Teachers' Perception of Using Coastal Community Laboratory Modules for Learning Practical Research 1

Ludy John B. Capilastique[1], Sarah Jane P. Satojito[2], Joedar P. Satojito, EdD*[3]
[1, 2] Fidel Zarceno National High School, Iloilo, Philippines
[3] Guimaras State University, Guimaras, Philippines
*Corresponding Author e-mail: *joedarsatojito2016@gmail.com*

Received: 30 July 2022 **Revised**: 10 October 2022 **Accepted**: 31 October 2022
Available Online: 14 November 2022

Volume I (2022), Issue 4, ISSN: 2945-3577

ABSTRACT

Aim: This research was conducted to determine the perception of the SHS teachers of Practical Research 1 on Modular Distance Learning using Coastal Community Laboratory Modules. Likewise, the study explored how SHS teachers perceived these contextualized modules in teaching Practical Research 1 for the S.Y. 2020 - 2021.

Methodology: The research design in this study was a mixed method. Research questions 1 and 2 employed a quantifiable descriptive study to determine the perception of the respondents towards the CoLLab Model as the basis to craft the exemplary modules for this study and their perception of the module exemplar had contribution to learners' personal development. Research question 3, on the other hand, employed a qualitative method to explore the perception of SHS teachers in using the Coastal Community Laboratory Modules to increase the learning experience of their learners. This research used purposive sampling to investigate the perception of 11 SHS teachers in the District of Carles in using Community Laboratory (CoLLab) Model as design for contextualized modules. Questionnaire that contained quantifiable closed-ended questions and open-ended questions was used to gather data. For the data interpretation, mean and standard deviation were used for the quantitative data and thematic analysis for qualitative data.

Result: Findings revealed that SHS teachers considered the Coastal Community Laboratory Modules "very effective" (M=3.37 and SD=0.19) in teaching Practical Research 1 and "effective" (M=3.11 and SD=0.12) in developing learners' personalities that needed to adapt in the new normal situation. Findings in the qualitative approach led to "context familiarization" that explained the way teachers perceived the use of Coastal Community Laboratory Modules to teach Practical Research 1 because of the realistic application of the modules, including its systematic progression and proximal manifestation. These findings generated plans and programs such as an integrative program of instruction, the formation of the District Research Team, and capability building in crafting the Coastal Community Laboratory Modules in other areas and fields of discipline.

Conclusion: After the teachers evaluate the Coastal Community Laboratory Modules, they perceived the effectiveness of the Context-based Approach in the teaching and learning process, and their capabilities to develop contextualized instructional materials once given proper guidance from the experts.

Keywords: *CoLLab Model, Coastal Community Laboratory Modules, Practical Research 1, SHS teachers, Context-based Approach*

INTRODUCTION

The secondary teachers in the coastal community had seen the necessity of integrating local concepts, knowledge, and culture after observing that the connection between learners and instructional materials written by foreign authors was detached. The foreign concepts and cultures found in the instructional text isolate learners from day-to-day experiences. This concern was raised pre-pandemic and heightened during the pandemic. The concern of the teachers was how to make learners think of, talk about and act upon their learning after reading the modules and answering the activities. Before the pandemic, the secondary teachers in the District of Carles shared that the learners

performed well in class through memorization of the exact answers, but the teachers wanted to impart 21st Century Skills that could not be attained through rote learning alone. This problem elevated when the new normal changed the educational landscape. The majority of learners enrolled in modular distance learning and the teacher had the responsibility to ensure the delivery of quality education.

The teachers wanted to create instructional materials so that the content knowledge was aligned with the local cultures and knowledge; however, they admitted that they needed the capacity building to fulfill their tasks (Capilastique, 2017). This situation enlightened the proponents of this study to create community-based and culture-based instructional materials patterned to the Community Laboratory (CoLLab) Model. It would guide learners of Practical Research 1 to observe the community situation, identify the focus for inquiry, gather data, interpret data and reflect on the data (McLeod, 2017; Krause et. al., 2016).

