



Learning the Indonesian Language through Fictional Text Based on Ecological Literacy (Malay-Langkat) as an Effort to Realize Literate Generation

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ABSTRACT

Education is a place where humans are formed to find and collect various information that will certainly be useful for shaping and developing human cognitive intelligence about many things, one of which is about ecology (environment / nature). In studying Indonesian, ecological discourse material (text) is one strategy to integrate environmental education and social interaction, as well as cultural customs of the community, especially Malay-Langkat which aims to form and develop mindsets and patterns of action, as well as healthy behavior both physically and mentally in everyday life. Through literary learning, educators are required to be more creative and sensitive in choosing interesting and suitable materials to be delivered instead of just fixating on the targets to be delivered and existing lesson plans, without thinking further about other things that can be used as a source of learning. But the availability of local ecology-based texts is still very little. This research aims to produce a Malay- Langkat literacy-based fiction text material that is feasible and effectively used at the high school level. So this research will focus more on developing a literacy culture to produce a literate generation, a generation that understands what is read and does something based on its understanding of the content of the reading. The literate generation is a

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generation that is intelligent, capable, characterful, and competitive. This research is a development research that adapts the 4-D Development model. Research and development steps are carried out using modifications and the Thiagarajan development model that is 4-D. This development model uses 4 stages consisting of define, design, development and dissemination.

Keywords: Teaching materials; fictional text; ecological literacy (Malay Langkat); literate generation.

1. INTRODUCTION

The government has organized improvements in order to improve the quality of education at various levels to achieve national education goals. Governments and institutions engaged in education have carried out various national and global reforms and improvements.

One of the improvements taken by the government is the change in curriculum, namely the change of curriculum level of education unit to curriculum 2013. The launch of the 2013 Curriculum means a lot to the changing educational paradigm. Through the 2013 curriculum, education will be directed to develop the potential of learners to have religious spiritual strength, self-recognition, personality, intelligence, noble morals as well as self-skills. Herdian [1] states that the ideal education and teaching process is essentially an invitation of an educator to bring an educator to deliver an educator to his learning goals by providing conducive situations and conditions and facilities so that a harmonious educational interaction is born. Related to learning facilities, teaching materials are one of the important educational access in organizing national education.

Quality learning materials will succeed in achieving learning goals if educators organize them into teaching materials properly and correctly. Teaching materials are all forms of materials used to help teachers in carrying out learning activities in the classroom.

Teaching materials are one of the vital learning resources for the success of learning in schools so that there is no longer a verbalistic culture among students, especially to achieve the goal of learning Indonesian language given that language is a barrier for understanding all sciences. Educators must be able to organize teaching materials that have been developed into teaching materials to make it easier for educators to present teaching materials in the learning process and make it easier for learners to learn them.

In line with the demands of four competencies that must be possessed by an educator (pedagogical competence, personality competence, social competence, and professional competence), mastery of the substance of the field of study and scientific methodology (disciplinary content knowledge) and the ability to choose and develop teaching materials in the field of study that are in accordance with the needs of learners (pedagogical content knowledge) is one of the obligations carried out by educators to develop competencies that are needed. He is a professional teacher. Text is formed from the development of the main ideas and explanations contained in the paragraphs that build the text. There are variations in the development of ideas or messages in building a text. This is shown in the presentation of the development of social science text ideas there is a tendency to develop ideas or messages based on constant patterns (76.9%), while mixed (7.7%), and linear (15.4%), development patterns.

Based on the curriculum so far that always pays attention to the learning of language skills and ability to abstract, the text in the 2013 curriculum can also be distinguished between literary text and non-literature text. Based on the study of basic competencies in the 2013 curriculum for Elementary School [2] Indonesian subjects 28 texts that include 7 literary texts (25%) and 21 non-literature texts (75%). In Junior high school, [3] in Indonesian subjects found 14 texts that include 3 literary texts (23%) and 11 non-literature texts (77%). While in high school [4] in Indonesian subjects found 14 texts that include 6 literary texts (43%) and 8 non-literature texts (57%). This finding is different from what was conveyed by Mahsun [5] which states that at the elementary school as many as 30 types of text, junior high school 45 types of text, senior high school 60 types of text [42-47].

Literature is an inseparable part of life. Through literature people will better understand the beauty of the language of the author in a writing. Literature has always offered a work that collaborates real life with fiction [33-41]. This is

where literature can be built with a form that attracts the attention of its readers. The rapid development of literature makes the power of dance self-contained for readers and researchers to find out more about the meaning contained in it [57-65]. Socio-cultural diversity in Indonesia greatly influences the creation of new works in the field of literature. Widianti [6] further said that literary teaching has a role to fertilize student intelligence in all aspects, including morals. Through literary appreciation, for example intellectual, emotional, and spiritual intelligence students can be trained and developed. Students are not only trained to read, but must be able to find meaning and values in a literary work. The scope of ecology is certainly very broad as Muin [7] says that nature has become part of literature. This is evidenced by not least the literature, especially among poets, who use diction forests, seas, trees, and others in their character. But as it develops, literature has undergone many changes, as well as nature. These two inseparable elements always seem to go hand in hand. Literature was the face of the past and literature is now the face of present nature. Literature needs nature as its inspiration, while nature needs literature as a conservation tool. Endraswara [8] further said that with the study of literary ecology, it will be revealed how the role of literature in humanizing the environment.

