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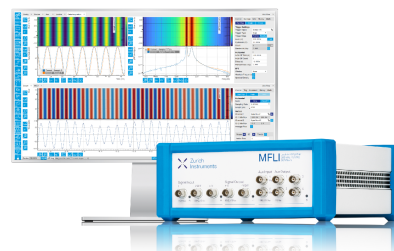
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Development of Adiwiyata Curriculum Model Based on Local Wisdom

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Abstract. This research aimed to develop a curriculum model of Adiwiyata based on local wisdom in elementary school, Palu City, Indonesia. The research method used the ADDIE development model, which includes five stages: Analysis-Design-Development-Implementation-Evaluation. Data collection techniques used were interviews, observation and documentation. Data analysis used a mixed method. This research resulted in production of a manual containing curriculum, syllabus, lesson plan and Adiwiyata assessment indicator that contains environmental education and local wisdom. This model of Adiwiyata curriculum can be disseminated to schools considering local wisdom education.

Keywords: Adiwiyata, curriculum, education.

INTRODUCTION

The development of science and technology can change the pattern of life and character of a person, especially in early childhood including elementary school ages, 7-8 years old. Elementary school is an educational program that can potentially teach about environmental care to young ages. Furthermore, local environmental and plant learning can introduce children to healthy foods that can serve as a real-life appreciation of food of biodiversity by processing dolphins and planting in collaboration, so that learning combines local plants that are nearby and can be processed into healthy food.¹ Green schools are buildings or facilities that can create a healthy and conducive learning environment while saving energy and resources, as well as providing financial benefits.²

The results of the research of Ioj et al. concluded that the design of green school curriculums involving students can lead to multifunctional education services;³ the educational curriculum that connects with the environment and builds relationships with local communities has an impact on student thinking and school organizational culture that will provide meaningful learning for students.⁴ Social science learning can be developed through the local wisdom with Bengawan Solo.⁵

It is important to include culture in the curriculum to recognize cultural diversity amongst the people. The new Turkish elementary school curriculum emphasizes the historical and cultural basis of Turkish society. The purpose of this new curriculum is so that students can learn culture and as lessons for the future.⁶

Through the learning of local wisdom children gain learning values, attitudes, skills and knowledge not only from the school but also from the family environment.⁷ The value of environmental education and local wisdom is for children to be integrated in learning to be ready to penetrate the millennial era that utilizes the sophistication of online-based technology. The rise of online games affects the social and emotional connection to the environment. This rise is associated with triggering the changing character of students with increasingly sophisticated technology flow, Western cultural lifestyle, telenovela and criminality.⁸

Among the several existing studies, none examined the local wisdom-based environment with the Adiwiyata assessment indicator and incorporated the 5R Adiwiyata principles into its research. This research aims to create a curriculum-based model founded on local wisdom for primary schools based on the needs analysis obtained from

the interviews of school residents. It was found that the curriculum currently used only introduces how to keep the environment from plastic waste heaps and does not teach about local culture.

The curriculum in elementary school is a thematic curriculum, which means the curriculum contains the concept of learning and uses the theme to link some subjects to provide experience for learners.⁹ The curriculum used is “school-based curriculum”, all schools that have programmed Adiwiyata education have not integrated local wisdom in all subjects and do not have references as binding guidance in executing the Adiwiyata program; therefore, as children prefer to play games online than traditional games, the traditional games are eroded and even forgotten. To address the challenges of the above problems, it is necessary to have Adiwiyata school guidance that includes a local wisdom-based environmental curriculum by integrating environmental education and local wisdom into all subjects with materials tailored to the circumstances of students and local cultures. This research uses a grassroots curriculum development model approach and demonstration as well as referring to four indicators of the assessment of Adiwiyata: 1) environment-based school policies and local wisdom; 2) environment-based curriculum and local wisdom; 3) facilities and infrastructure based on environment and local wisdom; and 4) activity plans and school budget (APSB).

