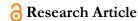
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Development and Acceptability of Environmental Education Kit for Elementary Learners

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Contextualizing environmental education is a significant factor in shaping learners' understanding of their environment. The absence of local knowledge in environmental education can significantly impact learners' ability to understand environmental learning when applied in their local context. This study has developed an Environmental Education Kit (EE Kit) containing contextualized activities aligned with the learning competencies listed in the newly implemented MATATAG or K-10 Curriculum for elementary learners in Davao del Sur, Philippines. The use of developmental research design was employed in this study since the main goal of the study is to create a contextualized EE Kit. In developing the EE Kit, the researchers have included five components, namely, topics, specific objectives, key concepts, directions, and activities. To determine the appropriateness of the developed EE Kit, 44 elementary science teachers from the Province of Davao del Sur, Philippines, were invited to participate in this study. The questionnaire used involved a Likert scale with five response options to assess various aspects of the kit, including its language, format and layout, and level of difficulty. Result of the analysis shows that teachers have rated all indicators under the content and face validity components as highly acceptable, providing positive feedback on the EE Kit's potential as a valuable resource to enhance contextualized learning in environmental education. Therefore, it is recommended that elementary science teachers utilize the EE Kit to allow hands-on experiences under the newly implemented curricula. Moreover, the need for future studies to assess the EE kit's efficacy from the learners' perspective is recommended, demonstrating our ongoing commitment to improving the EE Kit for Filipino learners.

Keywords: Environmental Education, Learning Kit, Science Education, Science Literacy

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1. INTRODUCTION

In the current educational setting, there is a pressing need to consistently adapt and innovate to ensure that learners thoroughly comprehend their environment, highlighting the significant emphasis on the importance of holistic environmental education and the development of natural environment literacy among young learners (Tustin & Conradie, 2016). Although there is a growing recognition of the importance of environmental education in promoting sustainable practices among young learners, there still needs to be a significant gap in how this education is tailored for elementary-level learners (Vladova, 2023). Thus, a need to contextualize environmental learning that is tailored to the learner's ability is crucial in developing a new generation of community members.

Existing literature presents various pedagogical toolkits such as the cultural probes (CP) toolkit, ecohumor toolkit, and Environmental Education (EE) teaching kit. However, it is essential to note that these toolkits lack the incorporation of contextualized activities specifically designed to meet the unique environmental challenges of different regions and align with the cognitive development of young learners (Matos et al., 2022). This lack of contextualization is problematic as it can limit the effectiveness of these educational tools in fostering a deep, practical understanding of environmental issues among elementary



students (Hwang & Park, 2014). Moreover, the importance of starting environmental education early and continuing it through all educational levels is crucial for producing better educational outcomes, combining Science and Environmental Education (Malaluan et al., 2023). Thus, there is an urgent need to address the lack of contextualized environmental education materials tailored for elementary learners to enhance their environmental literacy effectively.

Research suggests that when EE is adapted to reflect the local context, it significantly enhances student engagement and learning outcomes. A study by Hwang & Park (2014) showed that incorporating culturally relevant and place-based activities into EE programs substantially improves elementary learners' environmental literacy and critical thinking. Moreover, research conducted in various regions, including Greece, has highlighted that context-specific EE kits promote environmental awareness and foster a deeper connection between students and their local environment (Plaka et al., 2024). This approach is crucial in making environmental education more relevant and effective, as it allows students to see the direct impact of environmental issues on their communities, motivating them to become active participants in shaping their local environment through sustainable practices (Monroe et al., 2019). Furthermore, contextualized EE programs have been shown to support interdisciplinary learning, bridging subjects like science, geography, and social studies, which enhances students' overall academic performance and interest in environmental issues (Powell et al., 2019)

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) has emphasized this in its 2030 Agenda for Sustainable Development, where Education for Sustainable Development (ESD) is positioned as a critical driver for achieving the Sustainable Development Goals (SDGs) (UNESCO, 2017) Studies have shown that integrating EE into the curriculum through hands-on, contextualized activities improves environmental literacy and fosters a sense of responsibility and agency among young learners (Arenas, 2021). Research conducted in Korea demonstrated that integrating hands-on activities in environmental education (EE) programs was highly effective in improving students' environmental knowledge and emotional connection to the environment, which is critical for fostering long-term behavioral change (Hwang & Park, 2014). These global initiatives and findings underscore the essential role of EE in developing environmentally conscious individuals equipped to tackle the environmental challenges of the 21st century (Villamor et al., 2023).