The younger generation, especially students and students, will assume responsibility in advancing civilization and creating excellence in the Indonesian nation [9,10]. Their role as historical subjects, critical actors, creators, and innovators who determine the future face of the Indonesian nation must be prepared early and developed in a sustainable manner. For the development of a culture of literacy for them is a definite bridge. The development of literacy culture has actually been done for a long time, among others through the lets read movement launched by the government. The development of a literacy culture for students has also become a concern of the government [66-71].

In Indonesian language learning, teachers are required to provide understanding to learners, and not just to enforce a number of formulations to students to be stored which will then be released in the same form if needed. Learners should be seen as active individuals who can make choices over personal responsibilities regarding their own education. They need to be encouraged and facilitated to develop into a person born of themselves. Learning carried out

by Indonesian teachers should be able to build transitive critical awareness, which is characterized by the depth of interpreting various problems, building confidence in discussions, and building the ability to be able to accept and reject.

The development of Indonesian Literature Teaching Materials Based on Ecological Literacy is a form of effort to present teaching materials that harmonize literary appreciation, cultural understanding, Malay customs, environment and social environment with ecological intelligence in children [28-32]. The location used as an object of research is in Langkat Regency, precisely Vocational High School Sri Wampu Pertumbuhan whose 80% of students are Malay-Langkat and the remaining 20% are ethnically mixed who understand Malay but know little Malay folklore. The need for ecologically based teaching materials for the region is to compensate for the Java-centric culture that is entrenched in the community, even in the process of preparing teaching materials. In Indonesian subjects for high school / vocational high school appeared discourse about batik preservation [48-56]. This is certainly foreign to the Malay community of Asahan who are more familiar with Songket as his traditional clothing. This is certainly very difficult for teachers and students in the learning process.

2. MATERIALS AND METHODS

Utilization of the development of teaching books aimed at improving the ability of literature learners, especially in Basic Competence of Fiction of literature text at the high school / vocational level as equals and ecological intelligence (Malay-Langkat) to form literate people selected in this study.

2.1 Materials

2.1.1 Fact of the teaching material

According to Pannen in Prastowo (2012: 17) teaching materials are materials or subject matter that is systematically arranged, which teachers and learners use in the learning process. In addition, Sanjaya [11] defines the material of the lesson is everything that becomes the content of the curriculum that must be mastered by students with basic competencies in order to achieve the standard of competence of each subject in a particular educational unit.

Broadly speaking, teaching materials or teaching meters consist of knowledge, skills, and attitudes that students must learn in order to achieve predetermined standards of competence. The same thing was also conveyed by Prastowo [12] who concluded that teaching materials are all materials (whether information, tools, and texts) that are systematically arranged, which display the full figure of competence that will be mastered by learners and used in the learning process with the aim of planning and reviewing the implementation of learning. For example, textbooks, modules, handouts, worksheets, mockup models, audio teaching materials, integrative teaching materials, and so on.

Based on the above opinions it can be concluded that teaching materials are a set of subject matter (both information, tools, and text) that are systematically arranged and used in learning.

2.1.2 Principles of preparation of teaching materials

There are several principles that need to be considered in the preparation of teaching materials or teaching meters. According to Dirman [13] there are three principles of selection of teaching materials (teaching materials) namely (1) the principle of relevance, (2) the principle of consistency, and (3) the principle of adequacy. Here will be a description of these three principles.

1. The principle of relevance, meaning that the learning material should be relevant has a relationship with the achievement of core competencies and basic competencies. For example, if the basic competencies that are expected to be mastered by students in the form of memorizing facts, such as remembering the name of an object, the time, the location of an event, the name of a figure / expert, then the learning material taught in the form of facts or background knowledge. If the basic competencies expected to be mastered by students are the ability to express an understanding, identify the characteristics of something, classify, for example defining what is democracy, what are the main characteristics of democratic government, what is the difference between direct democracy and indirect democracy / representative, then the material that must be taught in the form of concept material.

2. The principle of consistency means that there is a harmony between learning materials and

basic competencies that must be mastered by learners. For example, the basic competencies that must be mastered by students of four kinds, then the teaching materials that must be taught must also include four types.

3. The principle of adequacy means that the material taught should be sufficient in helping learners master the basic competencies taught. The material should not be too little, and it should not be too much. If too little will be less helpful in achieving core competencies and basic competencies. Conversely if too much will be a waste of unnecessary time and energy to learn it.

