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Development Of Integrated Learning Tools For Immersed Model To Make Students Environmentalists

Markus Sampe[1], Silvester Taneo[2] , Sofia Godeliva Un Lala[3] , Rista Aprilliya Devi[4] , Martha Kota[5] , Chalvin Nubrihas[6] , Hafiza Uma Leba[7]

[1] Elementary School Teacher Education, Nusa Cendana University, Indonesia, Markus.sampe@staf.undana.ac.id
[2] Elementary School Teacher Education, Nusa Cendana University, Indonesia Silvester.taneo@staf.undana.ac.id ,
[3] Elementary School Teacher Education, Nusa Cendana University, Indonesia Sofia.lala@staf.undana.ac.id
[4] Elementary School Teacher Education, Nusa Cendana University, Indonesia rista.aprilia.devi@staf.undana.ac.id
[5] Elementary School Teacher Education, Nusa Cendana University, Indonesia Martha.Kota@staf.undana.ac.id
[6] Elementary School Teacher Education, Nusa Cendana University, Indonesia ChalvinN@gmail.com
[7] Elementary School Teacher Education, Nusa Cendana University, Indonesia Uba_Hafiza@gmail.com

Corresponding Author: sofia.lala@staf.undana.ac.id[1]

Abstract: Integrated learning immersed model is learning that is in accordance with the interests of students and can grow students' love for the field of interest. Integrated learning immersed model in elementary school begins with students' interest in a field so that students have the urge in themselves to learn more about the field so that students become experts in the field of their interest, this research was conducted to provide solutions related to environmental problems in Indonesia through immersed learning model. The formulation of the problem in this study is how the effectiveness of immersed model learning tools to foster a love for the environment? The purpose of this research is to describe the effectiveness of immersed model learning tools. This research method is R&D (Research and Develop) with 4D design, namely define, design, develop and dessiminate. The result of the research is that the integrated learning device immersed model is declared feasible in terms of the validity of the learning device. Practical to use is indicated by a high percentage of learning implementation, obstacles that arise do not significantly affect learning, and student responses to integrated learning immersed models are positive and good. The immersed model integrated learning device is effective to use in terms of learning outcomes test results that have increased significantly.

Keyword: Integrated Learning Immersed Model, Environmentalist Ability as a student

INTRODUCTION

As a gift from God Almighty to the Indonesian people, the environment must be preserved so that it can be a source and support for the life of the Indonesian people. The 1945 Constitution of the Republic of Indonesia states that a good and healthy environment is a human right and constitutional right for every Indonesian citizen. Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia states that "Every person has the right to live in physical and spiritual prosperity, to have a place to live, and to have a good and healthy environment and to receive health services". Therefore, the state, government and all stakeholders are obliged to protect and manage the environment in the implementation of sustainable development, so that the Indonesian environment can remain a source and support of life for the people of Indonesia and other living things on earth. In environmental management, the main effort that must be made is the prevention of pollution or environmental damage, not the prevention of pollution that has occurred, in accordance with the principle that states "an ounce of prevention is worth a pound of cure".(Listiyani et al., 2018).

Human behavior is one of the main causes of environmental degradation. Humans affect the physical environment in many ways: overpopulation, pollution, burning fossil fuels, and deforestation. Changes in the physical environment trigger climate change, soil erosion, poor air quality, and undrinkable water (Mendoza et al., 2020). The lack of human understanding and concern for the environment jeopardizes the sustainability of life on earth (Scottish Water, 2020). Therefore, it is necessary to make efforts so that humans become more concerned and responsible for the environment (Gifford & Nilsson, 2014)

Education is one of the most impactful efforts that can change a person's views and behavior (Rahmani & Rahiem, 2023).. Education plays an important role in building human ecological beliefs, understanding and behavior (Ahmad, 2010). Environmental education can improve students' attitudes and awareness of the environment. Environmental education is a necessity and should be the main material of learning in schools .

