

**A PHENOMENOLOGICAL STUDY ON THE CHALLENGES OF
CONTEXTUALIZED MATHEMATICS TEACHING
IN THE COUNTRYSIDE**

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Master of Arts in Teaching (MAT)
Major in Mathematics

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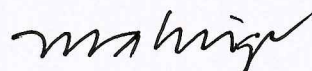
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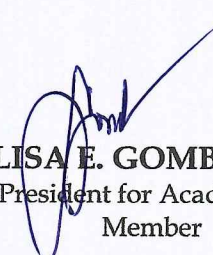
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DEDICATION

This manuscript is wholeheartedly dedicated to my beloved family and friends. A special feeling of gratitude to my loving husband whose words of encouragement and push for tenacity ring in my ears.

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ABSTRACT

This study aims to investigate the challenges of contextualization in teaching Mathematics in the countryside. The study was conducted within the public secondary schools in the countryside. Thirty secondary teachers in mathematics from seven public secondary schools were identified through purposive sampling using the practice of contextualization in the classroom as the selection criteria. The salient finding derived from the study is the contextualized teaching in mathematics assures delivery of learning since the following are evident among learners according to the teacher-participants: (1) long term retention of lessons; (2) increased learning engagement; (3) increased conceptual understanding; (4) able to relate with the lessons; and (5) teaching-learning process is active and interactive. So, mathematics teachers in the rural communities recognize the importance of contextualization as an effective teaching strategy in delivering mathematics lessons to students. They acknowledge its role in promoting faster learning and long-term retention of lesson by fostering active and interactive learning and enhancing learner engagement in the learning process. They discerned increased conceptual understanding among students through real-world application which makes lessons more relatable and meaningful to them. Based on the discoveries of the study, I recommend that the teachers should be informed more so that they may have better conceptual understanding of contextualization.

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Chapter 1

THE PROBLEM AND ITS SETTING

Introduction

The educational landscape in the Philippines was drastically transformed with the enactment of the “Enhanced Basic Education Act of 2013” which instituted the K to 12 Curriculum restructuring the 10-year basic education into a 13-year mandatory education. According to Ronda (2011) this was in response to the pressing demand of coping with the increasing trend of globalization and the declining performance of Filipino students in national and international assessments. This was reflected in the National Achievement Test (NAT) results of secondary students in 2008, 2009, and 2010 which showed mean percentage scores (MPS) of 49.26, 47.40, and 46.30 respectively. In 2003, the Philippines ranked 36th of 38 countries in the Trends in Mathematics and Science Study (TIMSS) survey and assessment (Mullis, Martin, Gonzalez & Chrostowski, 2004). The educational reform was legislated to improve the educational system and the academic performance of the students.

Among the important reforms being implemented by the K to 12 Curriculum is its focus on the contextualization of the teaching and learning process. This is reflected in one of the articles of the legislation which emphasized that “The curriculum shall be culture-sensitive, contextualized and global, and

flexible for schools to localize, indigenize and enhance educational and social context.

Mazzeo and his colleagues (2003) defined contextualization as a diverse family of instructional strategies in which the focus of the teaching- learning process is on the concrete applications in specific context that the students can relate. Perin (2011) added that there have been many terms previously used that refers to contextualization which include: contextual teaching and learning, contextualized instruction, content-area literacy, embedded instruction, integrative curriculum, and situated cognition, to name a few. The central idea of contextualization is that context plays an important role in the meaning construction of the learners.

In mathematics, contextualization refers to the teaching of mathematical problems that gives emphasis on real-life situations (Valenzuela, 2018). Bottge and Cho (2013) added that it involves the development of problems in mathematics that are authentic and which the students can apply in their careers in the future. Puri, Cornick, & Guy (2014) discovered that students usually find difficulty in solving mathematical problems that focuses on computations using formula devoid of real-world connections. Heckman & Weissglass (1994) concluded that it is because traditional teaching strategies in mathematics usually fails to engage students and stimulate their interest in meaningful activities.

Moreover, Valenzuela (2018) claimed that several studies pointed to the effectiveness of contextualization in improving students' understanding of

mathematical problems by translating them into concrete application, enhancing engagement around contextualized problems, helping them in organizing mathematical concepts, and facilitating authentic learning by retaining knowledge meaningfully and extending them into other learning settings.

DepEd Samar division introduced 10 themes to categorize the different local icons used for contextualization. These 10 themes or so called DLHTM (Division Local Heritage Theme Matrix) includes: 1) Festival and dances; 2) Local Heroes and Historical Events; 3) Beliefs and Values; 4) Indigenous People and Local Materials; 5) Topography, Flora and Fauna; 6) Role model of Achievements; 7) Musical Piece and Song; 8) Anthology and Folktales; 9) Food and Local Products; 10) Tourism, Transportation and industry. Despite these efforts to realize curricular changes such as highlighting the importance of contextualization in the teaching and learning process, the implementation at the grassroots still left much to be desired. Teachers in the basic education are still facing several challenges in carrying out contextualized instruction particularly in the field of mathematics.

A study on contextualization in teaching mathematics is very important in order to understand the sentiments of mathematics teachers by looking into their lived experiences in the application of contextualized instruction in mathematics. This can offer vital insights for teachers, administrators and policy makers to understand the challenges of contextualization from the perspective of the teachers and provide basis for strengthening its implementation through

appropriate interventions that would enhance the teaching and learning process and improve the academic performance of the learners.

Statement of the Problem

This study aims to investigate on the challenges of contextualization in teaching Mathematics in the countryside. Specifically, this study sought to answer the following questions:

1. What are the experiences of the teachers in a contextualized teaching in mathematics?
2. How does contextualization in Mathematics assure delivery of learning?
3. How do teachers address the challenges in contextualized teaching in mathematics?

Theoretical Framework

This study utilized the phenomenological approach to qualitative research to delve into the insights and experiences of mathematics teachers on contextualized teaching. Tuohy, Cooney, Dovling, Murphy & Sixmith (2013) describe phenomenology as a way of describing phenomena based on the perceptions of the person who experiences the phenomena. Creswell (2009) emphasized that this method helps identify meaning behind the human experience as it related to a phenomenon or notable collective occurrence. Edmund

Husserl (to whom modern phenomenological method is credited) advocated through his research that objects exist independently and that observations and experiences involving these objects are reliable suggesting an individual's perceptions are accurate representations of their consciousness [4]. The general purpose of a phenomenological study is to understand and describe a specific phenomenon in-depth and reach at the essence of the lived experiences of the participants. Van Manen (1990) clarified the nature of the lived involvement in a phenomenological study through a relationship outlining checked contrasts within the points of view of two individuals encountering comparative occasion. The meaningful experiences of a phenomenon by individuals can therefore be a starting point as well as an end point in a phenomenological study based on the study of Creswell (2009), Manen (1990) & Moustakas (1994).