Teaching materials are structured based on instructional goals and objectives. The preparation needs to follow the following steps: (1) formulate the objectives; (2) conduct an analysis of competency standards; (3) determine basic competencies; (4) describe the indicator; (5) arrange a framework of teaching materials; (6) devise a writing scenario; (7) composing/writing teaching materials; (8) expert test/field test; (9) revision; and (10) used in the teaching and learning process. Furthermore, in compiling teaching materials according to Pannen and Purwanto (2004: 54) can be done by writing itself, repacking information, and organizing information that has been obtained systematically. Thus making it easier for students to understand the teaching materials.

Based on the above opinion, it can be concluded that the teaching materials developed in this study explain the principle of relevance or have something to do with the achievement of basic competency and competency standards. By repacking all information about the fictional text material in order starting from instructions for the use of the material, exercises and tasks that need to be done by students, feedback. Additional material in the form of learning guidelines for students based on competency goals / standards, competency indicators, and syllabus [72-79].

2.1.3 Literary learning in high school

Addressing various problems related to the declining quality of literary learning in schools, it is appropriate if the Indonesian nation is now aware to immediately prioritize literary learning, and no longer complacent on matters that are physical material, and only want results that are easy to see. It is also time for the school curriculum to give a more portion in the field of

literature, so that students have an early opportunity to get to know and embrace literature. As the main pillar of literary learning, it is expected that teachers are able to bring their students to read literary works and interested in discussing together with their friends. By reading literature students have the opportunity to get acquainted directly with literary works, and at the same time appreciate them [80-84].

However, facts in the field show that there is still literary learning carried out in schools without the activity of reading literary texts through teaching materials of fiction texts. Literary books are not presented in the classroom for students to read in their entirety. Students are only asked to read pieces of literature or even just a synopsis. According to Taufiq Ismail (2004), such learning is actually not quality and just nonsense. Because the learning of literature without the activity of reading the literary text as a whole, is an inevitability. According to Aminuddin [14], ideally literary learning can utilize literary texts in line with the richness of their contents, because literary learning is not oriented to results solely. More important than that, in the learning of literature teachers also do the coaching of reading activities and coaching literary appreciation.

The problem is, to provide a literary text that has a wealth of content with various matryanya is not easy. To overcome that problem, it is necessary for the creativity of teachers in utilizing available learning facilities, even though it is very limited.

The curriculum of literary learning in high school states that the purpose of literary learning in schools, among others, is the achievement of students understanding of discourse and culture, which is expected to benefit him to live a social life in his environment. Therefore it can be said that the purpose of literary learning is not only to produce graduates who are able to do exam questions only, but more importantly than that is to produce graduates who are appreciative of literature, able to take the values of life contained in it, so that a well-mannered and cultured human being is formed.

In fact in the field, according to Suminto A. Sayuti [15], Indonesian people (often) suffer from social hysteria and (easily) exposed to cultural barriers. It is characterized by the tendency of humans to behave violently, aggressively, and become liars to their conscience. If it is said that all of it is the result of the failure of education, it may not be

wrong, for in that case education has failed in fulfilling its noble imperative, and has lost its essence as a process of culture. To overcome various problems as outlined above, it is necessary to establish good cooperation from various parties to understand each other and act on their respective duties and authorities, so that literary learning can be carried out in accordance with expectations.

2.1.4 Malay-langkat ecological literacy

Malay communities in Langkat and in the East Sumatra region in general, have been present since the XI century. In general, they live in coastal and low-lying areas. The main means of transportation are the sea and river. Because rivers are the main means of transportation on the mainland, they form villages around the river. The highest limit of the area of residence is the limit of people can no longer afford to pedal their boats upstream. In addition to being a source of livelihood, the river is also used as a direction. In everyday life, Malays are not guided by the east and west, or north and south in determining the address or something to go to, but based on the direction of the river. There are 4 directions that are used as guidelines, namely upstream, downstream, and land. Upstream is the direction to the headwaters of the river, downstream to the river or the direction to the sea, while land is the direction that indicates the area away from the river. The old Malay villages are generally open-patterned, but some are centered with a pattern of imprisonment [85-91]. Usually, the village on the riverbank always leads to the river. Every village has its back (where the boat rests). The shape of the house is high and hollow to avoid puddles and disturbing animals. Each village has its own farm area which is usually behind the house. There are also small and remote villages that are located far from the village area, but still be in the village. Each village is headed by the head of the village called Pengulu (Penghulu Kampung). It is the smallest territorial area of a government, while also the smallest legal territory. This territorial territory has similar government laws, cultural and language similarities, similar customs, and similar ways of life.

These four elements are in the manners and dynamics of community and national life. Every pattern and movement of life is wrapped by cultural resam and Islamic ideology. The identity of cultural resam with the religion of Islam is a public opinion that states that not Malay if not

Islamic. This identity is also characterized by the establishment of a surau, langgar (musholla), or mosque, in every Malay village. Its function is not only as a means of worship, but also as a place of worship and consensus. Not only in the ideology and movement of community life, the breath of Islam also always colors every variety of Malay culture. A village is included in the District or Kejeruan area. The District Area is led by a district chief and the district is led by a datuk. Some of these Districts and Districts were in one Luhak. Luhak was led by a Prince, whose duties and role were an extension of the Sultan and were domiciled as Little King. The territory of the Sultanate of Langkat is divided into 3 Luhak, namely (1) Luhak Langkat Hulu, (2) Luhak Langkat Hilir, (3) Luhak Teluk Haru, Sultan is the central point of the system of government and holders of legality based on strict law, religious law, and customary law. The center of the kingdom/sultanate is called the City. The principle of the sultans reign and the enlargement of the kingdom was accountability to Allah. That is, based on Islamic sharia, every leader will be held accountable by Allah Swt in the afterlife.

