Research Article

Development and Validation of Sign Language-based and Contextualized Kindergarten Module for Children with Hearing Impairment

Sammy Boy B. Guzman*

Department of Education, Kasiglahan Village Elementary School, Division of Rizal, Rizal, 1860, Philippines

ABSTRACT

This study aimed to develop and validate a sign language-based and contextualized kindergarten module for children with hearing impairment. There is a need to develop and contextualize a module in order to cater the unmet needs of students with hearing impairment. The developed module includes a teaching guide for parents, for them to become more effective co-facilitators of learning. The distinctive feature of this module is that, the sign language interpretations are with pictures and texts. The pictures vividly show the step-by-step procedure on how to sign the specific word. The pictures are supported by the comprehensive explanation on how to sign the words. This study utilized the Research and Development (R & D) research method to systematically design, develop and evaluate the instructional material. The participants of this study are eleven (11) students with hearing impairment and eleven (11) parents of students with hearing impairment. The respondents and served as expert-validators are master teacher, kindergarten teacher, and SPED teacher. It employed a purposive sampling technique; it purposely selected a population related to children with hearing impairment. To analyze the qualitative data, it was imported to MAXQDA software with the use of Horizontalization method by Moustakas. For statistical treatment of the descriptive data, researchers used the PSPP software. The study found that the parents' ideal module for children with hearing impairment has five emerging themes, such as 1) sign language medium of instruction, 2) disability consideration, 3) media consideration, 4) level of difficulty, and 5) technical design. Expert-validators assessed that the validity of contextualized kindergarten module is highly acceptable among the dimensions of: content, format and language, presentation, and usefulness. Effectiveness of the contextualized module as perceived by the parents yielded a total of 96.36% positive responses.

Introduction

The moment that COVID-19 was declared as a global pandemic, World Health Organization (WHO) plead to all countries to immediately take steps to prevent the transmission of virus. The pandemic caused disruption in all sectors, such as economy, social, culture and education around the world. In the education sector, the Department of Education (DepEd), decided that during the pandemic, education must still continue, and it was carried out through distance learning. The DepEd Region IV-A CALA-BARZON, developed its own self-learning materials called PIVOT, these materials are primary learning resources during education emergencies like the COVID-19.

Students with hearing impairment under the inclusion program also heavily relied on Self-Learning Modules (SLMs), and their parents served as co-facilitators of learning. However, SPED teachers discovered that students with hearing impairment under the inclusion program had a hard time in answering the SLMs. Through Friday *Kumustahan*, SPED teachers found out the rationale behind the hardships felt by the students with hearing impairment. First, the students' level of ability to sign is not equal to the level of difficulty of the SLMs. Second, the parents have limited sign language skills, or worst, do not have the ability to sign everything that is within the SLMs. Third and final, receiving teachers in the kindergarten level were not equipped in sign language interpretation, as a result they could not supplement the needs of the students. As a resort to temporarily solve this problem, SPED teachers do the sign language interpretation when needed. This project has an end view of providing a contextualized module that is suitable to the sign language skills of kindergarten. The contextualized module also includes a teaching guide for parents, for them to become more effective co-facilitators of learning. One of the unique features of this contextualized module is that, the sign language interpretations are with pictures and texts. The pictures vividly show the step-by-step procedure on how to sign the specific word. The pictures are supported by the comprehensive explanation on how to sign the words. The unique contribution of the developed module is the gap of the parents' inability to teach or follow-up the lessons of their children at home, due to inadequate knowledge to do sign language interpretation.

Literature Review
Importance of Contextualized Instructional Materials

Teaching and learning process requires materials that play an important role in the process itself. The function of contextualized module is a supplement that helps educators and co-facilitators in conveying the information in the learning process (Aisyi, et al., 2013). Department of Education (DepEd, 2016) encourages teachers to conduct an evidence-based study on different teaching strategies and develop lesson plans and instructional materials. The produced materials which have undergone thorough research and validation can positively affect students' performance by improving learning achievements and increasing students' motivation. Casiano (2012) added that utilization of instructional materials aids to achieve a more effective teaching and learning process.