Significance of the Study

This study provides inputs to secondary students, parents, secondary school teachers, administrators, and future researchers on the practices and challenges of contextualized teaching in mathematics.

To the Administrators. The study will help administrators in crafting learning tools in line with contextualization in teaching Mathematics. This will serve as their bases or guidelines in the effect on integration of contextualization of their teacher subordinates.

To the Mathematics Teachers. This study will be of great offer assistance to the secondary school teachers to fully understand the importance of contextualization and to help them evaluate the quality of teaching rendered in line with contextualization in teaching Mathematics. Results will also help in the teachers' teaching and evaluating strategies in enhancing Mathematical competencies.

To the Parents. This study would provide an aide for them to properly follow-up and assist their children on the additional activities at home. The discoveries of this study will help the parents adjust their learning assistance which they extend on their homes after school hours from basic Mathematics concepts through integration of contextualization.

To the Students. The findings of the study will give the students opportunities in the delivery of learning through contextualization in teaching Mathematics. This will also provide them a chance to assess their progress in Mathematics tracing this performance before after the contextualization.

To the Future Researchers. The future researchers will be guided on developing further on the integration of contextualization in teaching Mathematics. Moreover, this study will serve as a springboard for them to jumpstart their own studies.

Scope and Delimitation

This study aims to determine the challenges of contextualization in teaching mathematics in order to understand the sentiments of mathematics teachers by looking into their lived experiences. This delimits only to Secondary Mathematics teachers in the countryside. Lastly, this study was conducted during the School Year 2019-2020.

Definition of Terms

Key terms in this study are conceptually and operationally defined for better understanding of the readers:

Approach. Conceptually, the term refers to a way of looking at teaching and learning which gives rise to methods, the way of teaching something, which use classroom activities or techniques to help students to learn (<https://www.teachingenglish.org.uk>). This definition is used operationally in this study.

Challenges. Conceptually, it alludes to the circumstances of being confronted with something that needs incredible mental or physical exertion in arrange to be done effectively and so tests a person's capacity (<https://dictionary.cambridge.org>). Operationally, the term refers the hindrances that the Mathematics teachers encountered in contextualized teaching.

Context. Conceptually, the term alludes to the circumstances that frame the setting for an occasion, explanation, or thought, and in terms of which it can be

completely understood and assessed (<https://dictionary.cambridge.org>). Operationally, the term refers to the local setting of the study that will be used in implementing contextualization.

Contextualization. Conceptually, it refers to the educational process of relating the learning of foundational skills with academic or occupational content by centering teaching and learning squarely on concrete applications in a particular setting that's of intrigued to the learners_ (<https://www.gavilan.edu>). Operationally, this term refers to using the local information or icons found in a particular setting in teaching the lessons in Mathematics.

Contextualized Teaching. Conceptually, it is a diverse instructional strategy designed to link the teaching and learning of foundational skills and academic or occupational content to a concrete application in a specific context that is of interest to the students (Kalchik & Oertle, 2010). Operationally, the term refers to the strategy used by the Mathematics teachers in delivering the lesson more effectively and is the focused of the study.

Instruction. Conceptually, this refers to the activities of educating or instructing that impart knowledge or skill (<https://www.vocabulary.com/dictionary>). Operationally, the term refers to act of delivering the contextualized lesson of the respondents.

Intervention. Conceptually, this refers to the act of interfering with the outcome or course especially of a condition or process in order to prevent harm or improve functioning (<https://www.merriam-webster.com>). Operationally the

term refers to the contextualization of lessons in order to address the gaps in the teaching learning process.

Learners. Conceptually this term refers to persons attending an educational institution and those who are learning about a particular subject (<https://www.collinsdictionary.com>). Operationally, the term refers to the students enrolled in public secondary schools.

Local Icons. Conceptually this term refers to symbols of a particular thing (<https://www.collinsdictionary.com>). Operationally, the term refers to the symbols that are known and represent in the specific place/area.

Performance. Conceptually, this refers to the standard to which someone does something such as a job or an examination (<https://www.macmillandictionary.com>). Operationally, this refers to the result of contextualized Mathematics Teaching in the different schools in the countryside.

Practices. Conceptually, this refer to the actual performance of an activity in a real situation (<https://www.macmillandictionary.com>). Operationally, this refers to the best strategy of the teachers in contextualizing the lesson.

Subject. Conceptually, this refers to a branch of knowledge studied or taught in a school, college or university (<https://www.lexico.com>). Operationally, the term refers to Mathematics which is one of the subjects taught in Villareal, Samar using contextualization.

Teachers. Conceptually, this refers to one whose occupation is to instruct or to teach (<https://www.merriam-webster.com>). Operationally, the term refers to secondary Mathematics public teachers in Villareal, Samar who are the respondents of this study.

Chapter 2

REVIEW OF RELATED LITERATURE AND STUDIES

This chapter presents the related literature and studies taken from books, published and unpublished materials conducted locally and abroad, while other related information were taken from electronic and other sources to substantiate significant results. Discussed here also are the similarities and differences of the present study and the previous studies.

Related Literature

The following concepts from both local and foreign authors were found to have bearing or impact on the study conducted. These concepts had been considered for the development of the study.

Contextualization of the curriculum has slowly become a key concept in teaching and learning discussions. Understood as a way of bringing teaching learning closely to the realities of the students, contextualization is a prerequisite for addressing the content and organization of activities to be undertaken in the classroom, as highlighted in the study of Mouraz and Leite (2013). Furthermore, Torres (2015) explained localization, being one of the marks of contextualization, as the process of relating the learning contents specified in the curriculum to local knowledge and materials from the culture of the learners. Through these methods teachers are able to present the lesson in a more realistic and appropriate way

based on prior experiences and real-life circumstances of the learner. With contextualization, the learners are placed in a normal and actual learning environment that helps them to exploit, relate and respond to the various learning opportunities and tools available within the locality or group.

According to George (2010) and Howell (2011) contextualization gives a foundation for researchers, instructors, and administrators to execute and study how learners learn mathematics within the classroom. Researching the subject of contextualizing the educational programs is of significance to teachers and researchers since of the high failure rates in both college-level and remedial-mathematics instruction. Also found that there to be only a 25.0 percent success rate in remedial college-mathematics education. Mouraz et al., (2013) found that by helping students to relate the educational tasks with their knowledge and everyday experiences, curricular contextualization facilitates the linking of theory and practice. Likewise, Asera (2011) found the use of new curriculum with contextualized components and accelerated learning was another avenue for addressing the non-completion problem in college mathematics.