Through environmental education, learners explore environmental issues, engage in problem solving and take action to improve the environment. Learners also have the opportunity to explore environmental issues and hone their skills to make informed and responsible decisions (Saraswati, 2015). Environmental problems in Indonesia have become a global concern, especially about the shrinking forest area, non-optimal waste management, and air, water and soil pollution in various regions in the country known as the lungs of the world (Tampubolon & Purba, 2022). 77% of land in Indonesia has experienced deforestation caused by the conversion of forests into oil palm and paper plantations (Rohmatilahi et al., 2022); and there are 1.7 hectares (ha) of forests in Indonesia that experience fires every year . Waste management in Indonesia is still chaotic, to the point that Indonesia is experiencing a plastic waste emergency. Indonesia is one of the largest waste-producing countries in the world (Handayani et al., 2023); with the amount of waste per year up to 7.8 million tons and 4.9 million tons unprocessed, so 83 percent of it ends up in the sea. Urbanization and industrialization in Indonesia's major cities have led to air, land and water pollution. This pollution affects the health of the population, causing various types of diseases from mild to severe. Solutions to overcome these various environmental problems The Indonesian government has attempted to develop various environmental programs, both community action programs, government planning programs, and protection and education programs (Gusmadi & Samsuri, 2020).

Environmental management, utilization, and conservation can be trained through integrating environmental education in the learning process. (Rezkita & Wardani, 2018) (Syah, 2020). Immersed model integrated learning is learning that is in accordance with students' interests and can grow students' love for their fields of interest. Immersed model

integrated learning in elementary school starts with students' interest in a field so that students have the urge within themselves to learn more about the field so that students become experts in their field of interest, the teacher only needs to facilitate and direct the learning process. Integrated learning Immersed model is learning that uses an interdisciplinary approach, where students can integrate all data from each field of science and produce thoughts according to their field of interest to be applied in everyday life. (Fogarty, 1991). The students' area of interest in this study is the environment. Students' interest in the environment appeared when presented with a video about the current state of environmental damage in the world. Students felt enthusiastic, moved and moved to see the contents of the video. Students feel interested and want to learn more about the environment.

This research was conducted to provide solutions related to environmental problems in Indonesia through Immersed model learning. The formulation of the problem in this study is how the effectiveness of Immersed model learning tools to foster a love for the environment? The purpose of this study is to describe the effectiveness of the Immersed model learning tool. The urgency in this research is that environmental damage can be prevented through education. One way is through the Immersed model where the Immersed model can be integrated in the curriculum both in co-curricular, intra-curricular and extracurricular aspects and even has the leverage to become the basis of character education.

METHOD

The research method used is R&D (Research and Develop) or development with the 4D development design model namely define, design, develop, and desseminate. The learning tool developed is the Immersed model integrated learning tool to improve environmental skills. This research targeted elementary school students in Kupang City. This research was conducted through two stages, namely stage I is the development of learning tools followed by limited trials (trial I), while stage II is the application of learning tools with field tests (trial II). At the define stage, a needs analysis was conducted by conducting front-end analysis, learner analysis, task analysis, concept analysis, and specifying instructional objectives. The design stage is formulating the prototype of the Immersed model learning device. Followed by develop, namely validation by experts, trial I and trial II. In the disseminate stage, the learning tools that have been tested are distributed to schools in Kupang City. The research implementation is depicted in the research chart below.

RESULTS AND DISCUSSION

1. *Define* Stage

At this stage, an analysis is conducted to obtain an overview of the facts in the school that will help in determining the learning tools developed. The school chosen for the initial analysis was SDI Oeba 2 Kupang City. A total of 4 teachers in Phase B of SDI Oeba 2 Kupang City stated through questionnaires that students know that environmental damage is happening. Teachers have discussed environmental damage in learning because environmental conservation efforts are a shared responsibility. Environmental damage and environmental conservation efforts need to be conveyed early on to students because it has a very influential effect on human life.

Environment-based learning can create students' interest and love for the environment. The target of this research is class IV students totaling 30 people The steps taken to analyze the concept are to make the Flow of Learning Objectives (ATP) in the content of IPAS, Indonesian Language, Pancasila Education and Mathematics in Phase B. The preparation of ATP is based on the need to make students lovers of the environment. This research develops one learning objective in each subject content. Learning objectives are then made in the learning integration map of the Immersed model to make students lovers of the environment (Fogarty, 1991).