Legally familial, Malays adhere to the parental system. The parental system means the position of the mother and the fathers side is the same. That is why there is no clan (lineage), either from the fathers side or from the mothers side. The family tree can be drawn from the paternal lineage or from the maternal lineage. The parental system of society leads to the absence of the sorting of power and solidarity as in batak custom. But in certain cases, for example in the event of meminang, Malays still use the term beru child, as well as ethnic Karo. Its just that, the task and position are not absolute or not bound to strict customary lines. Social systems and family systems in society are expressed through language codes so as to determine the interaction of communication between them is called the kinship system. Kinship systems can be distinguished based on (1) social layers and (2) family layers. In the Malay community, the kinship system is on a social layer.

2.1.5 Literate generation

According to Teale and Sulzby in Gipayana (2010: 9) the concept of teaching literacy is interpreted as the ability to read and write. A person is called literate if he has the essential knowledge to use in any activity that demands

the effective functioning of literacy in society and the knowledge he attains by reading, writing, and arithmetic allows it to be utilized for himself and the development of society. Then literacy can be interpreted as a persons ability to process and understand information while doing the process of reading and writing. Literacy requires a set of cognitive abilities, written and spoken language knowledge, knowledge of genres and culture. Literacy is also closely related to learning patterns in schools, namely the availability of reading materials and the growth of reading society. Thus, the culture of literacy as the shaper of the literate generation can be said to be the root of civilization that is able to transform mindset and behavior [92-97].

The link between literacy and the progress of generation is clearly very close because the inherent literacy culture will make the nation more critical, richer in insight, information and of course will give birth to various ideas, concepts and able to communicate effectively and of course have broad and intelligent thinking. So, literacy or literacy can be interpreted as technological literacy, information literacy, critical thinking, sensitive to the environment, even sensitive to politics. A person is said to be literate if he can already understand something because he reads the right information and does something based on his understanding of the content of the reading. Sensitivity or literacy in a person certainly does not just appear. No human being has been literate since birth. Creating literate generation requires a long process and conducive means. This process starts from small and from the family environment, then supported or developed in schools, social environments, and work environments. Literacy culture is also strongly associated with the pattern of learning in schools and the availability of reading materials in the library [17-21]. But we also realize that literacy does not have to be obtained from school or higher education. High academic ability does not guarantee a person will be literate. Basically, sensitivity and critical power of the surrounding environment is preferred as a bridge to literate generation, which is a generation that has critical thinking skills to all information to prevent emotional reactions.

The literate generation is essentially the generation that has a literary soul. Literacy means understanding, awareness, and meaning. This applies to everything, including in the world of education. The world of Indonesian education needs a literate generation so that education in

this country can rise from the slump. In other words, creating a literate generation is an early bridge to a prosperous, caring, and critical nation. Therefore, the introduction of literacy culture to young people must be instilled early on both in the family, school, and community environment. The spirit movement of reading-writing must be transformed into our educational space. This movement requires all elements of education in this country, even if necessary the countrys education system needs to be reformed in order to be able to develop literacy skills from an early age. In short, it can be concluded that the literate generation is a generation that always civilizes reading and writing. Reading and writing culture is better known as literacy movement literacy is not only in terms of cognitive insight, but more includes the mastery of various information and able to process information and communicate it. Literacy not only includes non-electronic media such as books, the progress of todays era requires the younger generation to be technologically literate and use it wisely for the betterment of the nation.

The research was conducted at Vocational High School Sri Wampu Growth. The study was conducted in May-November 2021.

2.2 Methods

Types of this research is Research and Development (R&D) because researchers want to produce and develop fiction textbooks as a supplement to Indonesian learning at the high school level. This development research refers to the 4D model (four-D model) proposed by Thiagarajan (in Trianto [16]) which consists of 4 stages, namely the defining stage (Define), design (Design), development (Develop), and spread (Dessiminate).

The development stages are described as follows.

Stage 1: Define Stage: This stage aims to establish and define learning needs by analyzing material goals and boundaries. There are 5 steps in this stage:

Final Preliminary Analysis: The final initial analysis aims to find and establish the basic problems faced in learning so that the development of learning materials is needed. The problem on which it is based is the lack of local ecology and cultural-based textbooks so that language learning is less touching to students. From the above problem, a product of fiction textbooks is compiled that can help teachers and students.