Contextualization is implemented using many different instructional techniques. Contextualization is defined as employing the items of the language in a meaningful and relevant context or adapting the form of information for a certain target of audience (Jimenez, 2020). It is important that a newly developed materials must be culturally sensitive and respecting the cultural backgrounds and diverse abilities of the students (Miller & Albornoz, 2020). In the current study, the contextualization of the kindergarten module is putting pictorial and textural sign language interpretations, to help learners acquire new skills and knowledge.

Quality of Effective Instructional Materials

The study conducted by Articulo (2008) had identified several characteristics of good

quality Instructional Materials. It should (1) be written to match and specific group of learners; (2) make links with learners' own experience; (3) help learners to develop their own learning skills as well as helping them to learn the content; (4) make clear the particular learning objectives and help learners to set their own objectives too; (5) be structural in a way which is clear to learners, guiding them through the text; (6) build on learners' existing skills or knowledge; (7) keep the learner engaged with the text (by asking questions or providing interesting and useful activities); (8) give feedback within the text (on activities and questions); (9) provide opportunities for learners to develop their own ideas or make choices; (10) provide opportunities for practice, where appropriate; (11) use a lay-out which is attractive and makes reading and learning as easy as possible; (12) present material in short, manageable amount for studying. Furthermore, the study of Darmiatun (2013) discovered that an effective instructional material should be (a) self-instruction, (b) self-contained, (c) stand alone, (d) adapted, and (e) user friendly.

Prastowo (2014) ascertains that instructional materials, in broad-spectrum must be organized systematically which present the whole figure of competency going to be mastered by the students and to be implemented in the teaching and learning process with the purpose to plan and to select learning implementation. Sign language-based instructional modules are effective instructional materials; it can significantly improve students' vocabulary acquisition and communication skills compared to traditional teaching methods (Lopez & Catindig, 2018). Subsequently, the role of instructional materials is essentially to extent the defined basic competencies. The easy and interesting instructional materials help the teachers in enabling the students in learning and comprehending the materials.

Models in Creating Instructional Materials

The most collective model used for creating instructional materials is the ADDIE model; these acronym stands for five phases of the material development.

A stands for Analyze, the developer analyze learner characteristics and task to be learned.

D for design, in this phase the author must develop learning objectives and choose an instructional approach. *D* for develop, this is the creation phase of instructional materials. *I* for implement, deliver or distribute the instructional materials for utilization. And *E* for evaluate, make sure the materials achieved the desired goals (Kilem, 2000).

Another important model considered in this study is the ASSURE model, it is a six-step instructional designs intended to help teachers utilize technology and media in the classroom. ASSURE model is a way to ensure that the learning environment is appropriate for students.

The study of Darmiatun (2013) comprehensively discussed the phases of the ASSURE Model. Starting with the first step, analyze learners' characteristics, it is vital to first think about the students' general characteristics, academic levels, benchmark skills, and learning styles. The next step is to know what learning objectives are going to teach. What do the students want to know by the end of the lesson? Looking ahead at learning outcomes is very important. Next, selecting designs for instructional materials, it's important to choose methods and materials that appropriately meet the learning objectives. Utilizing these media and materials comes next; it is very important to preview or use media and a material before the actual lesson, to make sure everything works appropriately. Requiring learners to participate is also an essential part of any lesson. Lastly, evaluating and revising is a step that cannot be overlooked; while this step is often skipped over, it is actually the most vital piece. Anyone can develop a lesson and deliver it, but really good teachers must reflect upon the lesson, the stated objectives, the instructional strategy, the instructional materials, and the assessment and determine if these elements of the lesson were effective or if one or more of them need to be changed the next time the lesson is done. Re-teaching is not a negative thing; it's actually the mark of a great teacher that recognizes when the students did not meet their learning outcome and are committed to ensuring their students' success. In the current study, it followed the phases crafted by Wang and Hanafin (2005) in making a contextualized

module, which may be iterative: Planning Phase, Writing and Development Phase, and Validation Phase.