Pearl (2015), stressed that in all the learning areas, localization and contextualization can be achieved. He advised teachers to optimize the use of resources available to the school and to use credible resources, and to anchor teaching on the basis of the life of the learner. Moreover, Pecson (2014) suggested that teachers should use localization and contextualization in teaching to be adaptive and innovative. In education, these concepts were developed and

adapted to make the curriculum react, relate, represent, and be responsive to desires of the learners, particularly the learners of the 21st century who need to be developed in a holistic and skillful way. Mahanand (2016), claimed that doing so would not only help their local languages and culture evolve side by side, but will also continue to make multilingual learners. Such an approach will also promote efficient learning of languages.

Enhancing the quality of educational delivery is the ultimate goal and rationale behind curriculum localization and the localization of schooling materials. UNESCO (2009) noted, “A crucial dimension of quality education is that of relevance of curricula content; the diversity of local (sub national), cultural, and socio-economic realities”. Many educationists have proposed that learners should be taught through aspects that they are familiar with. Tagore, once said that the education of the child should be in accordance with the world around him. He not only believed in this but brought it into effect in his research at his experimental school in Santiniketan, India, with the education of the young learners (Mahanand, 2015).

Kenea (2014) stressed that the question of curriculum relevance is an important issue, whether curriculum planning and development take place at the center or at the regional level. It is important because it defines the position that formal education has in children's normal development as well as the roles that formal education plays in local and national growth. One aspect of maintaining the relevance of the curriculum is through contextualizing it to the learners’

experiences (and to the situation where it is being implemented). As used in everyday language, contextualization is taken as linking or relating or adapting the curriculum. DepEd Order No. 51, s. 2014 entitled "Guidelines on the Conduct of Activities and Use of Materials Involving Aspects of Indigenous Peoples Culture" states in its Policy Background that the localization and contextualization thrusts of the Enhanced Basic Education Curriculum direct all schools and learning programs to relate the curriculum content and competencies to the social and educational context of communities being served.

Related Studies

The following are examples from local/foreign studies which have been found relevant to the present study.

Contextualization and localization of the curriculum is important in the delivery of lessons to better understand the learning process. Former Deped Undersecretary Dina Ocampo confirmed in Peralta (2017) that the program is alive, and it varies depending on who is enforcing it, when it is being applied. Former Deped Undersecretary Dina Ocampo confirmed in Peralta (2017) that the program is alive, and it varies depending on who is enforcing it, when it is being applied. She explained that "in order to find and contextualize the curriculum, you need to think about where you are and you can make the curriculum applicable for you. This means that different areas of the country will also use different instruments to allow them to achieve the curriculum standards.

Reyes, Govers and Ruwaard (2018) stressed that learners have distinctive foundations, culture, and pace of learning appears to be overlooked by a few teachers. Thus, Felder and Spurlin (2005) concluded that students have different ways of learning the subject matter. This one issue should be considered that learners are special and have distinctive orientation the way they learn. It is the assignment of the teachers as front liners to direct students and to think a technique that's suited for the knowledge of the learners. This suggested that trainings for teachers' conceptions and understanding must be aligning to the changing needs of the learners.

Teachers' knowledge is additionally important on how to form mathematics important for the students. They must have sufficient thought to show the use of the lesson into real life circumstance where students may understand and appreciate the subject. Agreeing to Paris (2011) that's why it is exceptionally vital that the teachers ought to have the same cultural background with the students in order for them to get it the lesson and see what's within the world in a comparative way.

That's why concurring to Reyes et al. (2018) that distinctive institution continues to find diverse approaches is for them to assist learners within the teaching-learning process and to manage with the distinctive topics taught in school. Other than, it is the main goal of education to instill the learning within the minds of each learners and help them to understand mathematical concepts in a simple way.

Flores (2010) conformed that instruction has been shown effective in teaching mathematical computation which provides students greater access to understand mathematics curriculum. By the time that students reach their high school, the utilize of manipulatives in instruction has been overlooked since they are anticipated to know abstract concepts which is inaccurate, for concrete representation ought to be continuous as students were exposed to the next mathematical concept. Hughes (2011) showed that utilized concrete instruction and decided its results for engaging students' acquisition, retention, and self-efficacy of fractions. The eventual outcomes of the examination suggest concrete instruction, as depicted in this investigation, could be a compelling instructional strategy to taught portions to students who battle with math. All the more oddly, discoveries from this examination suggest that, for the students who took an interest within the exploration, the concrete instruction was more compelling than customary rule on students' maintenance of parts learning. Students in this examination who got concrete instruction held portions information predominant to students.

Misquitta (2011) explored the efficacy of the contextualized approach and specific instructional methods to teach the equivalence of fractions to students struggling in math. The contextualized approach included tangible aids such as fraction circles and fraction strings, representations such as fraction circle and polygon frame images, and algorithms. Explicit instruction involved an advanced organizer, positive feedback, and cumulative comments along a model-lead-test

series. Study results indicate that the intervention program which integrates contextualization and explicit teaching approaches is successful in improving the performance of students in fraction equivalence tasks. Furthermore, Yagci (2010) examined grade eight students presenting them with concrete instructions and also questioning the views of the students on concrete instructions for the layout. It was found that students better grasp the principles through the use of practical materials in teaching. Students can easily translate ideas into reality with the use of concrete examples.

Ultimately, educating students through specific things before switching to abstraction slowly leads them through symbols from real objects. Connecting mathematical principles by object use allows greater retention and concept incorporation in the real world. Students can easily see the importance of Mathematics in their lives by representations of abstract concepts with actual object.

Chapter 3

METHODOLOGY

This chapter presents the strategies and methods that will be used in this study. It describes the research design, locale of the study, instrumentation, validation of instrument, sampling procedure, data gathering procedure, as well as the statistical tools in the treatment of the data.

Research Design

This study is a qualitative research utilizing phenomenology to determine the lived experiences of mathematics teachers in the countryside relative to contextualized teaching. The study was conducted within the public secondary schools in the countryside. Thirty secondary teachers in mathematics from seven public secondary schools were identified through purposive sampling using the practice of contextualization in the classroom as the selection criteria.

Semi-structured interviews were conducted over a two-week duration at accumulated time in the houses of the teacher-participants during weekends and after class hours. An audio recorder was utilized to record the reactions of the participants.

Instrumentation

A semi-structured interview guide was developed and used in this study to gather insights among the participants on the challenges of contextualized

teaching in mathematics. The questions are listed in a way that it allows the respondents to freely express himself or herself on the issues on contextualized teaching.

According to Bernard (1988), semi-structured interviewing provides a clear set of instructions for interviewers and can provide reliable, comparable qualitative data. An audio recorder is used since the semi-structured interview guide contains open-ended questions and discussions may diverge from the interview guide. The data gathered were transcript for analysis.

