school-starts>.
- [8]. Buenaventura, J. R. A. (2015). Providers' perspective of special education for children. *International Journal of Child Development and Mental Health*, 3(2), 25-31. <https://he01.tci-thaijo.org/index.php/cdmh/article/view/64246>
- [9]. Bugler et al. (2017). How teachers judge the quality of instructional materials. <https://www.wested.org/wp-content/uploads/2017/03/resource-selecting-instructional-materials-brief-1-quality.pdf>
- [10]. Bureau of Elementary Education. (2000). *BEE annual reports: Pasig City, Philippines: 1995-2003*.
- [11]. Department of Education Council for Exceptional Children.
- [12]. Center for Literacy and Disabilities Studies (2015). Modifying instructional strategies, materials and tools to meet individual needs. [https://www2.edc.org/ncip/tour/O-Modify\\_Instr.html](https://www2.edc.org/ncip/tour/O-Modify_Instr.html)
- [13]. Center for Parent Information & Resources (2020). Supports, modifications, and accommodations for students. <https://www.parentcenterhub.org/accommodations/>
- [14]. Colette, E. (2011). Electronic education system model. *Computers & Education*, 36(2), 171-182. [http://dx.doi.org/10.1016/S0360-1315\(00\)00058-0](http://dx.doi.org/10.1016/S0360-1315(00)00058-0)
- [15]. Comprehensive Center Network (2020). Tools and guidance for evaluating bias in instructional materials: A region 8 comprehensive center report. [https://www.michigan.gov/-/media/Project/Websites/mde/Academic-Standards/Tools\\_Guidance\\_Eval\\_Bias\\_Instructional\\_Mats.pdf?rev=9fcd356602dd40de874f6d75e0e58d4e](https://www.michigan.gov/-/media/Project/Websites/mde/Academic-Standards/Tools_Guidance_Eval_Bias_Instructional_Mats.pdf?rev=9fcd356602dd40de874f6d75e0e58d4e)
- [16]. Department of Economic and social affairs disability. (2006) Conventions on the Rights of persons with Disabilities. <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>.
- [17]. Department of Education (2020). Guidelines on the use of the most essential learning competencies (MELCS). <https://commons.deped.gov.ph/MELCS-Guidelines.pdf>
- [18]. *DepEd Order No. 26* (1997). (Phil.)
- [19]. Dianito, A. J. P., Espinosa, J., Duran, J., & Tus, J. (2021). A glimpse into the lived experiences and challenges Faced of PWD Students towards online learning in the Philippines amidst COVID-19 pandemic. *International Journal of Advance Research and Innovative Ideas in Education*, 7(1), 1206-1230. <http://dx.doi.org/10.6084/m9.figshare.14033435.v1>

- [20]. El-Seoud, M. et al. (2014). E-learning and students' motivation: A research study on the effect of e-learning on higher education. <https://scholar.google.com.ph/citations?user=cvpMG38AAAAJ&hl=en&oi=sra>
- [21]. Fraser, E. (2020). Supporting deaf learners. <https://senmagazine.co.uk/content/specific-needs/hearing-impairment/10597/supporting-deaf-learners/>
- [22]. Gala, A. S. (2022). The importance of teaching sign language in early childhood education. <https://www.handtalk.me/en/blog/sign-language-early-childhood-education/>
- [23]. Garcia, M. B. (2017). E-Learning technology adoption in the Philippines: An investigation of factors affecting Filipino college students' acceptance of learning management systems. *The International Journal of E-Learning and Educational Technologies in the Digital Media (IJEETDM)*, 3(3): 118-130, <http://dx.doi.org/10.17781/P002374>
- [24]. Hainsworth, D. (2016). Instructional materials. <https://nursekey.com/instructional-materials/>
- [25]. Heward, W. L. (Eds.). (2013). *Exceptional children: An introduction to special education*. Amazon Inclusive Education Act (2022). (Phil.)
- [26]. Inverso, D. (2021). Hearing loss factsheet (for Schools). <https://kidshealth.org/en/parents/hearing-factsheet.html>
- [27]. Jameel, H. T. & Bibi, S. (2016). Benefits of sign language for the deaf students in classroom learning. *International Journal of Advanced and Applied Sciences*, 3(6). 24-26. [https://lms.jamdeaf.org/jm/pluginfile.php/612/mod\\_resource/content/1/Benefits%20of%20sign%20language%20for%20the%20deaf%20students%20in%20classroom%20learning.pdf](https://lms.jamdeaf.org/jm/pluginfile.php/612/mod_resource/content/1/Benefits%20of%20sign%20language%20for%20the%20deaf%20students%20in%20classroom%20learning.pdf)
- [28]. Jomoad, P. D., Antiquinia, L.M. M., Cericos, E. U., Bacus, J. A., Vallejo, J. H., Dionio, B. B., Bazar, J. S., Cocolan, J. V., & Clarin, A. S. (2021). Teachers' workload in relation to burnout and work performance. <https://journalissues.org/ijeptr/wp-content/uploads/sites/7/2021/04/Jomoad-et-al-.pdf>
- [29]. *Magna Carta for Disabled Persons Act* (1992). (Phil.)