In the Philippines, the National Environmental Awareness and Education Act, also known as Republic Act (RA) 9512, requires government agencies to incorporate Environmental Education (EE) into the curricula of all public and private educational institutions (Republic of the Philippines, 2008). Moreover, these includes from barangay daycare and preschools to non-formal, technical vocational, professional, indigenous learning, and out-of-school courses or program. Incorporating Department of Environment and Natural Resources (DENR) EE materials into the teacher education curriculum has proven advantageous in enhancing students' proficiency in environmental concepts and principles (Bercasio & Remolacio, 2022). Hence, effective environmental education strategies can be developed and used to increase environmental awareness and education in the Philippines (Kilag et al., 2022)

Moreover, Perin (2011) stated that contextualized teaching is a means of presenting subject information in a meaningful and relevant setting. Thus, to address the needs of the students on the subject, teachers should employ issues, events, activities, and real resources that are relevant to the learners. To show the importance of contextualization to the learners, the teacher should create strategies to use to motivate students for lasting retention (Diquito et al., 2024). Based on Garin et al. (2017), meaningful learning allows for faster acquisition and retention than rote learning, and to demonstrate the value of statistics to students, the teacher should connect the method of instruction and learning to the local environment.

According to Piaget (1974) learning involves the processes of modeling, transformation, and understanding the construction of objects, where interactions with the environment lead to a shift in our internalized view of the world. This idea is foundational to Constructivist learning theory, which suggests that knowledge is best acquired through mental reflection and active engagement in the learning process (Languita et al., 2023; Mascolo, 2014). In the context of this study, constructivism aligns seamlessly with the objectives of environmental education, which seeks to cultivate a deep understanding of environmental issues and empower individuals to take meaningful actions toward environmental protection.

The kit is designed with constructivist principles in mind, incorporating activities that are contextualized within the Philippine setting. This ensures that students' learning is closely connected to their cultural contexts and experiences, making the process more relevant and impactful. Research by Arik & Yilmaz (2020) further supports the effectiveness of constructivist methods in enhancing environmental knowledge and attitudes, showing that such strategies foster critical awareness and equip students to address environmental issues in their communities.

The purpose of this study is helpful for elementary school teachers in imparting new methods and creative approaches to the learners they are teaching considering this Environmental Education Kit (EE Kit) is a valuable teaching tool that aids their instruction in environmental education. That being so, this study provides educators with contextualized resources to help them nurture environmental literacy in young Filipinos, encouraging a future generation of informed decision-makers and responsible stewards of the Philippine environment. This study specifically addresses the following objectives: (1) identify the learning competencies of MATATAG K to 10 Curriculum to be included in the development kit; (2) create contextualized activities related to environmental education based on components in the literature; (3) determine the acceptance level of elementary educators towards the developed kit.

2. METHODS

2.1. Research Design

This research employs a developmental research to address the objectives of the study. Developmental research as Richey & Kein (2005) defined it is a method in which it focuses on the development and evaluation of the created product or processes. In this study, the researchers developed an Environment Education (EE) kit that focuses on the basic education in the Philippines. The purpose of this new EE kit is to give contextualization of environmental education for better learnings among learners.

2.2. Participants

The target participants of this study were elementary school teachers currently teaching science at any elementary school within the province of Davao del Sur, Philippines. In the DepEd Order number 40 series of 2014 - Establishment, Merging, Conversion, and Naming/Renaming of Public Schools, and Separation of Public School Annexes in Basic Education defined Elementary School as a public school providing primary education from kindergarten to Grade 6 (Department of Education, 2014).

In addition, the researchers employed purposive sampling to select a specific group of individuals based on the characteristics or attributes they have in common. According to Ames et al. (2019) this sampling method depends on the researcher's judgment in determining and selecting the target respondents who can give the best information to achieve the research objectives. In choosing the respondents for this study, the inclusion criteria were as follows: the respondents must have at least two (2) years of teaching experience, currently teaching in any elementary public school in the province, and must be teaching science subject. From these criteria, a total of 44 participants were drawn. The basis of this number of participants was based on the study of Araza & Magnaye (2023).