Validation of Instrument

The research instrument that was employed in this study was validated through expert validation. The drafted open-ended questionnaire by the researcher was submitted for expert validation focusing on the content of the instrument. After which, the interview guide was re-drafted by integrating all the suggestions provided by the expert.

Sampling Procedure

The respondents of this study were chosen through purposive sampling. Since the study focuses on the challenges of contextualized mathematics teaching, the respondents of the study are teachers who are teaching Mathematics in both Junior High School and Senior High School who were practicing contextualized lessons in teaching Mathematics during the School Year 2019-2020.

The researcher requested the school principals the list of teachers who are teaching Mathematics in the seven schools selected. Each teacher of the given list were asked if they are willing to participate in the study and a total of 30 participants from seven schools confirmed.

Data Gathering Procedure

In this study, the research sought the approval of the Samar Schools Division Superintendent. Later, letters of request, together with the Letter of Endorsement from the Samar Schools Division Superintendent, addressed to all Secondary School Principals were submitted for approval.

Upon approval of the said letters of request, the list of names of all the Mathematics teachers was secured from the concerned personnel of the school for the determination of the respondents.

The interviews were conducted over a two-week duration at accumulated time in the houses of the teacher-participants during weekends and after class hours. An audio recorder was utilized to record the responses of the participants.

Statistical Treatment of Data

The study utilized Colaizzi approach in data analysis as outlined by Sosha (2013). Transcription of the narratives of each participant after every interview were done through planned notes and careful transcription of the conversation from the audio recording. Careful review of the transcripts were done and significant statements were written and translated. Meanings were then generated

from the extracted statements. These meanings were then categorized into themes and these themes were used in describing the experiences of the mathematics teachers who participated in this study. The findings were reviewed by the researcher by eliminating unrelated and insignificant descriptions of contextualized teaching. Finally, the outcome of the acquired information were integrated for final findings.

Ethical Considerations

The anonymity and confidentiality of the participants was preserved by not revealing their names and identity in the data collection, analysis and reporting of the study. Moreover, privacy and confidentiality of the interview environment were managed carefully during the interview session.

Prior consent among the participants of this study was secured before conducting the interview. They were provided with information sheet to further explain the study. They were also given ample time to read the interview guide and to decide whether or not they wanted to be involved in the study.

Furthermore, the data gathered in this study will be kept with utmost confidentiality to protect the rights of the respondents.

Chapter 4

PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

This section presents the analyses and interpretation of the data collected in this study. It includes the discussion of the questions stated in the first chapter and the research implications of the data gathered.

Challenges in Contextualized Teaching in Mathematics

The following are the common themes derived from the responses of the participants on the question: What are the challenges in contextualized teaching in mathematics?

Applicability of Contextualization in Competencies. The most common sentiment expressed by the teachers on the challenges of contextualization is its inapplicability in many mathematical concepts and competencies.

"The challenge in contextualization is that not all competencies can be contextualized." Teacher 25

"Some topics are difficult to contextualize." Teacher 1

"Contextualization in teaching mathematics are sometimes not applicable in all competency." Teacher 8

"Hindi lahat ng competencies ay nakocontextualized." Teacher 20

Some teachers pointed that there are topics which they find difficulty to contextualize like mathematical theorems, radicals and other computations. They think that not all competencies can be contextualized.

"Other topics are difficult to contextualize especially in theorems, radicals and other computations." Teacher 7

"Minsan ang contextualization ay hindi nararapat gamitin sa ibang leksyon. Bukod pa sa mahirap talagang maghanap ng icon." Teacher 28

"Not all competencies can be contextualized especially those with computations." Teacher 27

This is particularly true for certain concepts in higher level mathematics as indicated by some teachers.

"Contextualization is really difficult in mathematics especially in higher grade levels." Teacher 14

Accessibility of Materials for Contextualization. Another common sentiment expressed by the participants is the lack of local materials and resources for contextualizing the teaching-learning process.

"Lack of resources/examples and unavailability of local materials on contextualization is what makes contextualization harder." Teacher 2

"Lack of resources/ examples and unavailability of local materials, minsan wala talaga akong mahanap na local icons na babagay sa lesson ko." Teacher 11

"It's very time consuming and when done integrating you found that the local materials to be used is not available." Teacher 13

Moreover, there are limited learning materials available that can be provide examples in contextualizing certain topics.

"Having hard time in giving concrete examples which are pertaining to daily lives." Teacher 3

"Lack of examples in contextualizing the topic." Teacher 26

Time Requirement for Contextualized Teaching. Time-related constraint is another concern collectively experienced by the teachers in integrating contextualization in their lesson.

“Napakatagal gumawa ng lesson plan na nakaintegrate sa contextualization. Minsan madaling araw ako gigising para matapos ko lang ung para sa COT.” Teacher 10

“Matagal gumawa ng lesson plan na nakacontextualized.” Teacher 21

“It’s time consuming.” Teacher 30

Some even expressed sentiments bordering in frustration on the reason why contextualizing lessons become very tedious and time consuming.

“It’s very time consuming and when done integrating you found that the local materials to be used is not available.” Teacher 13

“In contextualization, you have to think deeper, thus the preparation is time consuming.” Teacher 23

“Contextualization is time consuming because not all competencies can be contextualized.” Teacher 15

Learner’s Individual Differences. Another hurdle identified by the teacher participants in assimilating contextualization in their daily lesson is the issue on the individual differences of the learners. Each learner comes from varied backgrounds thus making the process of contextualization a bit more complicated and challenging on the part of the teachers.

“Students diversity is also the challenging part of contextualization. One example tend to be not appropriate to another student because of the different backgrounds.” Teacher 4

“Things that may seem contextualized to one student may be different from other students.” Teacher 12

"Learners are unique, that makes contextualization a lot harder."
Teacher 17

"Students now a days are varied and that's what it makes contextualization difficult. Hindi sila pareparehas ng pinagmulan."
Teacher 18

"Iba- iba yong katangian ng mga bata, minsan tinanong ako nong isang transferee kung anong ibig sabihin ng ginamit kong local icon." Teacher 22

Familiarization with the Local Icons. Familiarization with the local icons is another significant obstacle that the teachers need to overcome when contextualizing their lessons. This problem becomes even more complicated for some teachers hailing from another place.

"It is hard to use local icons that you are not familiar since I am not really from this place." Teacher 6

"The unfamiliarity of local icons is the difficult part of contextualization." Teacher 9

"Ang mahirap talaga sa contextualization ay 'yong hindi ko alam yung mga local materials o icons kasi hindi naman talaga ako taga dito, dito lang ako naassign." Teacher 24

Some expressed that choosing the appropriate icons for the lesson is already a challenge in itself.