- [30]. Magsambol, B. (2020). FAST FACTS: DepEd's modular learning. <https://www.rappler.com/newsbreak/iq/things-to-know-deped-modular-learning/>
- [31]. Marschark, M., Spencer, P. A., Adams, J., & Sapere P. (2021). Teaching to the strengths and needs of deaf and hard-of-hearing children. *European Journal of Special Needs Education* 26(1):17-23. DOI:10.1080/08856257.2011.543542
- [32]. McCombes, S. (2019). How to do a Case Study. Scribbr. <https://www.scribbr.com/methodology/case-study/>
- [33]. Media Access (2017). Five tips for teachers of students with hearing impairment. [https://mediaaccess.org.au/latest\\_news/education/five-tips-for-teachers-of-students-with-hearing-impairment](https://mediaaccess.org.au/latest_news/education/five-tips-for-teachers-of-students-with-hearing-impairment)
- [34]. Monash University (2021). Deaf, deaf, and hard of hearing. <https://allplaylearn.org.au/primary/teacher/deaf/#About>
- [35]. Murray, J. J., Hall, W. C., & Snoddon, K. (2020). The importance of signed languages for deaf children and their families. [https://journals.lww.com/thehearingjournal/fulltext/2020/03000/the\\_importance\\_of\\_signed\\_languages\\_for\\_deaf.6.aspx](https://journals.lww.com/thehearingjournal/fulltext/2020/03000/the_importance_of_signed_languages_for_deaf.6.aspx)
- [36]. Narvekar, H. N. (2020). Educational concerns of children with disabilities during COVID-19 pandemic. *Indian Journal of Psychiatry*, 62(5), 603–604. [http://dx.doi.org/10.4103/psychiatry.IndianJPsychiatry\\_585\\_20](http://dx.doi.org/10.4103/psychiatry.IndianJPsychiatry_585_20)
- [37]. Nasco Education (2017). The importance of sign language. <https://nasco-education-blog.com/2017/11/30/learn-to-sign/>
- [38]. National Deaf Children's Society (2022). Sign language. [https://www.ndcs.org.uk/information-and-support/language-and-communication/sign-](https://www.ndcs.org.uk/information-and-support/language-and-communication/sign-language/#:~:text=For%20many%20children%20with%20a,through%20which%20they%20are%20educated.)
- language/#:~:text=For%20many%20children%20with%20a,through%20which%20they%20are%20educated.
- [39]. Open Society Foundations. (2019, May). The value of inclusive education. <https://www.opensocietyfoundations.org/explainers/value-inclusive-education>
- [40]. Parmigiani, D., Benigno, B., Giusto, B., Silvaggio, C., & Sperandio, S. (2021). E-inclusion: online special education in Italy during the Covid-19 pandemic. *Technology, Pedagogy and Education*, 30(1), 111-124. DOI: 10.1080/1475939X.2020.1856714
- [41]. Rice, B. (2017). Strategies for Teaching Hearing-Impaired and deaf students. <https://www.therapytravelers.com/strategies-teaching-hearing-impaired-deaf-students/#:~:text=Since%20vision%20becomes%20a%20hearing,use%20captioned%20videos%20in%20class.>
- [42]. Robosa, J., Perante, L., Paras, N. E., & Alvez, T. (2021). The experiences and challenges faced of the public-school teachers amidst the COVID-19 pandemic: A Phenomenological Study in the Philippines. *International Journal of Advance Research and Innovative Ideas in Education* 7(1), 2395-4396. DOI: 10.6084/m9.figshare.14028833.v1
- [43]. Rodrigues, F. M., Rato, J. R., Mineiro, A., & Holmstrom, I. (2022). Unveiling teachers' beliefs on visual cognition and learning styles of deaf and hard of hearing students: A Portuguese-Swedish study. <https://doi.org/10.1371/journal.pone.0263216>
- [44]. Rosanes, M. (2020). How teachers' workloads impact classroom management. <https://www.theeducatoronline.com/k12/news/how-teachers-workloads-impact-classroom-management/273790>.
- [45]. Stearns, C. (2022). Learning styles of deaf & hard of hearing Students. <https://study.com/academy/lesson/learning-styles-of-deaf-hearing-impaired-students.html>
- [46]. Suresh, M., Priyu, V. V., & Gayathri, R. (2018). Effect of e-learning on academic performance of undergraduate students. [https://www.researchgate.net/publication/327202545\\_Effect\\_of\\_e-learning\\_on\\_academic\\_performance\\_of\\_undergraduate\\_students/citation/download](https://www.researchgate.net/publication/327202545_Effect_of_e-learning_on_academic_performance_of_undergraduate_students/citation/download)
- [47]. Tacchi, E. (2022). Hearing Loss | Chapter 4: Teaching strategies and accommodations. <https://www.trinity.edu/sites/students-vision-hearing-loss/hl-teaching>
- [48]. The Virtual Lab School (2021). The environment: Materials. <https://www.virtuallabschool.org/preschool/learning-environments/lesson-4>
- [49]. UNICEF. (2007). A human rights-based approach to education for all. [https://www.unicef.org/publications/files/A\\_Human\\_Rights\\_Based\\_Approach\\_to\\_Education\\_for\\_All.pdf](https://www.unicef.org/publications/files/A_Human_Rights_Based_Approach_to_Education_for_All.pdf). UNESCO
- [50]. UNICEF. (2013). The state of the world's children: Children with disabilities. [https://www.unicef.org/media/files/Embargoed\\_SOWC\\_2013\\_Executive\\_Summary\\_-\\_English.pdf](https://www.unicef.org/media/files/Embargoed_SOWC_2013_Executive_Summary_-_English.pdf). UNESCO
- [51]. Watson, S. (2019). Recognizing characteristics of deafness and hearing loss in students. <https://www.thoughtco.com/recognizing-characteristics-of-deafness-3110771>
- [52]. Walsh, M. (2018). The inclusion of students with special needs in the general education classroom. Dominican University of California. <https://doi.org/10.33015/dominican.edu/2018.EDU.ST.01>
- [53]. Wisconsin (2019). Guiding Principle 6: Responsive environments engage learners. <https://dpi.wi.gov/sites/default/files/imce/cal/pdf/guiding-principles6.pdf>