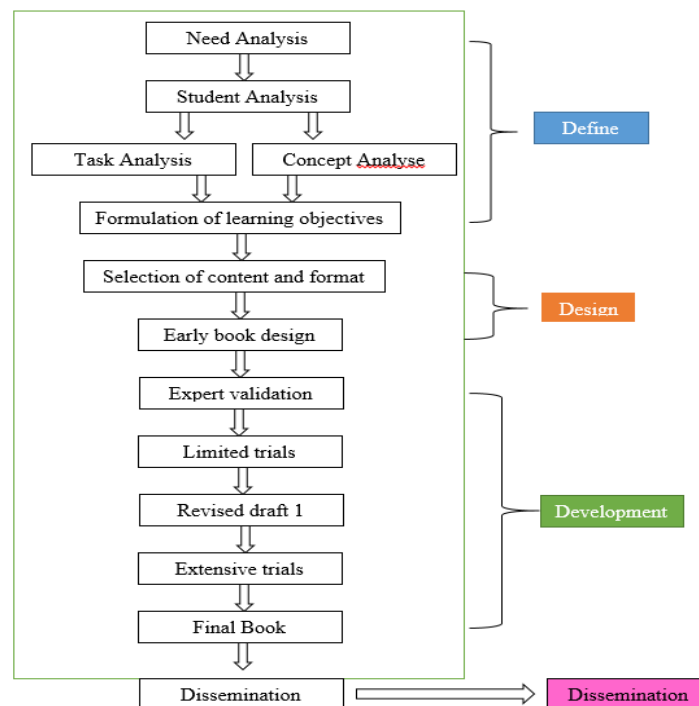


Fig. 1. The steps of 4D model

Student Analysis: Student analysis is about the characteristics of students that are in accordance with the design and development of Malay-Langkat ecology-based textbooks.

Concept Analysis: Concept analysis is proposed to select, detail and systematically establish relevant concepts to be taught based on the final initial analysis. This analysis is the basis for preparing learning objectives.

Analyst of Tasks: Task analysis is a collection of procedures for determining the contents in a unit of learning. In this analysis details the content of the material in an outline that is adjusted learning plan.

Formulation of Learning Objectives: This analysis is done to formulate the results of task analysis and concept analysis.

Stage 2: Design Stage: At this stage, the design of a malay-langkat ecology-free fiction textbook was carried out. In this stage is done the selection of formats, and initial designs.

Stage 3: Development Stage: The goal of the development phase is to produce a revised draft II of the learning device based on expert validation and data obtained from trials. Activities at this stage are expert assessments and field trials.

Stage 4. Desimination: At this stage, malay-langkat ecology-based fiction textbooks used in learning Indonesian disseminated.

3. RESULTS AND DISCUSSION

The result of this study is a malay-langkat ecology-based fiction textbook used in learning Indonesian at the high school level, in the book texts, puisi, short stories, anecdotes, historical stories themed on Malay cultural customs according to the ecological characteristics of students in langkat area so that through learning Indonesian students are introduced to their culture.

Ecological intelligence needs to be instilled in every individual, either through formal, or informal educational pathways. The school is one of the educational institutions that has an obligation to stimulate the growth of ecological intelligence for the younger generation of Indonesia. Through teaching and learning systems, ecological intelligence can be well embedded and implemented [22-27]. One way to

improve ecological intelligence for children, especially high school students is to present teaching materials that accommodate efforts to increase ecological intelligence. The responsibility of improving ecological intelligence is not only in subjects that intersect with nature, such as IPAs, both physics and biology, but the responsibility also exists in other subjects, such as Bahasa.

Efforts that can be done is to arrange teaching materials that contain environmental and cultural themes as a real effort to improve the ecological intelligence of each student. Environmental and cultural issues should be a big theme in every aspect of Indonesian language and literature learning in schools, especially for the people of North Sumatra. Ecological intelligence must be instilled through literary discourses in the form of ecoritics and contain local literary content as a form of cultural and linguistic participation. The research entitled Development of Teaching Materials Of Ecological Literacy-Based Fiction Text is a form of effort to present teaching materials that accommodate ecology intelligence. The location used as the object of the study is in The Langkat Area. From the trials that have been done, the following results can be obtained.

The results are obtained from comprehensive data processing based on interviews and questionnaires. From the diagram above it can be explained that students understanding of ecologically based fiction text teaching materials earns 53% in good categories, 30% in sufficient categories, 12% in excellent categories and 5% in disadvantage categories. In general, it can be said that the teaching material of ecological intelligence-based fiction text has a good and excellent category link of more than 65%.

Descriptively it can be explained that the teaching material of the ecologically charged fictional text of Indonesian subjects is a supplement teaching material that accommodates the local ecology for the Langkat region. The need for ecologically based teaching materials for the four regions is to compensate for the Java-centric culture that has become entrenched in the community, even in the process of preparing teaching materials. In Indonesian subjects for high school there is a discourse about batik preservation. This is certainly foreign to the People of Langkat Malays who are more familiar with Songket as their traditional clothing. This is certainly very difficult for teachers and students in the learning process.