"I'm having a hard time in selecting the suitable icons in the lessons." Teacher 11

"Minsan ang contextualization ay hindi nararapat gamitin sa ibang leksyon. Bukod pa sa mahirap talagang maghanap ng icon." Teacher 27

Appropriateness of Teaching Method. Choosing the appropriate teaching method and pedagogical approach is among the major obstacles faced by the teachers in the implementation of contextualized teaching. Some even expressed

confusion as to which teaching method will they use in the contextualization process.

"I'm confused of the method to be used in teaching using contextualization." Teacher 5

"Selecting the best method/ approach is much harder." Teacher19

"The approach to use in contextualization is difficult and confusing." Teacher 29

Delivery of Learning in Contextualized Mathematics Teaching

The following are the common themes derived from the responses of the participants on the question: How does contextualization in Mathematics assure delivery of learning?

Despite the challenges in the implementation of contextualization in teaching mathematics, the participants still recognize the role of contextualization in ensuring the delivery of learning to the students.

Long-term Retention of Lessons. Mathematics teachers recognizes that contextualization plays an important role in achieving long-term learning among the learners.

"Contextualization assures long- term learning of the students." Teacher 5

"Contextualization in Mathematics assure long term learning of the students." Teacher 7

"The retention in contextualization is much longer and it makes the lesson interactive." Teacher 14

Furthermore, they expressed a common sentiment that contextualization helps students achieve deeper understanding of the concepts. In addition, the learners can easily learn topics when taught in their context.

"Deeper understanding of the concept and easy for retention."
Teacher 8

"Madaling matuto ang mga bata sa ganitong paraan." Teacher 10

"Understanding of the lesson is much faster and longer retention is evident." Teacher 23

"Sa contextualization, mabilis ang pagkatuto ng mga bata at matagal ang retention." Teacher 27

"Long term retention and easy understanding is present." Teacher 29

Increased Learning Engagement. Contextualization in Mathematics increases the engagement of the learners in the teaching-learning process. Learners show more interest even on more difficult topics when the lesson are contextualized.

"For the learners, mathematics is the most difficult subject, but with contextualized lesson learners are more engaged and interested on the topics." Teacher 2

"Makes the lessons engaging to students." Teacher 6

Classroom activities become more interactive and lessons become more relatable to the learners as a result of contextualization.

"Engaging lessons and interactive teaching learning process."
Teacher 17

"This is very effective in teaching students. Makikita mo talaga na natuto sila kasi palaging nagtatanong at nagrerecite." Teacher 11

"Pagnaririnig nila yong icon nagiging engaging ang klase kasi nakakarelate sila at alam talaga nila." Teacher 21

"Engaging and interactive learning is the result of contextualization." Teacher 25

Increased Conceptual Understanding. Teachers consider contextualized teaching's great contribution in increasing the conceptual understanding of the learner in mathematics. Some teachers believe that improved assessment results of their students support this view.

"Better results in assessments and easy understanding of the lessons." Teacher 16

"Students relate with the lesson kaya madaling maintindihan." Teacher 18

Other teachers think that increased conceptual understanding is also apparent among their learners since they are able to apply what they have learned within the genuine world.

"Learning is applied outside the four walls." Teacher 9

"Contextualization increased conceptual understanding kaya naiaaply nila sa iba't ibang gawain." Teacher 20

Still others deem that contextualization helps students to deal with mathematics as seemingly much easier and fun to do.

"Mathematics seemed to be easier in contextualization." Teacher 26

"Even if the lesson is difficult students find it much easier and fun to deal with." Teacher 30

Relate to the Lessons. Learning in contextualization seem be easier since the students can relate to the different lessons in Mathematics. They easily understand the lessons because they are familiar with the examples given. According to the participants:

"Students easily understand the problems." Teacher 1

"It helps the learners feel the sense of belongingness in the class since they can relate with the lessons." Teacher 22

"Contextualization is the most effective way to deliver the lesson to the learners in an easy way." Teacher 24

"Learners understand the lesson well because they can relate with it." Teacher 28

Make Learning Active and Interactive. In teaching, making learning active and interactive is one of the goals of the teachers. This kind of learning is evident in contextualization. Students are enjoying and having fun while learning. This is reflected by Teacher 3 saying *"Familiarity of examples makes learning active and students are having fun while learning."* In addition, other participants seconded this by sharing that:

"Students feel the sense of belongingness in the class and thus makes the lesson interactive." Teacher 4

"Enhance interaction among the teachers and learners." Teacher 12

"Make learning active." Teacher 13

"Students are always excited to do activities in contextualization." Teacher 15

"Students are participative and active." Teacher 19

Strategies Used to Address the Challenges on Contextualized Teaching in Mathematics

The teacher participants proposed some of the strategies that they used in order to address the challenges on contextualized teaching in Mathematics. Contextualization is a bit difficult for the teachers especially that some of them are not well trained in this field of teaching and more so that they are not specialized in the subject taught. However, teachers are very resourceful and always find ways in order to deliver the lessons effectively and efficiently to our dear learners.

The teachers came up with the following strategies to address the challenges posed by contextualized teaching in Mathematics.

Conduct Trainings and Seminar Workshops. Majority believes that in order to overcome the challenges on contextualization, school-based trainings and seminar workshops are vital in enhancing the skills of the teachers in successfully implementing contextualization in their mathematics lessons.

"The school must conduct school-based contextualization workshop to provide the teachers with appropriate knowledge needed in contextualizing their lessons." Teacher23

"Conduct trainings to improve the skills in contextualization." Teacher28

"Magkaroon ng workshops at mentoring para sa mga nahihiraan sa pagcontextualized ng kanilang mga leksyon." Teacher27

"Provide more trainings and workshops on contextualization to enrich the knowledge of the teachers." Teacher16

"Enhance the skills of the teachings on the proper use of local icons and contextualization techniques." Teacher12

"The school should include contextualization on the topics of school-based learning action cell and INSET (In-Service Trainings) to equip and backup the teachers with knowledge regarding on how to apply contextualization to each lesson." Teacher4

"The school must provide also some school-based training, FGDs, and mentoring to gear the teachers with proper knowledge regarding the proper implementation of contextualized teaching strategies." Teacher1

Listing and Mapping of Local Icons. Other teachers express the need for icon mapping and listing of local icons to familiarize with them which would help them integrate contextualization more effectively.

"List down the icons in locality for more effective contextualized teaching." Teacher30

"I list the icons that can be used in contextualizing the lesson of the different competencies in Mathematics." Teacher1

"Each school must conduct listing of local icons of each municipality." Teacher24

"Sa contextualization, dapat ang paaralan ay magmapping sa kanilang komunidad para magamit sa pagtuturo." Teacher 27

"Conduct local mapping to equip the teachers with knowledge regarding local icons." Teacher13

They believe that mapping and listing of local icons will help enhance their knowledge on these icons and boost their know-how in their applications in contextualizing mathematics lessons. Furthermore, they think that creating an icon map will help teachers by providing them with enough references which they could refer to when contextualizing lessons.