However, there were issues and concerns in the development of modules. To begin with, the module should help learners to directly engage with their experiences to increase knowledge, develop skills, and clarify their old experiences. The UNT Teaching Commons explained that lessons that are based on community situations must have well-established linkages between learners' experiences and instructional materials. In addition, the contextualized module should place learners in cultural heritage, landscapes, and opportunities to develop their skills to do research while having engagement in community activities. These created lenses for studying the economy, ecology, culture, and socio-politics (EduInnovation, 2017). Furthermore, the learners learned the lessons in the community as a laboratory must coincide with the development of their abilities to recognize and criticize the social structure and to pursue truth (Maboloc, 2020). In conclusion, the modules to be developed must train learners to be capable to overcome challenges with a sense of autonomy and to become empowered in creating change in the community (Smith, 2020; Nardo, 2017).

The perception of teachers about Coastal Community Laboratory Modules in all areas of discipline was necessary for this study. Thus, the proponents of the study created these modules to check if the SHS teachers were amenable to creating and using modules in CoLLab Model. In crafting the modules, the Experiential Learning Theory of Kolb and Kolb was used as the basis. This theory had a cycle: from exposing and reinterpretation to concrete experiences, to reflective observation, to abstract (new idea) conceptualization, and to another or new concrete (learning) experiences (McLeod, 2017). The theoretical bases of developing Coastal Community Laboratory Modules were the Guided-discovery Approach wherein the learners develop knowledge from their own experiences to discover new knowledge (Cassad & Jawaharial, 2013); Social Learning Theory where the interaction of learners with others in a social context maximize learning experience (Nabavi, 2012); and theory of constructivism where learners gained information from their experiences and tried to make sense to it by creating their own meaning from this kind of information (Bada, 2015).

STATEMENT OF THE PROBLEM

After developing the module exemplars for this study, the proponents aimed to determine (1) the views of teachers on Coastal Community Laboratory Modules; (2) the views of teachers on the impact of Coastal Community Modules to learners' personal development; and (3) the way teachers perceive the use of Coastal Community Laboratory Modules to teach Practical Research 1 (PR1).

METHOD

The research design in this study was a mixed method. Research questions 1 and 2 employed a quantifiable descriptive study to determine the perception of the respondents towards the CoLLab Model as the basis to craft the exemplary modules for this study and their perception of the module exemplar had contribution to learners' personal development. Research question 3, on the other hand, employed a qualitative method to explore the perception of SHS teachers in using the Coastal Community Laboratory Modules to increase the learning experience of their learners. The exploratory design was

utilized to develop a comprehensive understanding of the phenomenon (Bhasin, 2020). In this study, the phenomenon was using Coastal Community Laboratory Modules to teach PR1.

The selection of the participants was according to the purpose of this study—to develop contextualized instructional materials that transform communities into learning laboratories. Research participants were the secondary teachers who were selected because they all taught PR1, lived in the coastal community and shared the same cultures. This study used purposive sampling and included eleven (11) PR1 teachers from six secondary schools in the District of Carles. After receiving In-Service Training from the University of Philippines Visayas (UPV) about contextualization, the proponents of this study developed contextualized exemplary modules following the CoLLab Model.

The modules and the research questionnaire were validated by the three master teachers in the District of Carles. In the data scaling, the modules were perceived "very effective" once the teachers "strongly agree" (mean range from 3.26 to 4.00); the modules were perceived "effective" once the teachers "somewhat agree" (mean range from 2.51 to 3.25); the modules were perceived "moderately effective" once the teachers "somewhat disagree" (mean range from 1.76 to 2.50), and the modules were perceived "not effective" once the teachers "disagree" (mean range from 1.00 to 1.75). Then, pilot testing was utilized on 30 junior high school teachers to determine the reliability of the research instrument.

Mean and Standard deviation was utilized to find the view of teachers in using the CoLLab Model in crafting contextualized exemplary modules and the view of the impact of these modules on the personal development of the learners, while thematic analysis by Braun and Clarke (1996) was utilized to find answers on how teachers perceived using Coastal Community Laboratory Modules to teach PR1 by using these sequence pattern such as familiarization, coding process, generating themes, reviewing the themes, defining and naming the themes and writing up

For the ethical consideration, the researcher sent permission letters via hand-carry mail to the principals of all secondary schools offering SHS in the District of Carles and to all SHS teachers teaching Practical Research 1. Second, the researchers maintained the privacy of participants during and after the collection of data. Codes were used to hide their identity. Third, the study observed anti-plagiarism acts by recognizing other researchers who contributed to this study. Lastly, the researchers considered the data and the people involved in the study with a high level of confidentiality.