Moreover, orientation was conducted by the researchers to the target participants, including their roles as respondents, the roles of the researchers, nature of the study and the ethical standards that need to be followed during and after the conduct of the study. After the orientation, all 44 respondents agreed to be part of the study.

2.3. Research Instruments

This study adopted the research instrument of Araza & Magnaye (2023) entitled "Development and Validation of the Essential Learning Competency-Based Workbook in General Physics 1 for Senior High School." This instrument contained two dimensions: content validity and face validity. Content validity consists of five indicators with a total of 27 statements. For indicators one to four: topics, specific

objectives, key concepts, and directions, each indicator contained five statements. For indicator five, "activities," there were seven statements.

Moreover, face validity consists of three indicators with a total of 17 statements. For indicator one, "language used," there were five statements. For indicator two, "format and layout," there were seven statements. Indicator three, "level of difficulty," there were five statements. Furthermore, this study utilized a Likert-scale questionnaire with a scale of (5) Strongly Agree, (4) Agree, (3) Neutral, (2) Disagree, and (1) Strongly Disagree to measure the acceptability level of the developed Environmental Education Kit (EE Kit). The researchers adapted the range of means and level of acceptability from the study of Salcedo (2016) entitled "Acceptability of a Developed Teaching Module on Selected Writings of Jose Rizal."

| Range of Means | Descriptive Interpretation | Descriptive Meaning |
|-------------------|-------------------------------|--|
| 4.51 - 5.00 | Very Highly Acceptable | This means that the developed EE Kit follows all the necessary standards of a high quality educational kit in a basic education setting. |
| 3.51 - 4.50 | Highly Acceptable | This means that the developed EE Kit follows majority of the necessary standards of a high quality educational kit in a basic education setting. |
| 2.51 - 3.50 | Moderately Acceptable | This means that the developed EE Kit follows the necessary standards of a high quality educational kit in a basic education setting. |
| 1.51 - 2.50 | Slightly Acceptable | This means that the developed EE Kit slightly follows the necessary standards of a high quality educational kit in a basic education setting. |
| 1.00 - 1.50 | Not Acceptable | This means that the developed EE Kit did not follow the necessary standards of a high quality educational kit in a basic education setting. |

Table 1. Range of Means and Level of Acceptability

2.4. Procedures

This study involved three distinct stages. The first step is the utilization of the MATATAG K or K-10 Curriculum which is the curriculum set to implement in the Philippines in the S.Y 2024-2025. According to Department of Education (2023) the MATATAG Curriculum sets the new direction in resolving basic education challenges through the four critical components: (1) Make the curriculum relevant to produce competent and job-ready, active, and responsible citizens; (2) Take steps to accelerate delivery of basic education facilities and services; (3) Take good care of learners by promoting learner well-being, inclusive education, and a positive learning environment; and (4) Give support to teachers to teach better.

The researchers used the MATATAG curriculum particularly the science curriculum from Grade levels three (3) to six (6) to identify the learning competencies related to Environmental Education. The development kit comprises five (5) components: topics, specific objectives, key concepts, directions, and activities (Araza & Magnaye, 2023). The second stage was the creation and development of the Environmental Education Kit (EE kit). During this step, the researchers developed contextualized activities related to Environmental Education that are deemed relevant to the Department of Education's. Hence, the researchers created and developed the kit utilizing the Canva software.

The third stage was to determine the acceptance level of elementary educators towards the development kit. The researchers assessed the results of analysis and interpretation of data that were collected from the data collection. Thus, appropriate measurement was used to determine the content validity (topics, specific objectives, key concepts, directions, and activities) and face validity (language used, format and layout and level of difficulty).

The research procedure utilized in this study was derived from the available information and supplemented by additional sources. Therefore, securing data privacy requires taking ethical considerations into account (Olores et al., 2023). The researchers sought authorization from the institution's authorities to conduct the study. Researchers asked for the respondents' permission after obtaining the approval. To maintain participants' privacy, the survey was conducted via hard copy questionnaires and any personal information was either excluded or replaced with other identifiers.