"Mag community mapping para mapalawak ang kaalaman ng mga guro sa mga local na icons na maaari nilang gamitin sa pagtuturo." Teacher21

"Provide enough references on local icons which will best suit to Mathematics topics." Teacher22

"Mas maganda kung magkakaroon ng references ang mga guro para magamit nila sa contextualization." Teacher18

"It is through localized/easy terms of application that applies to the concept/topic during discussion using examples in real life situations." Teacher7

"Provide sources of local icons and conduct trainings." Teacher29

Providing Technical Assistance, Mentoring, and Holding FGDs. Several teachers recognized mentoring, holding of focused group discussions, and providing technical assistance could help them surmount the glitches they face in the process of contextualization.

"Conduct technical assistance and mentoring on teachers regarding contextualization." Teacher 14

"Sometimes I ask my co-teachers in Mathematics about contextualizing the certain lesson that is difficult for me to contextualized." Teacher 6

"magkaroon ng workshops at mentoring para sa mga nahihiraan sa pagcontextualized ng kanilang mga leksyon." Teacher 27

"The school must provide also some school-based training, FGDs, and mentoring to gear the teachers with proper knowledge regarding the proper implementation of contextualized teaching strategies." Teacher 1

"Conduct listing of local icons, school-based training-workshops, provide mentoring and FGDs on contextualization." Teacher 5

"Kailangan na magkaroon ng school-based training-workshop, at magbigay ng technical assistance ang paaralan upang mahasa ang

mga kakayahan ng mga guro ukol sa tamang paggamit ng local icons sa pagtuturo.” Teacher 11

“Ask technical assistance to those who are experts in contextualizing.” Teacher 9

Rely on their Resourcefulness. A few resort to their own resourcefulness to get through the challenges of contextualization. They assert that through conscientious thinking, teachers can create alternative ways through which they would be able to properly practice contextualized teaching in mathematics.

“The challenges mentioned can be addressed through the support and sense and resourcefulness of both teachers and the government. The teachers can look for alternatives to cater the needs of the students.” Teacher 10

“It can be addressed through deep thinking and also through proper application of contextualization.” Teacher 8

Chapter 5

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

This chapter displays the findings, conclusions and recommendations of the study.

Summary of Findings

The following were the salient findings derived from the study.

1. The challenges encountered in contextualized teaching in Mathematics by the teacher-respondents are: (1) applicability of contextualization in competencies; (2) accessibility of materials for contextualization; (3) time requirement for contextualized teaching; (4) learners' individual differences; (5) familiarity with the local icons; and (6) appropriateness of teaching method.

2. Contextualized teaching in mathematics assures delivery of learning since the following are evident among the learners according to the teacher-participants: (1) long term retention of lessons; (2) increased learning engagement; (3) increased conceptual understanding; (4) able to relate with the lessons; and (5) teaching-learning process is active and interactive.

3. Contextualization is indeed challenging to the teachers. To address the challenges in contextualized teaching in mathematics the teacher-respondents used strategies such as (1) participating in school-based training and seminar workshops on contextualization; (2) icon mapping and listing of local icons; (3) providing technical assistance, mentoring, and focused-group discussion; and (4)

self-reliance and resourcefulness. These strategies help the teacher- participant to improve their skills and to enhance their knowledge on the what, when and why in contextualized teaching in Mathematics.

Conclusions

Mathematics teachers in the rural communities recognizes the importance of contextualization as an effective teaching strategy in delivering mathematics lessons to the students. They acknowledged its role in promoting faster learning and long-term retention of lesson by fostering active and interactive learning and enhancing learner engagement in the learning process. They discerned increased conceptual understanding among students through real-world application which make the lessons more relatable and meaningful to them.

Despite acknowledging its importance, they experience various challenges in implementing contextualization in their daily mathematics lessons. Many maintain the notion that it is not applicable in some mathematics competencies. Others affirmed the unavailability of local materials, and their unfamiliarity with the local icons. Furthermore, they asserted that lesson preparation using contextualization is time consuming and the differences in the learners' background presents another challenge in its implementation.

Recommendations

Based on the discoveries of the study, the following were the recommendations that the researcher considered relevant for the implementation of contextualized teaching in Mathematics, to wit:

1. The teachers should be informed more so that they may have better conceptual understanding of contextualization.
2. Trainings on the actual application of contextualized teaching should be conducted so that the teachers may gain confidence in using this teaching strategy in their classrooms.
3. Bench-marking should be done to gain insights on the best practices of other schools in contextualized teaching.
4. Schools and teachers should adopt alternative ways in preparation for teaching mathematics using contextualization by designing a time on task scheme different from that of the actual teaching.
5. Teachers should craft a journal of pedagogies for every lesson with contextualization to ease up the preparation and teaching phase.
6. Further studies should be conducted on the students' perspective and lived experiences in contextualized learning.

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APPENDICES

Appendix A

Semi-structured Interview Guide

1. Qualitative Interview Introduction

Moderator: I'm Lora N. Gerardo, a Master of Arts in Teaching student of Samar State University. I am conducting this interview in relation to my study on the "A Phenomenological Study on the Challenges of Contextualized Mathematics Teaching in the Countryside". I am going to lead the discussion. We are here to determine the challenges of contextualized mathematics teaching.

2. Verbal Consent

Would you like to participate in this interview?

3. Background Information

Would you like to tell me about the implementation of contextualization in your school?

4. Experiences in contextualized Teaching in Mathematics

Can you tell me about your experiences in contextualized teaching in Mathematic?

- Are you using contextualized lesson in Mathematics?
- How was your experience?
- Did you encounter difficulties in delivering a contextualized lesson?
 - Can you enumerate those challenges?

5. Delivery of Learning

How does contextualization in Mathematics assure delivery of learning?

- What is the difference between using a contextualized lesson from that of traditional way?
- Does the students learn easily?
 - How do you say so?

6. Strategies used to address gaps

How do you address the challenges in contextualized teaching in Mathematics?

- How do you address the gaps in contextualized teaching?
- Did it help you deliver the lesson easily?
 - How?

Would you like to add more insights?

Thank you very much for your time!

Have a great day!

Appendix B

Letter Request to the Schools Division Superintendent

Republic of the Philippines
Department of Education
Region VIII
Division of _____

February 17, 2020

Schools Division Superintendent
This Division

Dear Sir/Madam:

Greetings!