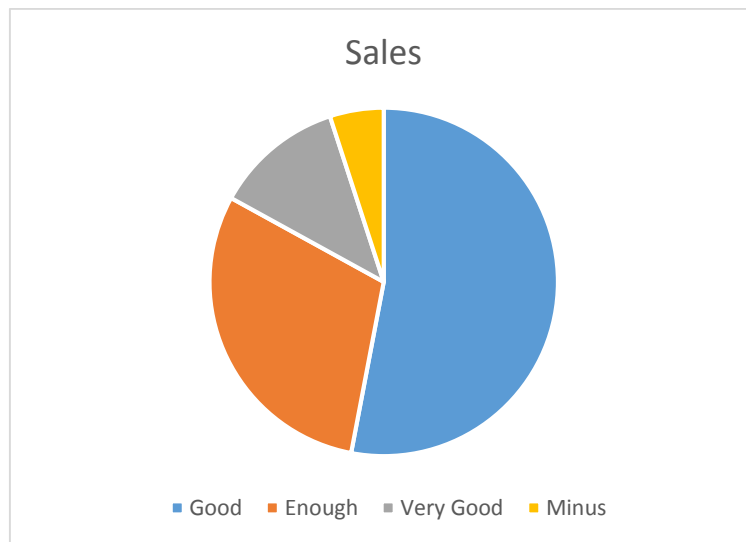


Fig. 2. Percentage of Students Understanding of Malay Langkat Ecologically Based Fiction Text Material

For the story material in Chapter IV Preserving the Value of Local Wisdom through Folklore for example, it is difficult to imagine a high school teacher in Langkat named Muzzakir 34 years later having to link the Noble Sense Story or The Flower Of The Kemuning With local wisdom.

Therefore, the preparation of teaching materials adapted to the local ecology is very welcomed by teachers and students as a vehicle to learn Indonesian with the help of texts that are close to their lives. For example, for Indonesian teaching materials of Malay Langkat ecology, the text material of the saga is contained in a Malay motto Bumi Sorcerer Negeri Beradat.

Furthermore it is said anyway; What is the sign of a lucky Malay. When he is given a mandate, he is trustworthy. There is no way the concept of cultural customs, proverbs, and Malay mottos is just spoken, the term Do not reason. Of course it is the height of reason of Malay figures and thinkers. More than that, the material of the story text becomes easy to apply and has the usefulness for the life of students in real terms. This will certainly be able to improve ecological intelligence for students by having implications for students ability to exercise control over the environment.

4. CONCLUSIONS

Realizing the literate generation is expected to be a collective consciousness (teachers,

lecturers, writers, textbook authors, schools, governments, and society). But in the context of education, teachers or educators have more responsibility because it is the teacher who stands at the forefront of succeeding education. Teachers are expected to be the main driving force to print literate generation, which is a generation that not only has an understanding of what is read, but also able to internalize the values contained in it and is able to actualize it in real performances and prestigious works. The generation of literate generation that is intelligent, competent, characterful, and competitive is a dream that is continuously spread to be realized. The literate generation is believed to be able to produce great and meaningful works for the dignity of the nation.