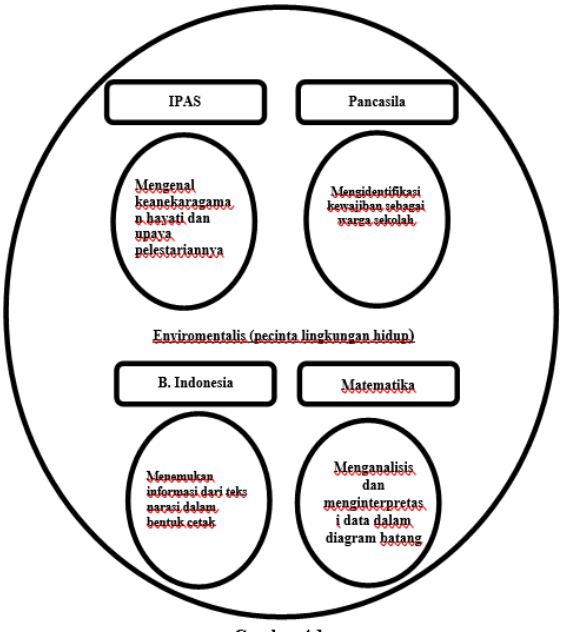


Figure 1: *Immersed* Integration Map

The learning objectives of the *Immersed* model integrated learning tool to make students environmentalists can be presented in the following table:

Table 1. Learning Objectives

Course Content	Learning Objectives
IPAS	Recognize biodiversity and efforts to conserve it
Pancasila Education	Identifying obligations as a school citizen
Bahasa Indonesia	Find information from a narrative text in print
Math	Analyzing and interpreting data in bar charts

2. *Design* Stage

The preparation of the test was carried out by paying attention to the ATP that had been prepared previously. The problem consists of 20 numbers of multiple choice questions which are divided into each lesson content of 5 multiple choice questions. The learning media chosen is powerpoint media because it can improve student learning outcomes (Setiawan et al., 2023). The learning tools compiled in this study consist of teaching modules, LKPD, learning media, teaching materials and learning outcomes tests. Learning tools are made for each subject content to make students lovers of the environment. The learning devices made are teaching modules, LKPD, Powerpoint Media and learning outcomes tests. The initial design of learning devices is presented in Appendix 3 called Draft 1.

3. *Develop* Stage

Draft 1 was then validated by 2 experts. in the field of primary school learning. Draft validation results is as follows: Device validity This study aims to determine the assessment of experts based on various aspects before being used in learning.

Table 2: Learning Device Validity Results

Device	V1	V2	R	Criteria
Teaching Module	4	4	>75%	Valid
Teaching Materials	4	4	>75%	Valid
LKPD	3	3	>75%	Valid
Assessment Learning Implementation	3	3	>75%	Valid
	4	4	75%	Valid

a. Effectiveness of learning tools

Before the learning takes place the teacher gives a pretest to find out the students' initial knowledge. After the learning takes place the teacher gives a posttest to determine the understanding gained by students. Students' pretest and posttest scores are used to determine the improvement of students' understanding.

Table.3 Student Pretest and Posttest Results

Class	Pre	The post	*Ngain*	Description
A	46	71	0,6	Medium
B	54	81	0,9	High
C	30	63	0,6	Medium
D	52	81	0,9	High
E	65	81	0,4	Medium

Based on the results of the effectiveness of learning devices declared effective for use in learning

CONCLUSION

Based on the results that have been described, it can be concluded that the device Immersed model integrated learning is declared feasible in terms of: Immersed model integrated learning devices ranging from Learning Implementation Plans (RPP), Student Books, Student Activity Sheets (LKS), and Learning Outcome Tests are considered valid and can be used by validators. The Immersed model integrated learning device is practical to use which is indicated by a high percentage of learning implementation, the obstacles that arise do not significantly affect learning, and students' responses to the Immersed model integrated learning are positive and good.

The Immersed model integrated learning device is effective to use in terms of learning outcomes test results that have significantly improved. Suggestions that can be given by researchers are that other researchers can develop other environmentally oriented learning tools in other classes and the next level of education. Thank you to the Faculty of Teacher Training and Education, Nusa Cendana University, Primary School Teacher Education Study Program for the opportunity to conduct research.

REFERENCES

Ahmad, M. (2010). Pendidikan Lingkungan Hidup Dan Masa Depan Ekologi Manusia. *Edukasia Islamika*, *8*(1), 57–71.

Fogarty, R. (1991). *Fogarty - 1991 - Ten ways to integrate curriculum*. *October*.