Usefulness of the Contextualized Instructional Materials

The study of Inocencio and Calimlim (2021) provided different indicators of the usefulness of teacher-made instructional materials, and teacher-respondents strongly agreed that teacher-made instructional material must have the following qualities: task is relevant and consistent to the lesson; provides a systematic review of what has already been taught; reflects the most important aspects of what is being taught in the lesson; grammatically correct; language used is consistent with that used in the rest of the les-son and in the rest of the workbook; instructions are clear and easy to follow; it contains important concepts where students learn something; requires students to make discrimination and provided by number of task that provide practice on the components of the discrimination; content of the workbook is accurate and precise; response modes are consistent from task to task; and instructional design of individual task are carefully planned.

The study of Chen and Yu (2021) emphasized the usefulness of the contextualized materials, they found that interactive multimedia programs and assistive technologies can significantly improve various aspects of learning and development including language skills, academic achievement, and social communication.

Research Questions

The main objective of this research study was to develop and validate a contextualized kindergarten module for students with hearing impairment.

Specifically, this study aimed to answer the following questions:
1. What kind of contextualized kindergarten module can be developed for Children with Hearing Impairment?
2. What is the level of validity of the Contextualized Module for Children with Hearing Impairment based on the experts' evaluation?
   2.1 Content
   2.2 Format and Language
   2.3 Presentation
   2.4 Usefulness
3. What is the level of effectiveness of the Contextualized Module for Children with Hearing Impairment based on the parents' perception?

Scope and Limitation

The scope of the study is delimited to development and validation of contextualized kindergarten module for children with hearing impairment. The contextualized module primarily aimed to aid the lack of sign language competence of SPED teachers, kindergarten teachers, parents, and students with hearing impairment. The module was originally made by the CALABARZON Region, titled 'PIVOT 4A Learners' Material for Kindergarten'. The researchers integrated a textural interpretation and pictorial instructions on how to sign the phrases in the module. The developed module was validated by a SPED teacher who is teaching children with hearing impairment, kindergarten teacher/ grade level chairman, and a master teacher assigned to special education department. The dimensions of the validation include: content, format and language, presentation and usefulness. The effectiveness of the developed module was perceived by the parents in terms of item (10) researchers-made questionnaire.

As to limitation, this research study covered only the development and validation phase, usually this type of research must be in the phases of: 1) Development, 2) Validation, and 3) Evaluation. However, the module output of this research is currently undergoing the evaluation process by the Regional Learning Resource Evaluator (LRE), therefore, the evaluation phase of this module will be conducted in a separate research study and definitely will cover a wider and more comprehensive evaluation factors and variables.

Methods
Research design

Research and Development (R & D) design was utilized in this study. It has been defined as the systematic study of designing, developing, and evaluating instructional programs, processes, and products that must meet criteria of

internal consistency and effectiveness (Richey, 1994).

Participants and Sources of Data

The participants of this study were eleven (11) students with hearing impairment and eleven (11) parents of students with hearing impairment. The expert-validators were master teacher, kindergarten teacher and SPED teacher. The names of respondents/ participants were not revealed to maintain privacy and confidentiality of their responses as per ethics in research explained by Fraenkel (2003).

Sampling Technique

This research employed purposive sampling; it is a non-probability sample that is selected based on the characteristics of a population and the objective of the study (Tongco, 2007).

Data Collection and Data Analysis

The study was divided into several phases which may be iterative: Planning Phase, Writing and Development Phase, and Validation Phase (Wang & Hanafin, 2005).