2.5. Data Analysis

In analyzing the data, the use of mean score (\overline{x}) and standard deviation (SD) were used. Mean score were used to determine the overall acceptance level of the developed EE kit. Sullivan & Artino (2013) have noted that mean score is useful in understanding the behavior of the participants. In addition, the use of standard deviation is also used in the study to determine how disperse the responses of the respondents (Barde & Barde, 2012).

3. RESULTS

3.1. Environmental Education Learning Competencies in the MATATAG or K-10 Curriculum

The result of the analysis was used as a foundation for applying out relevant findings and recommendations. Table 2 shows the MATATAG Learning Competencies related to Environmental Education, particularly from the Science Curriculum from Grade levels three to six. According to Department of Education (2023) learning competencies are specific aspects of content that learners must achieve. Moreover, the learning competencies included in the developed kit were related to environmental education. As Fang et al. (2023) mentioned that environmental education is an academic discipline or process that promotes responsible management of the environment.

Based on the analysis, a total of 21 learning competencies that relates in environmental education in the newly implemented science curriculum for basic education were included. The learning competencies were distributed to the following grade levels: grade 3 and grade 4 consist of six competencies, grade 5 consists of four competencies, and grade 6 consists of five competencies.

Table 2. MATATAG Learning Competencies Related to Environmental Education

| MATATAG Competencies | Quarter | Grade Level | Page |
|--|---------|----------------|-------|
| 1.Demonstrate proper handling and disposal of materials according to their properties, such as reusing objects, disposing of excess oil into garbage, and recycling paper, plastic or glass; | 1 | 3 | 1-2 |
| 2.Identify the basic needs of humans, plants and animals such as air, food, water, and shelter. | 2 | 3 | 3-4 |
| 3.Observe examples and explain how living things depend on one another and on the environment to meet their basic needs. | 2 | 3 | 5-6 |
| 4.Recognize that there is a need to protect and conserve the environment. | 2 | 3 | 7-8 |
| 5. Observe and record changes in the weather during a day or over some days and describe the different types and patterns of weather that occur in the local area; | 4 | 3 | 9-10 |
| 6.Describe how changes in the weather can affect daily activities and explain how some types of weather can be dangerous for people; | 4 | 3 | 11-12 |
| 7.Use a drawing or diagram to classify some Philippine animals and plants, based on their habitat: some live on land (terrestrial), live in water (aquatic) or fly in the air (aerial) | 2 | 4 | 13-14 |
| 8.Make a list or draw up a table with examples of animals and plants in a particular habitat, such as a garden, rice field, seashore, and mangrove swamp; | 2 | 4 | 15-16 |
| 9.Draw a simple food chain using living things from the Philippines and label them as herbivores, carnivores, and omnivores. | 2 | 4 | 17-18 |
| 10.Recognize that water is one of the basic needs of plants and animals. | 4 | 4 | 19-20 |
| 11.Use weather instruments to measure and record some of the characteristics of weather during a school day. | 4 | 4 | 21-22 |
| 12.Practice safety precautions to use during poor or extreme weather conditions; | 4 | 4 | 23-24 |

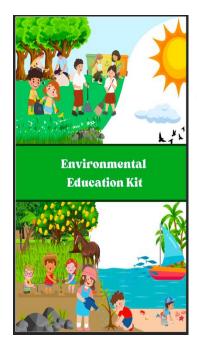
| MATATAG Competencies | Quarter | Grade Level | Page |
|--|---------|----------------|-------|
| 13.Identify local examples of natural landforms and bodies of water | 4 | 5 | 25-26 |
| such as mountains, valleys, rivers, and coastlines, and describe how they influence non-living and living components of the environment; | | | |
| 14.Explain the role of the water cycle in the environment; | 4 | 5 | 27-28 |
| 15.Describe some effects of weather disturbances that occur in or near the Philippines; | 4 | 5 | 29-30 |
| 16.Describe the weather conditions according to a Public Storm Warning Signal issued by the Philippine Atmospheric, Geological and Astronomical Services Administration (PAGASA) | 4 | 5 | 31-32 |
| 17.Describe the roles of producers, consumers, scavengers, and decomposers in a food web; | 2 | 6 | 33-34 |
| 18.Describe living things, such as animals and plants, as biotic factors and light, water, temperature, and soil type, as abiotic factors of an ecosystem; | 2 | 6 | 35-36 |
| 19.Explain how interaction between living things and interactions between living and nonliving things may bring good or harm to the living things involved. | 2 | 6 | 37-38 |
| 20.Use local information or other reliable sources to identify where the nearest active and inactive volcanoes are located and assess the risk of impacts from eruptions to their local community; | 4 | 6 | 39-40 |
| 21.Describe the different seasons in the Philippines and suggest activities that are appropriate for each season; | 4 | 6 | 41-42 |