The undersigned researcher is a Master of Arts in Teaching Mathematics Student of Samar State University, Catbalogan City who presently conducting a study entitled **“PHENOMENOLOGICAL STUDY ON THE CHALLENGES OF CONTEXTUALIZED MATHEMATICS TEACHING IN THE COUNTRYSIDE.”** This research aims to determine the challenges of contextualized mathematics teaching and to use this data to strengthen the implementation of the K to 12 Curriculum through contextualization and localization of lessons using local history and information.

The researcher would like to request permission from your good office to administer my interview to the Mathematics Teachers of the different schools in your division on February 24-28, 2020.

Your favorable consideration on this request will be highly appreciated.
Thank you and God Bless

Respectfully Yours,

LORA N. GERARDO
Researcher

Appendix C

Letter Request to the Respondents

Republic of the Philippines
Commission on Higher Education
SAMAR STATE UNIVERSITY
COLLEGE OF GRADUATE STUDIES
City of Catbalogan

February 24, 2020

Dear Participant:

Good day!

I invite you to participate in a research study entitled, "Phenomenological Study on the Challenges of Contextualized Mathematics Teaching in the Countryside." I am currently enrolled in the course Master of Arts in Teaching Mathematics at the College of Graduate Studies of Samar University, City of Catbalogan and I am in the process of writing my Masters' Thesis.

The purpose of this study is to determine the challenges of contextualized mathematics teaching and to use this data to strengthen the implementation of the K to 12 Curriculum through contextualization and localization of lessons using local history and information.

I have chosen you as my research respondents because you are a Secondary Mathematics Teacher. I hope that you will be able to give your precious time to answer my questions during the interview.

I wish to ensure you that all information obtained in this study will be confidential. I hereby attached my interview guide so that you will be guided on the sequence and questions to be included.

Thank you for sharing me your time to assist me in my research study. Your cooperation and participation is highly appreciated.

Respectfully Yours,

LORA N. GERARDO
Researcher

Appendix D

Teachers' Responses on the Interview Conducted

Question: What are the challenges in contextualized teaching in Mathematics?

School	Teacher-Respondent	Responses
A	1	Some topics are difficult to contextualized.
	2	Lack of resources/ examples on contextualization.
	3	Having hard time in giving concrete examples which are pertaining to daily lives.
	4	Students diversity is also the challenging part of contextualization. One example tend to be not appropriate to another student because of the different backgrounds.
	5	I'm confused of the method to use in teaching using contextualization.
	6	Its hard to use local icons that you are not familiar since I am not really from this place.
	7	Other topics are difficult to contextualize especially in theorems, radicals and other computations.
	8	Contextualization in teaching mathematics are sometimes not applicable in all competency.
	9	The unfamiliar local icons is the difficult part of contextualization.
	10	Napakatagal gumawa ng lesson plan na nakaintegrate sa contextualization. Minsan madaling araw ako gigising para matapos ko lang ung para sa COT.
B	11	Lack of resources/ examples and unavailability of local materials, minsan wala talaga akong mahanap na local icons na babagay sa lesson ko.

School	Teacher-Respondent	Responses
	12	Things that may seem contextualized to one student may be different from other students.
	13	Its very time consuming and when done integrating you found that the local materials to be used is not available.
C	14	Contextualization is really difficult in mathematics especially in higher grade levels.
	15	Contextualization is time consuming because not all competencies can be contextualized.
	16	I'm having a hard time in selecting the suitable icons in the lessons.
	17	Learners are unique, that makes contextualization a lot harder.
	18	Students now a days are varied and that's what it makes contextualization difficult. Hindi sila pareparehas ng pinagmulan.
	19	Selecting the best method/ approach is much harder.
D	20	Hindi lahat ng competencies ay nacocontextualized.
	21	Matagal gumawa ng lesson plan na nakacontextualized.
	22	Iba- iba yong katingian ng mga bata, minsan tinanong ako nong isang transferee kung anong ibig sabihin ng ginamait kong local icon.
	23	In contextualization, you have to think deeper, thus the preparation is time consuming.
	24	Ang mahirap talaga sa contextualization ay 'yong hindi ko ala mung mga local materials o icons kasi

School	Teacher-Respondent	Responses
		hindi naman talaga ako taga dito, ditto lang ako naassign
E	25	The challenge in contextualization is that not all competencies can be contextualized.
	26	Lack of examples in contextualizing the topic.
	27	Minsan ang contextualization ay hindi nararapat gamitin sa ibang leksyon. Bukod pa sa mahirap talagang maghanap ng icon.
	28	Not all competencies can be contextualized especially those with computations.
F	29	The approach to use in contextualization is difficult and confusing.
	30	Its time consuming.

Question: How does contextualization in Mathematics assure delivery of learning?

School	Teacher-Respondent	Responses
A	1	Students easily understand the problems
	2	For the learners, mathematics is the most difficult subject, but with contextualized lesson learners are more engaged and interested on the topics.
	3	Familiarity of examples makes learning active.
	4	Students feel the sense of belongingness in the class and thus makes the lesson interactive.
	5	Contextualization assures long- term learning of the students.
	6	Makes the lessons engaging to students.
	7	Contextualization in Mathematics assure long term learning of the students.
	8	Deeper understanding of the concept and easy for retention.
	9	Learning is applied outside the four walls.
	10	Madaling matuto ang mga bata sa ganitong paraan.
B	11	This is very effective in teaching students. Makikita mo talaga na natuto sila kasi palaging nagtatanong at nagrerecite.
	12	Enhance interaction among the teachers and learners.
	13	Make learning active.
C	14	The retention in contextualization is much longer and it makes the lesson interactive.
	15	Students are always excited to do activities in contextualization.

School	Teacher-Respondent	Responses
	16	Better results in assessments and easy understanding of the lessons.
	17	Engaging lessons and interactive teaching learning process.
	18	Students relate with the lesson kaya maling maintindihan.
	19	Students are participative and active.
D	20	Contextualization increased conceptual understanding kaya naiaaply nila sa iba't ibang Gawain.
	21	Pagnaririnig nila yong icon nagiging engaging ang klase kasi nakakarelate sila at alam talaga nila.
	22	It helps the learners feel the sense of belongingness in the class since they can relate with the lessons.
	23	Understanding of the lesson is much faster and longer retention is evident.
	24	Contextualization is the most effective way to deliver the lesson to the learners in an easy way.
E	25	Engaging and interactive learning is the result of contextualization.
	26	Mathematics seemed to be easier in contextualization.
	27	Sa contextualization, mabilis ang pagkatuto ng mga bata at matagal ang retention.
	28	Learners understand the lesson well because they can relate with it.
F	29	Long term retention and easy understanding is present.

School	Teacher-Respondent	Responses
	30	Even if the lesson is difficult students find it more easier and fun to deal with.