METHODS

This method contains exposure to research and development of three things, namely (1) development model; (2) development procedures comprising (a) preliminary studies, (b) design and development and (c) testing of product effectiveness; (3) data, instruments, subject and analysis of research data.

The research method used the ADDIE model with five stages of implementation with grassroots curriculum and demonstration approach. The grassroots model of curriculum development is conducted from the bottom up, where the curriculum is developed by the teacher as the user and the implementer of learning then reported to the boss concerned. Once the curriculum is developed, it is disseminated on a small scale and subsequently used on a wider scale (Fig. 1).

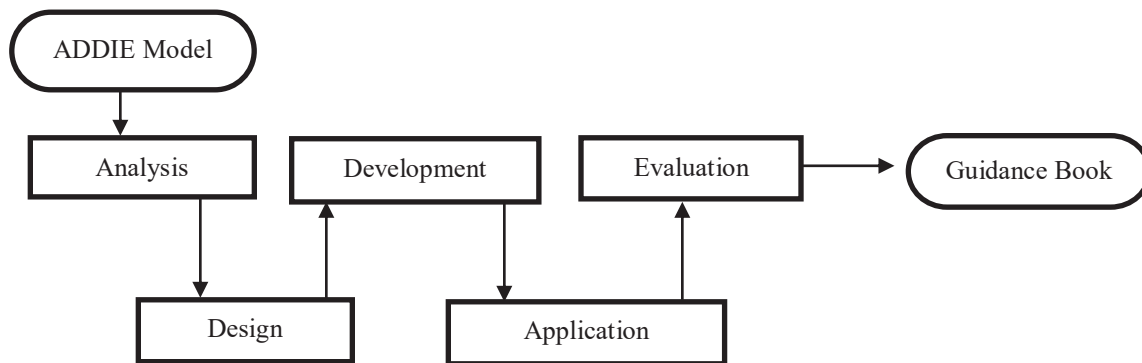


FIGURE 1. ADDIE development step.

RESULTS AND DISCUSSION

This research produced an Adiwiyata curriculum based on local wisdom, which has systematic development stages. Through validity testing by a model expert and curriculum experts, as well as reliability test and effectiveness test to get valid results, correctness is guaranteed and it can effectively be used as a reference to develop an Adiwiyata school curriculum. The Adiwiyata curriculum development model based on local wisdom is described in Fig. 2.