In the Planning Phase, the researchers analyzed the situation of students with hearing impairment under the modular distance learning. The data were gathered through implementing the *Project Kumustahan*, researchers made the proposal based from the data given by the parents and students. Furthermore, the planning phase defined the main objective of the research which is to develop and validate a contextualized module for kindergarten. In this phase, the schedule of development is also crystallized. The preparations of work breakdown among the two proponents were structured. It is clear that this research project has no monetary budget, so the budget planning is based on the current available resources.

In the Writing and Development Phase, researchers made sure that students in kindergarten still received the competencies in the K-12 Curriculum Guide. Hence, the Kindergarten Module made by the PIVOT 4A Learner's Materials was used for the contextualization. The writing and development phase was divided between the two proponents. Lessons on week

1, 3, 5, and 7 were assigned to Dr. Guzman, while week 2, 4, 6 and 8 were assigned to Ms. Banaag. The existing module was slightly revised for disability sensitiveness purposes. The basis for sign language interpretation is from the American Sign Language (ASL). The ASL was chosen because the current students' first language is ASL, and the SPEd teachers nationwide were only trained to interpret using the ASL. The local Filipino Sign Language (FSL) were considered, however, the SPEd teachers don't have proper training to interpret FSL, and they don't have access to teaching and learning materials in FSL. As of the moment, FSL is currently

The artists for pictorial demonstrations were also the two project proponents. The textural explanations were based from the internet; however, it was modified to fit in with the cultural and social background of Filipino students. The project proponents also served as the photographer, layout artist, and content creators.

In the validation phase, the project proponents adapted the *evaluation checklist of the instructional materials* created by Marin and Marasigan (2003). The instrument was used to determine the acceptability of the contextualized module; a five-point Likert checklist was used. The validators were the Master Teacher, SPED Teacher, and Kindergarten Teacher. They were chosen as validators due to the following parameters: experience in handling children with hearing impairment, nature of their work, and expertise in children with special needs.

The researchers imported the qualitative data to *MAXQDA software*; it is world-leading software for qualitative and mixed methods data analysis. It analyze the data from Friday Kumustahan and informal interviews. On the other hand, quantitative data were imported to *PSPP software*, it is an open-source application used for statistical analysis of sampled data.

To analyze the data in problem no. 1 "What kind of contextualized kindergarten module can be developed for Children with Hearing Impairment?" – **horizontalization** was used.

To analyze the data in problem no. 2 "What is the level of validity of the Contextualized Module for Children with Hearing Impairment

based on the experts' evaluation?" – **fre-quency**, **mean** and **summative mean** were used.

To analyze the data in problem no. 3 "What is the level of effectiveness of the Contextualized Module for Children with Hearing Impairment based on the parents' perception?" – **fre-quency**. **percentage,** and **mean** were used.

Result and Discussion

Problem No. 1: <u>What kind of contextualized kindergarten module can be developed for Children with Hearing Impairment?</u>

The table below shows the themes, verbal transcriptions and codes based on the interviews of the parents of children with hearing impairment.

Table 1. Participants Responses about the Ideal Module for Children with Hearing Impairment

Theme	Verbal Transcription	Coding
Sign Language Medium of Instruction	*"Sana po mayroong module na may sign language, kasi 'di ko naman alam lahat kung paano i-sign yung mga nakalagay sa module."* –Parent 9	SIGN LANGUAGE INTERPRETATION
	"Mas maganda kung may pictures na gagayahan para magawa nang maayos yung pag sign language." –Parent 2	ILLUSTRATIVE PICTURES
	"Kung may instraksyon ang sign language ay madaling masundan." –Parent 7 *"Gusto ko may sign language guide sa gilid ng module, dahil mas madaling maintindihan ng anak ko yung pinagaaralan."* –Parent 4	TEXTURAL PROCEDURE
Disability Consideration	*"May mga activity na kailangan magsalita ng bata, pwede ilagay doon na senyas kasi parang masakit sa magulang at sa mga anak namin kapag ganun yung pinapagawa sa module."* –Parent 3	EUPHEMISTIC USAGE OF WORDS
Media Consideration	*"Gusto ko pa rin nakamodular yung yung anak ko, kasi pwedeng balikan yung mga pinagaralan."* –Parent 3 *"Lagi kasi akong walang load kaya nasa modular kami nakaenrol"* –Parent 4 *"Pwedeng module, pwede ring isend ng naka-picture, kapag nasa trabaho ako pwede kong aralin yung sign language. Paguwi ko sa gabi pwede ko na ituro sa anak ko."* –Parent 6	PRINTED FORMAT