Question: How are the challenges in contextualized teaching in mathematics addressed?

School	Teacher-Respondent	Responses
A	1	I list the icons that can be used in contextualizing the lesson of the different competencies in Mathematics. The school must provide also some school-based training, FGDs, and mentoring to gear the teachers with proper knowledge regarding the proper implementation of contextualized teaching strategies.
	2	Seminar-workshops, technical assistance and Focus Group Discussion should be given to Mathematics Teachers regarding contextualization.
	3	Sometimes it's very hard for the students to understand the concept in contextualization. The school must conduct mapping on the local icons, conduct trainings and provide technical assistance on how to contextualize the lessons.
	4	Sometimes, contextualized teaching in mathematics limits us on the strategies that we are about to implement and it gives the students and teachers limited knowledge. The school shall include contextualization on the topics of school-based learning action cell and inset to equip and backup the teachers with knowledge regarding on how to apply contextualization to each lesson.
	5	Conduct listing of local icons, school-based training-workshops, provide mentoring and FGDs on contextualization.
	6	Sometimes I ask my co-teachers in Mathematics about contextualizing the certain lesson that is difficult for me to contextualize.


School	Teacher-Respondent	Responses
	7	It is through localized/easy terms of application that applies to the concept/topic during discussion using examples in real life situations.
	8	It can be addressed through deep thinking and also through proper application of contextualization.
	9	Ask technical assistance to those who are experts in contextualizing.
	10	The challenges mentioned can be addressed through the support and sense and resourcefulness of both teachings and the government. The government should give bigger budget allocation to education for them to provide the needs of the teachers and students. The teachers can look for alternatives to cater the needs of the students.
B	11	The challenge in contextualized teaching in mathematics is on the proper implementation of contextualization in each learning area. Kailangan na magkaroon ng school-based training-workshop, at magbigay ng technical assistance ang paaralan upang mahasa ang mga kakayahan ng mga guro ukol sa tamang paggamit ng local icons sa pagtuturo.
	12	Enhance the skills of the teachings on the proper use of local icons and contextualization techniques.
	13	Conduct local mapping to equip the teachers with knowledge regarding local icons.
C	14	Conduct technical assistance and mentoring on teachers regarding contextualization.
	15	Provide more school-based workshops regarding the effective strategies in contextualization and on

School	Teacher-Respondent	Responses
		how to make the activities more fun and exciting to the learners.
	16	Provide more trainings and workshops on contextualization to enrich the knowledge of the teachers.
	17	Provide workshops on how to engage more the students in the lesson.
	18	Mas maganda kung magkakaroon ng references ang mag guro para magamit nila sa contextualization.
	19	Conduct more workshops on enhance skills in contextualized teaching.
D	20	Provide technical assistance sa mga gurong mahihirapan sa pagcontextualized ng kanilang mga leksyon.
	21	Mag community mapping para mapalawak ang kaalaman ng mga guro sa mga local na icons na maaari nilang gamitin sa pagtuturo.
	22	Provide enough references on local icons which will best suit to Mathematics topics.
	23	The school must conduct school-based contextualization workshop to provide the teachers with appropriate knowledge needed in contextualizing their lessons.
	24	Each school must conduct listing of local icons of each municipality and provide school-based seminars on the proper use of the said icons in contextualization.
E	25	Conduct school trainings on contextualized teachings.


School	Teacher-Respondent	Responses
	26	Provide technical assistance to the teachers with difficulties in contextualization.
	27	Sa contextualization, dapat ang paaralan ay magmapping sa kanilang komunidad para magamit sa pagtuturo, magkaroon ng workshops at mentoring para sa mga nahihiraan sa pagcontextualized ng kanilang mga leksyon.
	28	Conduct trainings to improve the skills in contextualization.
F	29	Provide sources of local icons and conduct trainings.
	30	List down the icons in locality for more effective contextualized teaching.

Appendix E

Ethical Approval



SAMAR STATE UNIVERSITY
Aroche Blvd - Catbalogan City, Philippines 6700
Office of the University President



JAS-ANZ
Certificate No. AJA/1849
SSU-OPRE-EA-007
01-OCT-2019 REV 000

CERTIFICATE OF ETHICS APPROVAL

This is to certify that the Samar State University Institutional Research Ethics Review Committee (IRERC) has reviewed and approved a study entitled

A Phenomenological Study on the Challenges of Contextualized Mathematics Teaching in the Countryside

Name of Researcher: **Lora N. Gerardo**
Reference No: **IRERC EA-0017**
Date of Application: **February 28, 2020**

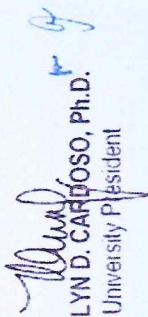
It is hereby mandated that in the implementation of the aforementioned study, the subject researcher shall adhere to International ethical guidelines, national guidelines and all other pertinent requirements prescribed by the SSU-IRERC.

The Researcher can now commence to the data gathering process and the study shall be valid for two (2) years from the date of issuance hereof

DATE OF ISSUANCE: March 4, 2020

VALID UNTIL: March 4, 2022

RHEAJANE A. ROSALES, D.M.
Director/IRERC



MARILYN D. CARDOSO, Ph.D.
University President

Telephone No. (055) 251-2139 | Fax: (055) 543-8394 | Website: www.ssu.edu.ph

CURRICULUM VITAE

CURRICULUM VITAE

Name : Lora N. Gerardo
 Birthday : November 23, 1992
 Address : Brgy. Mahayag Villareal, Samar
 Father : Baltazar G. Gerardo Sr.
 Occupation : Carpenter
 Mother : Hilaria N. Gerardo
 Occupation : Housewife
 Spouse : Arthur G. Yu
 Occupation : Teacher

EDUCATIONAL BACKGROUND

Elementary : VILLAREAL II CENTRAL ELEMENTARY SCHOOL
 2000- 2005
 Secondary : VILLAREAL NATIONAL HIGH SCHOOL
 2005-2009
 Tertiary : LEYTE NORMAL UNIVERSITY
 2009-2013
 Course : Bachelor of Secondary Education
 Major in Mathematics
 Graduate Studies : SAMAR STATE UNIVERSITY
 2016- PRESENT
 Course : Master of Arts in Teaching (MAT)
 Major in Mathematics

WORK EXPERIENCE

Assistant Chief Instructor	March 18, 2013- September 8, 2014 Kumon Philippines, Catbalogan Branch
Secondary School Teacher I	September 9, 2014- July 30, 2018 Villareal National High School
Secondary School Teacher III	July 31, 2018- Present Villareal National High School

ELIGIBILITY

Licensure Examination for Teachers	November 22, 2013
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