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Creating a generation of literacy Requires a variety of support from Therefore, it should be We can make a contribution. The real good is that it contributes to the application of a culture of literacy to self own or create a generation of literacy in the home environment, the community and in the classroom, university and others Etc.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Herdian. 2009. Model Pembelajaran NHT (Numbered Head Together). <http://herdy07.wordpress.com/2009/04/22/model-pembelajaran-nhtnumbered-head-together/>. Retrieved April 28, 2012, at 6:20 p.m.
DOI:10.15760/comminfolit.2016.10.2.27
2. [Kemendikbud] Kementerian Pendidikan dan Kebudayaan. 2013a. Materi Pelatihan Guru Implementasi Kurikulum 2013 SMP/MTs Matematika. Jakarta: Kementerian Pendidikan dan Kebudayaan. 77
3. [Kemendikbud] Kementerian Pendidikan dan Kebudayaan. 2013b. Pedoman Pelatihan Implementasi Kurikulum 2013. Jakarta: Kementerian Pendidikan dan Kebudayaan.
4. [Kemendikbud] Kementerian Pendidikan dan Kebudayaan. 2013c. Pedoman Pemberian bantuan Implementasi Kurikulum Tahun 2013. Jakarta: Kementerian Pendidikan dan Kebudayaan.
5. Mahsun. Pembelajaran Bahasa Indonesia Menggunakan Pendekatan Teks. Kompas Edu.27 February 2013. Retrieved February 8, 2012.
6. Widianti E, Keliat BA, Wardhani IY. Aplikasi Terapis Keperawatan Jiwa pada Pasien Skizofrenia dengan Harga Diri Rendah Kronis di RSM Jawa Barat. *Jurnal Pendidikan Keperawatan Indonesia*. 2017;3(1):83-89.
7. Muin I. *Sosiologi Kurikulum 2013*. Jakarta: Erlangga; 2013.
8. Endraswara, Suwardi. *Metodologi Penelitian Ekologi Sastra Konsep, Langkah, dan Penerapan*. Yogyakarta: CAPS; 2016.
9. Suwandi, Sarwiji. 2015a. "Pendidikan Karakter Sebagai Peneretas Jalan Mewujudkan Bangsa Indonesia yang Berjati Diri dan Bermarwah" Papers presented at the National Seminar on Education organized STKIP Hamzanwadi Selong, Lombok Timur, Nusa Tenggara Barat, 200 March 2021.
10. Suwandi, Sarwiji. 2015b. "Membangun Budaya Literasi untuk Mengembangkan Profesionalisme Guru dan Dosen Bahasa Indonesia" Papers presented at the National Seminar organized Asosiasi Dosen Bahasa dan Sastra Indonesia (ADOBSI) bekerja sama dengan Jurusan Pendidikan Bahasa dan Seni FKIP UNS, 25 April.
11. Sanjaya. *Strategi Pembelajaran Berorientasi Standar Proses Pendidikan*. Jakarta : Prenada Media Group; 2010.
12. Andi Prastowo. *Panduan Kreatif Membuat Bahan Ajar Inovatif*. Yogyakarta: Diva Press; 2012.
13. Dirman dan Cicih Juarsih. *Teori Belajar dan Prinsip-prinsip Pembelajaran yang mendidik*. Jakarta: PT. Rineka Cipta; 2014.
14. Aminuddin. *Pengantar apresiasi karya sastra*. Bandung: Sinar Baru Algesindo; 2000.
15. Suminto Sayuti A. *Berkenalan dengan Prosa Fiksi*. Yogyakarta: Gama Media; 2000.
16. Trianto, *Model-model Pembelajaran inovatif berorientasi konstruktivistik*. Prestasi Pustaka: Jakarta; 2007.
17. Abud M. *Indonesia: New digital nation*. Internews Center for Innovation and Learning; 2012.
18. Anshari M, Alas Y, Hardaker G, Jaidin JH, Smith M, Ahad AD. Smartphone habit and behavior in Brunei: Personalization, gender, and generation gap. *Computers in Human Behavior*. 2016;64:719-727.
DOI: 10.1016/j.chb.2016.07.063
19. Anshari M, Almunawar MN, Shahrill M, Wicaksono DK, Huda M. Smartphones usage in the classrooms: Learning aid or interference?. *Education and Information Technologies*. 2017;22(6):3063-3079.
DOI: 10.1007/s10639-017-9572-7
20. Arwizet K, Jalinus N, Rizal F. Development and Application of Project- based Collaborative Learning Models on Vocational College in Indonesia. In 5th UPI International Conference on Technical and Vocational Education and Training (ICTVET 2018). Atlantis Press; 2019.
DOI: 10.2991/ictvet-18.2019.12
21. Astuti I. The Implementation of ADDIE Model in Developing Career Guidance Program in Senior High School. *JETL (Journal of Education, Teaching and Learning)*. 2019;4(1):174-179.
DOI: 1026737/jetl.v4i1.992
22. Azali K. *Indonesias Divided Digital Economy*. Yusof Ishak Institute; 2017.
DOI: ISSN 2335- 6677
23. Benhabib J, Spiegel MM. The role of human capital in economic development evidence from aggregate cross-country