Theme	Verbal Transcription	Coding
	"Ngayong pandemic, nagustuhan ko yung modular kasi sa internet masakit sa ulo kapag nakaharap lagi sa mga gadgets." –Parent 8	DIGITAL FORMAT
Level of Difficulty	*"Yung mga activity sa module dapat sakto lang siya na kayang-kaya ng bata, hindi siya sobrang dali na maboboring yung bata, hindi din siya sobrang hirap na tatamarin na sumagot yung bata."* –Parent 11	AGE-APPROPRIATE
Technical Design	*"Makulay yung design ng module para masaya yung bata habang nag-aaral"* –Parent 1 *"Malalaki yung mga salita para kitang-kita"* –Parent 6	COLORFUL LARGE FONT SIZE

Based on the parents' responses from the informal interview, an ideal module for children with hearing impairment has five emerging themes, such as: 1) sign language medium of instruction, 2) disability consideration, 3) media consideration, 4) level of difficulty, and 5) technical design.

Parents in general perceived that the modules for children with hearing impairment should have sign language interpretation, Illustrative pictures, and textural procedure. Parents are also hoping that contextualized modules should have disability consideration, wherein euphemistic usage of words must be evident. In the new normal education, learning delivery modality plays a huge role. Consequently, parents affirmed that media consideration must be a top priority; they demand that modules must be in print and digital format. Parents are also concerned with the level of difficulty of the modules; the difficulty of the activities must be age-appropriate. Parents pinpointed-out the technical design of the module, it must be colorful and with large font size.

Similar to the study conducted by Aisyi et al., (2013) modules must serve as supplemental instructional material that helps students and educators in learning the subject matter.

Problem No. 2: What is the level of validity of the Contextualized Module for Children with Hearing Impairment based on the experts' evaluation?
Table 2.1. Validity of Contextualized Module in the Aspect of Content

Validity of Contextualized Module in the Aspect of Content	Mean	Verbal Interpretation
1. The contents are presented in a logical and sequential order.	5.00	Strongly Agree
2. The contents of the sign language difficulty level are beginner-friendly.	5.00	Strongly Agree
3. The sign language interpretation of each lesson is directly relevant to the kindergarten module.	5.00	Strongly Agree
4. The sign language interpretations are fully discussed.	4.66	Strongly Agree
5. The sign language interpretations are supported by illustrative pictures and texts.	5.00	Strongly Agree
SUMMATIVE MEAN	**4.93**	**Strongly Agree**

Legend:5 [4.20-5.00] Strongly Agree   **4** [3.40-4.19] Agree   **3** [2.60-3.39] Undecided
2 [1.80-2.59] Disagree   **1** [1.00-1.79] Strongly Disagree

Table 2.1 shows the validity of contextualized kindergarten module for children with hearing impairment in the aspect of content. Specifically, items 1, 2, 3, and 5 (M= 5.00) obtained the highest means, implying that the expert-validators '*strongly agree*' that the contents of the module are presented in a logical and sequential order, sign language difficulty level are beginner-friendly, sign language interpretation of each lesson is directly relevant to kindergarten, and sign language interpretations are supported by illustrative pictures and texts. Furthermore, item 4 (M= 4.66) yielded the lowest mean, which infer that the expert-

validators also '*strongly agree*' that the contents of the developed module are fully discussed.