Gifford, R., & Nilsson, A. (2014). Personal and social factors that influence pro-environmental concern and behaviour: A review. *International Journal of Psychology*, *49*(3), 141–157. https://doi.org/10.1002/ijop.12034

Gusmadi, S., & Samsuri, S. (2020). Gerakan Kewarganegaraan Ekologis sebagai upaya Pembentukan Karakter Peduli Lingkungan. *Jurnal Ilmiah Pendidikan Pancasila Dan Kewarganegaraan*, *4*(2), 381. https://doi.org/10.17977/um019v4i2p381-391

Handayani, F., Ananda, R., & Fitria, Y. (2023). Implementation of Integrated Learning Based on the Immersed Model To Improve Student Response in Class Iv Elementary School. *Jurnal CERDAS Proklamator*, *11*(1), 35–44.

Listiyani, N., Hayat, M. A., & Mandala, S. (2018). Penormaan Pengawasan Izin Lingkungan dalam Pencegahan Pencemaran dan Kerusakan Lingkungan Hidup dalam Eksploitasi Sumber Daya Alam. *Jurnal Media Hukum*, *25*(2), 217–227. https://doi.org/10.18196/jmh.2018.0116.217-227

Mendoza, S. D., Nieweglowska, E. S., Govindarajan, S., Leon, L. M., Berry, J. D., Tiwari, A., Chaikeeratisak, V., Pogliano, J., Agard, D. A., Bondy-Denomy, J., Chatterjee, P., Jakimo, N., Lee, J., Amrani, N., Rodríguez, T., Koseki, S. R. T., Tysinger, E., Qing, R., Hao, S., … Wang, H. (2020). No 主観的健康感を中心とした在宅高齢者における健康関連指標に関する共分散構造分析Title. *Nature Microbiology*, *3*(1), 641. http://dx.doi.org/10.1038/s41421-020-0164-0%0Ahttps://doi.org/10.1016/j.solener.2019.02.027%0Ahttps://www.golder.com/insights/block-caving-a-viable-alternative/%0A???%0Ahttp://dx.doi.org/10.1038/s41467-020-15507-2%0Ahttp://dx.doi.org/10.1038/s41587-020-05

Rahmani, N. F., & Rahiem, M. D. H. (2023). Implementasi Pendidikan Lingkungan Hidup di Raudhatul Athfal. *Jurnal Ilmiah Potensia*, *8*(1), 12–25. https://doi.org/10.33369/jip.8.1.

Rezkita, S., & Wardani, K. (2018). Karakter peduli lingkungan di sekolah dasar. *Trihayu: Jurnal Pendidikan Ke-SD-An*, *4*(2), 327–331. https://jurnal.ustjogja.ac.id/index.php/trihayu/article/view/2237

Rohmatilahi, L., Kholisah, N., Arifin, M. H., & Wahyuningsih, Y. (2022). Urgensi Pembelajaran IPS dalam Upaya Meningkatkan Pemahaman Budaya Indonesia pada Siswa Sekolah Dasar. *Jurnal Pendidikan Tambusai*, *6*(1), 4270–4276.

Saraswati, D. E. (2015). *Arahan Revitalisasi Kawasan Cagar Budaya Sebagai Wisata Sejarah Di Kawasan Rajawali Surabaya*. 377. http://repository.its.ac.id/71434/

Scottish Water. (2020). *No 主観的健康感を中心とした在宅高齢者における健康関連指標に関する共分散構造分析Title*. *21*(1), 1–9.

Setiawan, A., Nugroho, W., & Widyaningtyas, D. (2023). Development of interactive powerpoint learning media based on information and communication technologies to improve student learning outcomes. *Jurnal Pendidikan Dasar Nusantara*, *9*(1), 75–86. https://doi.org/10.29407/jpdn.v9i1.20056

Syah, E. F. (2020). Representasi Kerusakan Lingkungan Pada Cerita Anak The Time Travelling River Karya Parinita Shetty: Kajian Ekokritik Sastra. *Forum Ilmiah*, *17*(3), 295–315. https://digilib.esaunggul.ac.id/public/UEU-Journal-20198-11_1341.pdf

Tampubolon, Y. H., & Purba, D. F. (2022). Kapitalisme Global sebagai Akar Kerusakan Lingkungan. *Societas Dei: Jurnal Agama Dan Masyarakat*, *9*(1), 83–104. https://doi.org/10.33550/sd.v9i1.265