RESULTS

Table 1. The views of teachers about Coastal Community Learning Laboratory in terms of using Community as Learning Laboratory (CoLLab) Model as design and the Impact of modules to develop learners' personality

Categories	N	SD	M	Interpretation
Collab Model as Design	11	0.19	3.37	Very Effective
a. application of the course knowledge	11	0.51	3.50	Very Effective
b. primary structure of module	11	0.49	3.50	Very Effective
c. socialize learning experience	11	0.53	3.39	Very Effective
d. develop critical attitude	11	0.52	3.09	Effective
Impact of the modules to personal development	11	0.12	3.11	Effective
a. empathy				
b. resilience mindset	11	0.45	3.27	Effective
c. autonomy	11	0.57	3.07	Effective
d. sense of purpose	11	0.54	3.11	Effective
	11	0.37	3.00	Effective

Scale: 3.26-4.00 Very Effective; 2.51-3.25 Effective; 1.76-2.50 Moderately Effective; 1.00-1.75 Not Effective

The weighted mean of *3.37* with SD of *0.19* indicated that teachers agreed that the modules were "very effective" as they guided learners to apply the course knowledge to practical situations, to become positive change-maker, to make connection with other community members, to critique social structure, and to appreciate local heritage, culture and landscape. The SHS teachers of the District of Carles teaching Practical Research 1 viewed the CoLLab Model as "very effective" in the application of course knowledge (weighted mean of *3.50* and standard deviation of *0.51)*. They viewed CoLLab Model as "very effective" once used as the primary structure of the experiential module (weighted mean of *3.50* and standard deviation of *0.49)*. They viewed the experiential module in CoLLab Model as "very effective" once used to increase socialized learning experience (weighted mean of *3.39* and standard deviation of *0.53)*. They also viewed CoLLab Model as "effective" in developing the critical attitude of learners (weighted mean of *3.09* and standard deviation of *0.52)*.

Moreover, the weighted mean of *3.11* with an SD of *0.12* indicated that The SHS teachers of the District of Carles teaching Practical Research 1 agreed that the modules were "effective" in creating an impact on learners' personal development in terms of empathy for fellow learners and other community members skills (weighted mean of *3.27* and standard deviation of *0.45)*; resilience mindset like understanding patterns of problems and potential solutions (weighted mean of *3.07* and standard deviation of *0.57)*; the sense of autonomy that can accomplish academic projects with fewer teachers' supervision (weighted mean of *3.11* and standard deviation of *0.54)*; and sense of purpose like understanding their role in the community (weighted mean of *3.00* and standard deviation of *0.54)*.Table 2: Responses of Teachers on how they view the Use of Coastal Community Laboratory Modules to Teach Practical Research 1 (PR1).

Verbal Transcription	**Emerging Themes**
"*guide learners on-hand experience to improve knowledge and critical thinking [skills],"* Teacher B. "*help learners discover and realize the importance [of] help[ing] the community,"* Teacher I *"activities [are] based in real-life situations,"* Teacher H *"[lessons] allow students to engage their personal experience"* Teacher D *"engage activities that are community-based,"* Teacher G *"materials enable [learners] to experience/ immerse in their environment,"* Teacher K	Realistic Application
"*helpful due to its step-by-step process for learners,*" Teacher I. *"develop higher-order-thinking-skills,"* Teacher H. *"topics were presented in methodical or systematic process,"* Teacher A. *"topics were orderly introduced and discussed"* Teacher A	Systematic Progression
"*activities in the modules are easy to understand [because they] set in the local context,"* Teacher K *"[teachers] visit learners' community to uncover situations/ problems in the community,"* Teacher H *"set of activities help learners measure understanding and capabilities,"* Teacher A.	Proximal Manifestation

Based on the learners' responses, Realistic Application, Systematic Progression, and Proximal Manifestation as themes emerged.

In Realistic Application, teachers perceived that the context of the Coastal Community Laboratory Modules created familiarity among learners about their community. Through Coastal

Community Laboratory Modules, learners could learn the lessons of Practical Research 1 because the modules helped them to engage in activities that are community-based. This means that the material enabled them to experience or immerse in their environment. It also brought observable issues to the actual learning environment and helped them discover and realize the importance of helping the community.

In Systematic Progression, the learners would become familiar with the context of Practical Research 1 because of the methodical development of the lessons. The topics in the module were orderly introduced and arranged logically.