To sum up, expert-validators assessed the validity of the contextualized module in the aspect of content, as highly acceptable with a mean of 4.93, with a verbal interpretation of '*strongly agree*'.

Concurring to the study of Articulo (2008) a good quality of instructional materials should be written to match a specific group of learners, help learners to develop their own learning skills, and keep the learners engaged with the text.

Table 2.2. Validity of Contextualized Module in the Aspect of Format and Language

Validity of Contextualized Module in the Aspect of Format and Language	Mean	Verbal Interpretation
1. The format/layout is well-organized, which makes the lessons more interesting.	5.00	Strongly Agree
2. The language used is easy to understand.	4.66	Strongly Agree
3. The language used is clear, and motivating.	4.66	Strongly Agree
4. The instructions in the instructional modules are concise and easy to follow.	4.66	Strongly Agree
SUMMATIVE MEAN	**4.75**	**Strongly Agree**

Legend: **5** [4.20-5.00] Strongly Agree   **4** [3.40-4.19] Agree   **3** [2.60-3.39] Undecided
                 2 [1.80-2.59] Disagree   **1** [1.00-1.79] Strongly Disagree

Table 2.2 discloses the validity of contextualized kindergarten module for children with hearing impairment in the aspect of format and language. Item 1 (M= 5.00) got the highest mean, entailing that the expert-validators '*strongly agree*' that the format and language of the module is well-organized, which makes the lessons more interesting. Moreover, items 2, 3, and 4 (M= 4.66) gained the lowest means, specifying that the experts-validators also '*strongly agree*' that the format and language used in the module is easy to understand, clear and

motivating, and the instructions are concise and easy to follow.

To sum up, expert-validators assessed the validity of the contextualized module in the aspect of format and language, as highly acceptable with a mean of 4.75, with verbal interpretation of '*strongly agree*'.

The result of this study is supported by the findings of Articulo (2008) emphasizing that an effective instructional material should use a lay-out which is attractive and makes reading and learning as easy as possible.

Table 2.3. Validity of Contextualized Module in the Aspect of Presentation

Validity of Contextualized Module in the Aspect of Presentation	Mean	Verbal Interpretation
1. The sign language interpretation of each lesson is simple and easy to understand.	4.66	Strongly Agree
2. The contents of the modules are presented in a unique and original form.	5.00	Strongly Agree
3. The instructions are presented clearly.	5.00	Strongly Agree

Validity of Contextualized Module in the Aspect of Presentation	Mean	Verbal Interpretation
4. The presentation of each sign language interpretation is attractive and interesting.	5.00	Strongly Agree
5. Adequate instructions are given to each word.	4.66	Strongly Agree
SUMMATIVE MEAN	**4.86**	**Strongly Agree**

Legend: **5** [4.20-5.00] Strongly Agree   **4** [3.40-4.19] Agree   **3** [2.60-3.39] Undecided
                 2 [1.80-2.59] Disagree   **1** [1.00-1.79] Strongly Disagree

Table 2.3 displays the validity of contextualized kindergarten module for children with hearing impairment in the aspect of presentation. Items 2, 3, and 4 (M= 5.00) garnered the highest means, signifying that the expert-validators '*strongly agree*' that the presentation of the module is unique and in original form, presented clearly, and interpretation is attractive and interesting. Deliberately, items 1 and 5 (M= 4.66) obtained the lowest means, denoting that the experts-validators also '*strongly agree*' that the presentation of the module is simple and easy to understand, and adequate instructions are given to each word.

To sum up, expert-validators assessed the validity of the contextualized module in the aspect of presentation, as highly acceptable with a mean of 4.86, with verbal interpretation of '*strongly agree*'.

The findings of the current study are in consonance with the study of Articulo (2008) inferring that the instructional material must be presented in a short or manageable amount for studying.