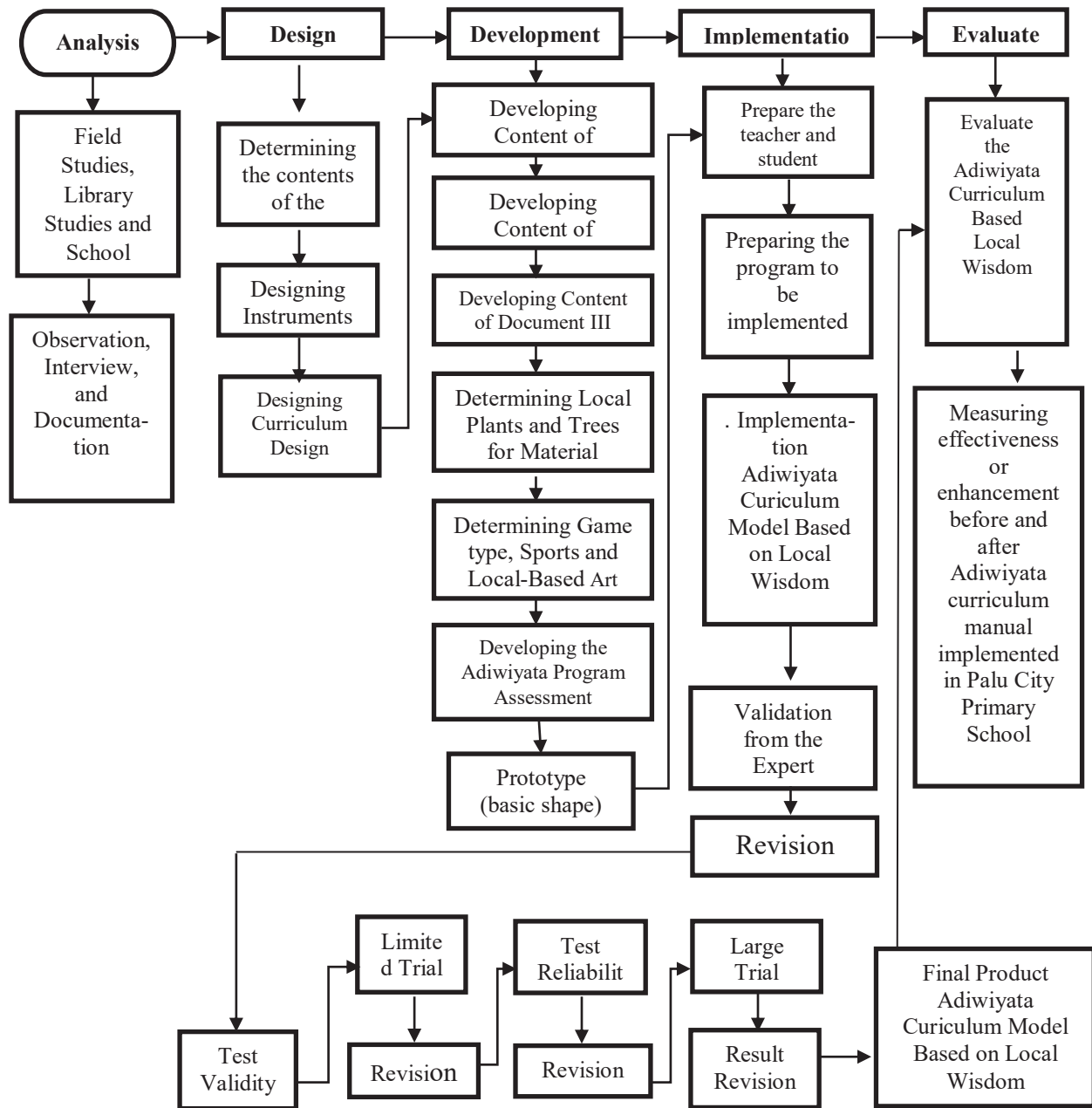


FIGURE 2. The procedural model of adiwiyata curriculum based on local wisdom.

Adiwiyata curriculum based on local wisdom has three main components that contain document I, document II and document III. Document I contains the curriculum containing: 1) objectives and principles of curriculum development; 2) basic education objectives; 3) school vision and mission; 4) school purpose; 5) curriculum structure; 6) curriculum content; 7) subjects; 8) self-development; 9) learning expenses; 10) assessment; 11) mastery learning; 12) class and graduation increases; 13) life skills education; and 14) basic competence and core competencies.

Document II contains the syllabus as a reference for the development of a lesson plan that integrates the Adiwiyata curriculum based on local wisdom components: 1) identity of subject or lesson theme; 2) competency standards (SK); 3) basic competence (KD); 4) learning materials; 5) learning activities; 6) indicators of competence

achievement; 7) assessment; 8) time allocation; and 9) learning resources. Syllabus is developed based on content standards (SI) and graduate competency standards (SKL).

Document III contains a learning plan containing the 5R components (Recycle, Reuse, Reduce, Replace, Replant) of Adiwiyata curriculum based on local wisdom; 1) identity of subjects consisting of educational unit, class, semester, lesson theme and number of meetings; 2) standard of competence; 3) basic competence; 4) indicators of achievement of competence; 5) learning objectives; 6) teaching materials; 7) time allocation, 8) learning method, 9) learning activities consisting of preliminary activities, core activities and closing activities; 10) assessment of learning outcomes; and 11) learning resources.