3.2. Development of the Environmental Education Kit's (EE Kit) Components

Table 3 shows the five (5) components of the developed Environmental Education Kit (EE Kit). These were the topics, specific objectives, key concepts, directions, and activities. The components utilized in the study of Araza & Magnaye (2023) were considered when developing the kit, and Department of Education Order No. 1 Series 2021, which focuses on self-learning module evaluation, offered specific instructions for structuring the kit. Figure 1 shows the sample of the developed EE kit:

Table 3. Components of the Developed Environmental Education Kit (EE Kit)

| Components | Description |
|-------------------------------|---|
| Topics Specific Objectives | These are areas of study with concepts related to Environmental Education. These are measurable statements of student learning outcomes that focus on the development of cognitive, psychomotor, and affective domain. |
| Key Concepts Directions | These are essential ideas and principles underlying a particular topic and are crucial for student understanding and progress. These are clear instructions that guide students in performing the activities. |
| Activities | These are engaging contextualized experiences that help students learn skills and knowledge related to Environmental Education and are aligned with the specific objectives and key concepts. |
| Materials | These are the things that are commonly utilized by learners for them to complete the activities. |



BEST FEATURE OF THE KIT

ABOUT THIS KIT

- The Environmental Education Kit (EE Kit) contains hands-on activities that foster students

- The Environmental Education KI, EE RVI contains hands on activities that foster students' self-reliance, collisionation, and critical thinking salis.

 Each activity is enviched with captivating illustrations to stimulate children's curiosity.

 Immensing students in real-file activities makes learning more relevant and memorable.

 Intransform the wais of the classroom, changing into engaging learning spaces.

 Provides a comprehensive understanding of environmental concepts and facilitates practical application in real file scenarios.

 It enables students to activity contribute to resolving issues related to the environment.

 The enables students to activity contribute to resolving issues related to the environment.

Environmental Education Kit (EE Kit) offers contentualized activities aligned with the MATATAG K to 10 Curriculum Of The K to 12 Program, particularly the Science Curriculum from Grade levels three to six. These contentualized activities are based on the selected learning competencies from the Science Curriculum.

collaborative skills, scientific skills, and environmental literacy by engaging in activities encouraging exploration, project-based learning, hands-on applications, and experimentation. This kill illustrate environmental concepts with bod examples. Each activity is accompanied by appealing and exciting illustrations to attract the students' interest.

Environmental Education Kit (EE Kit) is packed with attractive visuals, interactive





Figure 1. Sample of the Developed Environment Education (EE Kit)

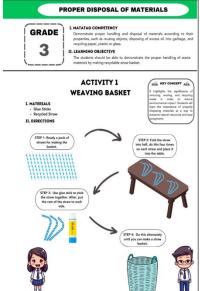
ROLE OF EDUCATION IN WORSENING CLIMATE CRISIS

Effective environmental education programs go beyond simply providing information. (Arhman & Monroe, 2000) emphasizes the importance of students developing critical thrisking-stalls and a sense of agency. By participating in interactive activities, case studies and provision solving secreties, students can explore possible solutions and develop a personal connection to environmental publics. This intellis in them a sense of responsibly and empowers them to act in their communities, no matter how small (Daffing-Hammond et al., 2019).

Current education systems often do not pay enough attention to environmental issues, especially in developing countries (Fitho, 2017). This creates a knowledge gap that prevents students from concentring environmental concepts to their lives. This kift list gap by focusing on contextualized learning, a method advocated by (Kalchik & Certle, n.d.). This kit ecognize the immediate impacts of climate change on their own cor

or promoting eminormenta intenzy rom a young agit, we are issuing a generation or responsible citizens who understand the sectionness of the climate crisis. You will be prepared to advocate for change, make informed decicions, and build resilience to environmental challenges. For UNESCO, education, especially regarding children and young people, is a ley factor in curbing climate change, it states "discussion contributes to changing the attitudes and behavior of young people and helps them adapt to trends related to climate change."