Table 2.4. Validity of Contextualized Module in the Aspect of Usefulness

Validity of Contextualized Module in the Aspect of Usefulness	Mean	Verbal Interpretation
1. The instructional modules will motivate the students to study.	5.00	Strongly Agree
2. The instructional modules will help the students master the topics at their own pace.	4.66	Strongly Agree
3. The instructional modules will allow the users to utilize their time more efficiently.	5.00	Strongly Agree
4. The instructional modules will develop the sign language skills of the users.	5.00	Strongly Agree
5. The instructional modules will serve as a supplementary material that can cater to the needs of the students.	5.00	Strongly Agree
SUMMATIVE MEAN	**4.93**	**Strongly Agree**

Legend: **5** [4.20-5.00] Strongly Agree   **4** [3.40-4.19] Agree   **3** [2.60-3.39] Undecided
                 2 [1.80-2.59] Disagree   **1** [1.00-1.79] Strongly Disagree

Table 2.4 depicts the validity of contextualized kindergarten module for children with hearing impairment in the aspect of usefulness. Items 1, 3, 4, and 5 (M= 5.00) garnered the highest means, implying that the expert-validators '*strongly agree*' that the module can motivate the students to study, allow the users to utilize their time more efficiently, develop the sign language skills of the users, and serve as a supplementary material that can cater the needs of the students. Likewise, item 2 (M= 4.66) obtained the lowest mean, indicating that the experts-validators also '*strongly agree*' that the module can help the students to master the topics at their own pace

To sum up, expert-validators assessed the validity of the contextualized module in the aspect of usefulness, as highly acceptable with a mean of 4.93, with verbal interpretation of '*strongly agree*'.

In relation to the study of Darmiatun (2013) the findings of the research also discovered that an effective instructional material should be (a) self-instruction, (b) self-contained, (c) stand alone, (d) adapted, and (e) user friendly.

Table 2.5. Summary Table of Validity of Contextualized Module

Aspect of Contextualized Module	Mean	Verbal Interpretation
Content	4.93	Strongly Agree
Format and Language	4.75	Strongly Agree
Presentation	4.86	Strongly Agree
Usefulness	4.93	Strongly Agree
SUMMATIVE MEAN	**4.87**	**Strongly Agree**

Legend: 5 [4.20-5.00] Strongly Agree 4 [3.40-4.19] Agree 3 [2.60-3.39] Undecided
2 [1.80-2.59] Disagree 1 [1.00-1.79] Strongly Disagree

Table 2.5 outlines the validity of contextualized kindergarten module for children with hearing impairment in the four aspects. The aspect on content and usefulness (M= 4.93) obtained the highest means, it was followed by the aspect of presentation (M= 4.86). The aspect on format and language (M= 4.75) yielded the lowest mean. All of the four aspects are verbally interpreted as '*strongly agree'*.

As a conclusion, expert-validators assessed that the contextualized module is highly acceptable with a mean of 4.87, and with verbal interpretation of '*strongly agree'*.

Problem No. 3: <u>What is the level of effectiveness of the Contextualized Module for Children with Hearing Impairment based on the parents' perception?</u>
Table 3. Effectiveness of the Contextualized Modules as Perceived by the Parents

Criteria	Response			Percentage of Positive Responses
	Yes	Neutral	No	
1. It is appropriate to the age of the child *(Ito ay angkop sa edad ng bata.)*	11	0	0	100%
2. It will suit the child's ability *(Ito ay angkop sa abilidad ng bata.)*	10	0	1	90.91%
3. Captures the interest and attention of the child *(Nakukuha ang interes at atensyon ng bata.)*	11	0	0	100%
4. The pictures used are colorful *(Makukulay ang mga larawan na ginamit).*	11	0	0	100%
5. Photos are easy to understand *(Ang mga larawan ay madaling maunawaan)*	11	0	0	100%
6. The contents are aligned in PIVOT *(Ang mga nilalaman ay nakahanay sa PIVOT)*	11	0	0	100%
7. PIVOT content is better understood *(Mas lalong naiintindihan ang nilalaman ng PIVOT)*	11	0	0	100%
8. Can be done by the child even without parental guidance *(Kayang gawin ng bata kahit walang gabay ng magulang)*	8	0	3	72.73%
9. The child learns more because of the extra pictures *(Mas lalong natututo ang bata dahil sa dagdag na mga larawan)*	11	0	0	100%