This curriculum integrates environmental education and local wisdom in all subjects by utilizing existing school facilities and infrastructure. Children learn not only in the classroom but also need to learn in a fun situation outside the classroom. Children also need to be taught local wisdom so as not to be shackled by games or Western culture (online) that can make children lose playmates, ignore others and adopt contemporary styles from an outside culture. Other than that, it was found that students' environmental literacy is still low.¹⁰

In line with the program of environment ministering of the Adiwiyata school program, all the schools will be provided with environmental education to help reduce environmental issues from various other environmental impacts. Testimonies from successful school principals that focus on development of the school's culture as a learning environment is fundamental to improved teacher morale and student achievement.¹¹ To become a quality school, especially in Ternate City, the value of local wisdom is demonstrated by way of leadership "Joguru" (main teacher) and "Sangadji" (head) with personality, managerial, entrepreneurial, supervision and social aspects.¹²

Among the several existing studies, none examined the local wisdom-based environment with the Adiwiyata assessment indicator and incorporated the 5R Adiwiyata principles into its research. With this developmental research, the child will learn and apply the 5R concept in the environment: Reuse (reusable)- reusable goods can be reused, for example shopping bags, cardboard and powder or other places; Reduce (reduce)- the use of waste production by limiting the excessive use of goods with durable or refillable equipment; Recycle- reuses goods to make new goods; Replace- replace goods made from materials like plastic or crackle with durable goods that can be decomposed by the soil, for example crackle bags; replant (planting)- greening the environment by planting (medicinal or vegetable crops). The above can be used to realize a beautiful school environment, but education is required apart from local wisdom with active learning, innovative, creative, effective and fun education.

The Adiwiyata school introduces crops and plants (local), local food, hygiene, health, electricity savings, environmental facilities, infrastructure and local wisdom, and school policies. Schools should have lighting so students can learn more in comfort, again with the help of the sun, but it can reduce electricity consumption. Daylight is a fundamental resource to achieve indoor quality and energy efficiency in educational buildings and, therefore, to improve their sustainability.¹³ In addition to being environmentally friendly, Adiwiyata curriculum plays a role in the formation of character development through various models and learning strategies. The learning model is effective for improving students' character in integrative learning of religion and environmental education for students who study at the Adiwiyata school in Tarandam area of Padang City.¹⁴ The environmental education curriculum developed based on local wisdom showed satisfactory results. Based on input from experts and assessments, the developed curriculum based local wisdom can be distributed in the elementary schools in Gresik Indonesia.¹⁵

Based on various research results that support the benefits of an Adiwiyata curriculum, it can be concluded that the curriculum should also be applied in the city of Palu and supported by local policy so that all institutions can have an easier process of making the curriculum. This curriculum is equipped with websites that can be accessed anywhere, anytime and by anyone

The development of Adiwiyata curriculum includes a curriculum website that aims to facilitate use by other schools because all the data was entered on the Adiwiyata special responsive school page created by the researcher, the name of the page is "Inovatif Kurikulum Adiwiyata" (IKA). The implementation of the development is a bit difficult so the researchers made the IKA page for the schools to easily download the material, especially for school supervisors, to make an impact in schools. This will increase the knowledge of the school administration in running the Adiwiyata program. The page contains Adiwiyata curriculum files based on local wisdom, environmental vision and cultural missions, supporting photographs, *sarpras*, APSB development, Adiwiyata rating indicators, healthy canteen, slogans, Adiwiyata songs, supporting videos and examples of waste recycling.

SUMMARY

The Adiwiyata curriculum model based on local wisdom can be used as a reference for schools to develop their curriculum. This curriculum model introduces students to love and care about the environment and love the culture they have. This curriculum model can reduce student gaming activity through traditional games taught on SBDP subjects. This curriculum model can introduce students to the cultural games that are almost forgotten because of online games.

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