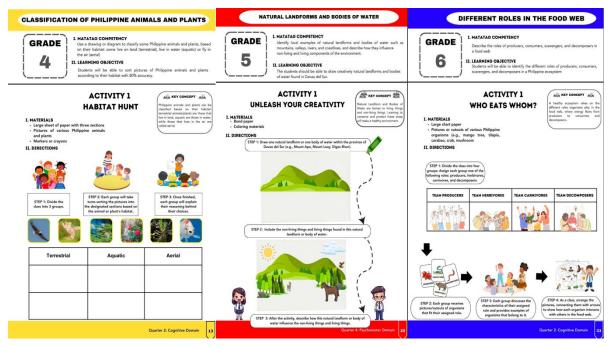


Figure 1. Sample of the Developed Environment Education (EE Kit) (continuation...)

3.3. Analysis of Educators' Acceptance Level of the Developed Environmental Education Kit (EE Kit)

Table 4 reveals the assessment of the elementary teachers on the acceptance level (content validity and face validity) of the Environmental Education Kit (EE Kit) in terms of topics, specific objectives, key concepts, directions, activities, language used, format and layout and level of difficulty.

The content validity of the developed EE kit has received a very high acceptable level based on the evaluation of the elementary educators (\bar{x} =4.64, SD=0.27). This means that the developed EE Kit follows all the necessary standards of a high-quality educational kit in a basic education setting. Based on the result of the study, the developed EE kit has demonstrated these qualities and, therefore can be used as a reference or a supplementary learning material in teaching environmental science.

| Table 4. Acceptance Level of Elementary Educators towards the Developed Environmental Education Kit (EE | Educators towards the Developed Environmental Education Kit (EE |
|---|---|
| Kit) | Kit) |

| Indicators | \overline{x} | SD |
|------------------------|----------------|------|
| A. Content Validity | 4.64 | 0.27 |
| 1. Topics | 4.66 | 0.31 |
| 2. Specific Objectives | 4.58 | 0.36 |
| 3. Key Concept | 4.69 | 0.30 |
| 4. Directions | 4.60 | 0.42 |
| 5. Activities | 4.66 | 0.35 |
| B. Face Validity | 4.64 | 0.29 |
| 1. Language Used | 4.64 | 0.39 |
| 2. Format and Layout | 4.66 | 0.31 |
| 3. Level of Difficulty | 4.63 | 0.39 |
| Overall | 4.64 | 0.27 |

Moreover, analysis further revealed that content validity (\overline{x} =4.64, SD=0.27), and all of its indicators have received a very high acceptance rate: topics (\overline{x} =4.66, SD=0.31), specific objectives (\overline{x} =4.58, SD=0.36), key concept (\overline{x} =4.69, SD=0.30), directions (\overline{x} =4.60, SD=0.42), and activities (\overline{x} =4.66, SD=0.35). This means that the developed EE kit contains the necessary information for an effective EE kit. As for the face validity, data revealed that the overall face validity (\overline{x} =4.64, SD=0.29), and all of its indicators have received

a very high acceptance rate: language used (\overline{x} =4.64, SD=0.39), format and layout (\overline{x} =4.66, SD=0.39), and level of difficulty (\overline{x} =4.63, SD=0.39). This means that the developed EE kit demonstrates a good EE kit that is applicable in the Philippines setting.

4. DISCUSSION

This study highlights the importance of contextualized learning activities in promoting environmental education. To carry out the objectives of the study, an analysis of the newly implemented curriculum (MATATAG curriculum) in the Philippines was carried out. The result of this analysis revealed that there are a total of 21 learning competencies in elementary science that are aligned with environmental education. These competencies were distributed to six in Grade 3 & 4 individually, four in Grade 5, and five in Grade 6 (Department of Education, 2023). These learning competencies in science education reflect the importance of promoting environmental literacy in the nation as this is aligned with 21st-century skills and industry 4.0 skills (Diquito, 2024). For example, in the 3rd Grade level, the focus is on learning the differences between living and non-living things and their importance on our planet. These competencies emphasize the basic foundation of learning the concept of environment as it is one of the founding principles in environmental education (Funnell & Sheridan, 1992; Gasparatou et al., 2020).