And lastly, in Proximal Manifestation, the context of the Coastal Community Laboratory Modules was readily perceived in the understanding of the learners as it made community situations the point of origin in the learning process. The topics in the module were viewed by the teacher as tools to measure learners' understanding and capabilities. They were discussed comprehensibly and easily to understand. Hence, the learners were guided to answer questions and did the activities.

The three generated themes were the reflection of the views of the SHS teachers in the District of Carles teaching Practical Research 1 on how they perceived the use of Coastal Community Laboratory Modules. These three generated themes produced a theoretical scheme called "**context familiarization**". Context familiarization refers to the views of SHS teachers that Coastal Community Laboratory Modules are effective in teaching and learning because of the two integrated contexts: the learners used the context of Practical Research 1 to become familiar with their own community and they use the socio-cultural context of the modules to learn Practical Research 1. 'Familiarization' was the term used to be the result after the exploration of the teachers' perception in using Coastal Community Laboratory Modules to teach Practical Research 1 because, in the views of the teachers, it signified learners who were in the stages of knowing the process in the application of the real-life situation to learn the lesson, knowing the process of doing research in methodical manner following higher-order-thinking skills, and knowing the process of integrating the socio-cultural context in learning the lesson.

DISCUSSION

From this study, four interesting findings were worth special attention. First, the teaching and learning process in Practical Research 1 became "very effective" if the learners were guided to examine their own experiences using qualitative inquiry in gaining broad and wider knowledge about their own community. Second, the Coastal Community Laboratory Modules were "effective" in developing learners' personalities needed in adapting to the new normal situation. Third, a new theoretical scheme was generated to comprehensively discussed the first two findings. Fourth, plans and programs were proposed not only for Senior High School but for the entire basic education curriculum as well.

SHS teachers believed that CoLLab Model, once used as the design for Coastal Community Laboratory Modules, could generate and deepen learning because it applied course concepts and knowledge in practical situations. With this, learners became positive change-maker and leaders. They turned into different persons—from someone who was incapacitated to understand the community to someone who knows how to reach out to other community members. Looking at it from a general perspective, it made sense. Their ability to criticize the social structure and seek truthfulness was developed. Moreover, their curiosity about economic, socio-political, ecological, cultural, etc. was heightened if CoLLab Model guided them to observe, make predictions, and collect data to understand and appreciate local heritage, culture, and landscapes. Through CoLLab Model, the learners created the connection between what they learned in Practical Research 1 and what was happening in the community.

Findings also revealed that the Coastal Community Laboratory Modules were considered effective if used for the personal development of learners. This was based on the views of SHS teachers. When learners were guided to work with fellow learners to accomplish the assigned task and understand other community members coming from different backgrounds, it developed their ability to lead their own community. Another, they knew how to help their community in order to bounce back from adversity because CoLLab Model guided them to understand patterns in problems and potential solutions. Then, they were guided by the Coastal Community Laboratory Modules to become independent learners who could accomplish projects assigned to them without teachers' supervision.

Lastly, if the learners acquired the skills mentioned, they were able to understand their purpose of studying their own community in their Practical Research 1.

Finally, participants shared how they perceived Coastal Community Laboratory Modules when asked about their perspective on using CoLLab Model to increase the learning experience, their presumed difficulties, and their suggestion for the improvement of the modules. About the use of CoLLab Model on learning experience and presumed difficulties, "context familiarization" was the description generated from teachers' responses. The context familiarization describes how SHS teachers assumed the success of the CoLLab Model in the learning process because of the realistic application of its content and activities arranged in systematic progression and considering the community as the point of origin in learning the Practical Research 1 lessons. Context familiarization pointed out that the Coastal Community Laboratory Modules provided a series of instructions for learners to become familiar with and eventually learned both research context and community context. Additionally, the SHS teachers made suggestions that helped improve the status of the contextualized instruction. Thus, SHS teachers teaching Practical Research 1 are continuously immersed in the community to create supplemental activities in teaching the lessons.

The suggestions and all interesting findings led to the development of plans and programs for Practical Research 1 and to the entire basic education curriculum. First, the Integrative Program of Instruction made the module exemplar the learning supplement during face-to-face instruction. Second, the formation of the District Research Team, composed of master teachers and teacher-researcher in different learning areas, was important for the extensive study of the tangible and intangible heritage of the community to create localized and indigenized materials from kinder to Grade 12. Lastly, a seminar and workshop on how to craft contextualized learning materials were needed. This capability building was to be conducted by the District Research Team which aimed to use the local heritage as instructional materials in teaching every subject in the basic education curriculum.