Criteria	Response			Percentage of Positive Responses
	Yes	Neutral	No	
10. The child enjoys answering the activity sheets *(Natutuwa ang bata sa pagsagot ng activity sheets)*	11	0	0	100%
TOTAL	**106**	**0**	**0**	**96.36%**

Table 3 reveals the effectiveness of the contextualized module as perceived by the parents. Criteria 1, 3, 4, 5, 6, 7, 9, and 10 obtained the highest percentage of positive responses, indicating that all the parents perceived that the module is age appropriate, captures the student's interest and attention, pictures used are colorful, pictures are easy to understand, contents are aligned with PIVOT, the competencies in PIVOT is better understood, child learns more because of the extra pictures, and child enjoys answering the activity sheets. Furthermore, criteria 2 garnered the second to the highest percentage of positive responses denoting that one (1) parent perceived that the module is not appropriate to child's ability. On the other hand, criteria 8 yielded the lowest percentage of positive responses, implying that three (3) parents perceived that the child cannot do the module without parental guidance. As a whole, the module obtained a 96.36% of positive responses from the parents. Therefore, the contextualized module is deemed effective.

Another measure of the effectiveness of the module is the efficiency of the students in answering the given activity. The increase in the academic performance of the students who utilized the module was evident in the mean difference between 'before' and 'after' they utilized the module.

In connection to the study of Darmiatun (2013), an effective instructional material should be user-friendly. Additionally, the study of Prastowo (2014) supported the result of the current study by stating the notion that instructional materials should help teachers in enabling the students in learning and comprehending the content of the materials.

Conclusion

Based on the findings of the study, the following conclusions were drawn:

1. Parents perceived that the ideal module for children with hearing impairment must have the following themes: a) sign language medium of instruction, b) disability consideration, c) media consideration, d) level of difficulty, and e) technical design. The locale of the study is only one school, the perception about the ideal module for children with hearing impairment may be more substantial if multiple schools will participate in the study.

2. Expert-validators assessed the contextualized module as highly acceptable in all of the following dimensions: content (M= 4.93), format and language (M=4.75), presentation (M= 4.86) and usefulness (M= 4.93). The expert-validators were limited to SPEd teacher, kinder teacher and master teacher, the wide-range of validation maybe done through adding some experts from sign language interpretation, lay outing, grammar, and animation.

3. The module obtained a 96.36% of positive responses from the parents. Therefore, the contextualized module is deemed effective. The effectiveness of the module is solely dependent to the perception of the parents; triangulation among other stakeholders may improve the quality of the validation phase.

Recommendations

Grounded on the results and discussions, the following recommendations are hereby offered:

1. The utilization of Contextualized Kindergarten Module for Children with Hearing Impairment is strongly recommended to address the inability of the parents to interpret the module through sign language.

2. Replicate the study using the Filipino Sign Language (FSL), because FSL is the official

National Sign Language of the Filipino deaf community.

3. Development team for higher grade level modules must be established and sustained; each grade level must have its own module development team to ensure that the quality of the content of the module is parallel to the standards of every grade level. Instructional materials developer should tap potential illustrators and layout artists to promote collaboration in making the contextualized module.

4. School heads should include the development of contextualized module through SLAC or INSET to encourage the teachers to continuously contextualize various instructional materials.

5. Future researchers may do studies for continuous revision and modification of the contextualized module.

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