As learners moved to the 4th-Grade level, they were introduced to various chemical properties in the environment. These competencies help learners understand the factors that affect the environment (Mahaffy et al., 2014; Tümay, 2016). In 5th-Grade learners were introduced to different properties of matter and its role in the environment. This is further deepened in 6th-Grade, where learners further explore the different components of the environment and their interactions with the Earth system. These competencies are very crucial since it give learners the necessary knowledge of the various systems of the earth (Balmer, 2021; Zembal-Saul, 2009). Following the identification of these learning competencies, the EE kit was developed. The developed EE kit was guided by the suggestion of Araza & Magnaye (2023) and, therefore, must include the following components: topics, specific objectives, key concepts, directions, and activities.

Moreover, in developing the activities included in the worksheets, the researchers meticulously identified the materials and made sure that these materials were available in the area. The purpose of this is to enhance the participation of the students in the classroom, thus creating a positive learning environment through a student-centered approach (Jasmi et al., 2011). This principle is based on Kolb (2014) experiential learning theory which holds that knowledge is best gained by engaged participation and reflection on experiences. Through this, students will be immersed in learning activities in environmental education that promote lifelong learning. This competency is crucial in developing learners with a deep connection to the environment and are able to promote environmental protection and conservation (Drissner et al., 2014; Tanner, 1980; Tidball & Krasny, 2011)

Further, to determine the appropriateness of the developed EE Kit in the current context, the researchers consulted 44 Elementary teachers. The result of the level of acceptance among the participants shows a very high level of acceptance, including content validity and face validity. This shows that elementary teachers have approved the use of the EE kit in their own context. This finding is supported by Ghauth & Abdullah (2010) and Woo (2011) that learning material must be of high quality and follow a certain standard. This standard include necessary content for environmental education (Araza & Magnaye, 2023), can connect essential concepts to students' own experiences or local environment (Monroe et al., 2019), and must have succinct value and clear language, good layout and design, format necessary in instructional materials to support students' comprehension (Kusumowardhani & Maharani, 2022; Rustan, 2008; and Snow & Matthews, 2016). Thus, the developed EE kit can serve its purpose based on the context of the study.

Although the developed EE kit is intended for the identified Department of Education province satellite in the Philippines, still this EE kit can be used in different provinces in the Philippines or other education setting across the globe to better enhance students' interactions in their own environment. This EE kit is not only limited to the identified province since the primary goal of this kit is to create meaningful learning activities that are simple yet can promote environmental literacy at an early stage of education. Moreover, it is suggested that before using this EE kit, educators must also acknowledge the differences between learners, particularly in their learning styles, developmental stages, types of learners, and other

aspects. The purpose of this is to ensure that learners are given other opportunities to learn environmental education with the aid of other instructional materials, strategies, and teaching styles.

5. CONCLUSION

The general purpose of this study is to develop an Environmental Education Kit (EE Kit) composed of contextualized activities aligned with the newly implemented MATATAG or K–10 Curriculum's learning competencies in the Philippines. Data revealed that the developed Environmental Education Kit (EE Kit) gained an overall high mean with a verbal interpretation of "very highly acceptable" among the participants of the study. This shows that the EE kit provides the necessary contents and learning activities necessary to promote environmental education at the early stage of education. Although the developed kit is intended for the Philippines, however, other countries can also utilize this kit since environmental education is not limited to one setting only. Moreover, before using the activities in the kit with other contexts, it is suggested to check the competencies first to make sure that there is an alignment between the activities and targeted competencies. In addition, it is also suggested to check learners' learning styles and other aspects of learners before implementing this EE kit since the current study focuses only on the development of the EE kit and its alignment with the learning standards set by the national government. Further, it is recommended to have a separate study wherein the focus is on the learner's point of view to further enhance the credibility of the developed EE kit. Finally, it is suggested to enhance the developed EE kit based on different localization and context to better serve the kit's purpose.

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Data Availability Statement. The corresponding author can provide all the necessary data upon proper request.

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