CONCLUSION

The views of the teachers revealed their positivity to use contextualized experiential modules in teaching their field of discipline. Their responses emphasized that the familiarity of learners with community contexts helped them learn the concepts, facts, and principles of the subject matter, especially when integrated into learners' community cultures and local knowledge. At the same time, they believed the modules could enhance learners' personalities in terms of empathy, resilient mindset, autonomy, and sense of purpose. Thus, these views and the way they made their perception about CoLLab Model initiated the possibility that teachers would be able to integrate local concepts, knowledge, and culture in their curriculum and they could design materials that have community-based and culture-based instruction. Proper support and guidance were needed for this endeavor.

RECOMMENDATION

Extensive research needed to be implemented to document all tangible and intangible heritage of the community for the creation of instructional materials for the Basic Education Curriculum. For the creation of the contextualized materials, research was necessary to investigate teachers' preparedness and their needs in crafting contextualized materials. Studies would be important on the training and on the development of instructional materials for CoLLab Model. Further action research should be done to measure if CoLLab Model affects the performance of learners in every area of discipline.

REFERENCES

Bada, S. O. (2015). Constructivism Learning Theory: A Paradigm for Teaching and Learning. *IOSR Journal of Research & Method in Education 5*(6) pp. 66-70. DOI: 10.9790/7388-05616670

Bhasin, H. (2020 Oct. 5). What is Exploratory Research? Types of Exploratory Study in Sales [webpage]. Retrieved from https://www.marketing91.com/exploratory-research/

Braun, V. and V. Clarke (2006). Using Thematic Analysis in Psychology. [Electronic Version] *Qualitative Research in Psychology 3*(2) pp. 77-101.

Capilastique, L. (2017). Lived Experience of Teachers in the MTB-MLE as Transit Curriculum to ESL [Grad thesis] University of the Philippines Visayas.

Cassad, B. and Jawaharial M. (2013). Learning trough Guided Discovery: An engaging Approach to K-12 Stem Education. *American Society for Engineering Education*. Retrieved from https://www.researchgate.net/publication/259360809

EduInnovation (2017). What is Placed-based Education and why does it matter? Retrieved from https://www.gettingsmart.com/wp-content/uploads/2017/02/What-is-Place-Based-Education-and-Why-Does-it-Matter-3.pdf

Krause, S. J., Waters, C., Stuart, W., Judson, E. Ankeny, C. and Smith, B. (2016). *Effect of Contextualization of Content and Concepts on Students' Course Relevance and Value in Introductory Materials Classes* [Conference Paper]. ASEE Annual Conference & Exposition. Retrieved from https://www.asee.org/public/conferences/64/papers/14943/view

Maboloc, C. R. (2020). Critical Pedagogy in the New Normal: Teaching Values-based Education Online. *Voices in Bioethics*, *6*. https://doi.org/10.7916/vib.v6i.6888

McLeod, S. A. (2017, October 24). *Kolb - learning styles*. Simply Psychology. Retrieved from https://www.simplypsychology.org/learning-kolb.html

Nabavi, R. T. (2012) Bandura's Learning Theory and Social Cognitive Theory. Retrieved from https://www.researchgate .net/publication/267750204

Nardo, M. (2017). Modular Instruction Enhances Learner Autonomy. *America Journal of International Research 5*(10) 1024-1034. DOI: 10.12691/education-5-10-3

Santos, R. and Camara, M. (2010). Autonomy in Distance Learning: Reflection Over Learners' Role. Retrieved from http://www.abed.org.br/congresso2010/cd/ing/252010174412.pdf

Smith, J. T. (2020). Teaching resilience in School and Fostering Resilient Learners [webpage] Retrieved from https://positivepsychology.com/teaching-resilience/

Sayco, G. C. (2019). Developing A Repository of Fishing Community Cultural Contexts for Junior High School Mathematics and a Contextualized Mathematics Teaching Unit Using the 'Community as Learning Laboratory' (Collab) Model. [graduate thesis] University of the Philippines Visayas.

UNT Teaching Commons. The Impact of Experiential Learning on Student Learning. Retrieved from https://teachingcommons.unt.edu/teaching-essentials/engaged-learning/impact-experiential-learning-student-learning