- data. *Journal of Monetary economics*. 1994;34(2):143-173.
24. Berger N, Fisher P. A well-educated workforce is key to state prosperity. *Economic Policy Institute*. 2013;22(1):1-14.
 25. Binyamin SS, Rutter MJ, Smith S. The Influence of Computer Self-Efficacy and Subjective Norms on the Students Use of Learning Management Systems at King Abdulaziz University. *International Journal of Information and Education Technology*. 2018;8(10):693-699.
Available:https://www.researchgate.net/profile/Sami_Binaymin/publication/323834388_The_Influence_of_Computer_Self-Efficacy_and_Subjective_Norms_on_the_Students%27_Use_of_Learning_Management_Systems_at_King_Abdulaziz_University/links/5b43840fa6fdccb910d63d/The-Influence-of-Computer-Self-Efficacy-and-Subjective-Norms-on-the-Students-Use-of-Learning-Management-Systems-at-King-Abdulaziz-University.pdf
 26. Blake MR, Morse C. Keeping your options open: A review of open source and free technologies for instructional use in higher education. *Reference Services Review*. 2016;44(3):375-389.
 27. Blomström M, Kokko A. *FDI and human capital: a research agenda* Paris, France: OECD Development Centre. 2002;3(1):47-58.
 28. Brook T, Luong HV. (Eds.). *Culture and economy: The shaping of capitalism in Eastern Asia*. University of Michigan Press; 1999.
 29. Chew ES, Hamid A, Madar AR. Conceptual Framework for Designing and Developing a Creativity Enhancement Module in Education. *Incorporating Indigenous Perspectives*. 2017;25(67).
Available:<http://psasir.upm.edu.my/id/eprint/58307/1/JSSH%20Vol.%2025%20%28S%29%20Apr.%202017%20%28View%20Full%20Journal%29.pdf#page=83>
 30. Chong CH, Yeo KJ. An overview of grounded theory design in educational research. *Asian Social Science*. 2015;11(12):258.
DOI: 10.5539/ass.v11n12p258
 31. Cole AW, Weber NL. The Use of Emerging Technology Exploration Projects to Guide Instructional Innovation. In *Technology Leadership for Innovation in Higher Education*. IGI Global. 2019;165-184.
DOI: 10.4018/978-1-5225-7769-0.ch007
 32. Collins A, Halverson R. *Rethinking education in the age of technology: The digital revolution and schooling in America*. Teachers College Press; 2018.
 33. Connelly JO, Miller P. Improving Learning Outcomes for Higher Education Through Smart Technology. *International Journal of Conceptual Structures and Smart Applications (IJCSSA)*. 2018;6(1):1-17.
DOI: 10.4018/IJCSSA.2018010101
 34. Divayana DGH. Utilization of CSE-UCLA model in evaluating of digital library program based on expert system at Universitas Teknologi Indonesia: A model for evaluating of information technology-based education services. *Journal of Theoretical & Applied Information Technology*. 2017;95(15).
 35. Di Gropello E, Kruse A, Tandon P. *Skills for the labor market in Indonesia: trends in demand, gaps, and supply*. The World Bank; 2011.
 36. Dotong CI, De Castro EL, Dolot JA, Prenda M. Barriers for educational technology integration in contemporary classroom environment. *Asia Pacific Journal of Education, Arts and Sciences*. 2016;3(2):13-20.
 37. Elkhider IA, Khalil MK. Applying learning theories and instructional design models for effective instruction. *Advances in physiology education*. 2016;40(2):147-156.
DOI: 10.1152/advan.00138.2015
 38. Endraswara, Suwardi. (2011). *Metodologi Penelitian Sastra*. Yogyakarta: CAPS.
 39. Endraswara, Suwardi. (2016). *Sastra Ekologis Teori dan Praktik Pengkajian*. Yogyakarta: CAPS.
 40. Felker G. Technology policies and innovation systems in Southeast Asia. In *Southeast Asian paper tigers*. Routledge. 2013;154-190.
Available:<https://www.taylorfrancis.com/books/e/9781136004469/chapters/10.4324/9780203060407-11>
 41. Gipayana, Muhana. 2010. *Pengajaran Literasi*. Malang: Asih Asah Asuh.
 42. Guetterman TC, Babchuk WA, Howell Smith MC, Stevens J. Contemporary approaches to mixed methods-grounded theory research: A field-based analysis. *Journal of Mixed Methods Research*. 2017;1558689817710877.
DOI: 10.1177/1558689817710877
 43. Guillén MF, Suárez SL. Explaining the global digital divide: Economic, political

- and sociological drivers of cross-national Internet use. *Social Forces*. 2005;84(2): 681-708.
44. Glaser BG, Strauss AL. *Discovery of grounded theory: Strategies for qualitative research*. Routledge; 2017. DOI: 10.4324/9780203793206
 45. Goleman, Daniel. *Kecerdasan Ekologis: Mengungkap Rahasia Dibalik Produk-produk yang Kita Beli*. Gramedia: Jakarta; 2010.
 46. Grzybowski M. Educational technologies in South Korea. *General and Professional Education*. 2013(1):3-9. ISSN 2084-1469
 47. Gusmida R, Islami N. The Development of Learning Media for the Kinetic Theory of Gases Using the ADDIE Model with Augmented Reality. *Journal of Educational Sciences*. 2017;1(1):1-10. DOI: 10.31258/jes.1.1.
 48. Hanushek EA, Kimko DD. Schooling, labor-force quality, and the growth of nations. *American economic review*. 2000;90(5):1184-1208.
 49. Hasibuan ZA, Santoso HB. The use of e-learning towards new learning paradigm: Case study student centered e-learning environment at Faculty of Computer Science-University of Indonesia. In *Fifth IEEE International Conference on Advanced Learning Technologies (ICALT05) IEEE*. 2005;1026-1030.
 50. Hess AN, Greer K. Designing for engagement: Using the ADDIE model to integrate high-impact practices into an online information literacy course. *Communications in information literacy*. 2016;10(2):6.
 51. Hidayati N, Wuryandari AI. Media design for learning Indonesian in junior high school level. *Procedia-Social and Behavioral Sciences*. 2012;67:490-499. DOI: 10.1016/j.sbspro.2012.11.354
 52. Hsu TC, Lee-Hsieh J, Turton MA, Cheng SF. Using the ADDIE model to develop online continuing education courses on caring for nurses in Taiwan. *The Journal of Continuing Education in Nursing*. 2014;45(3):124-131. DOI: 10.3928/00220124-20140219-04
 53. Ismail, Taufik, 2004. *Tirani dan Benteng*. Jakarta: Yayasan Indonesia.
 54. Jones BA. *ADDIE Model (Instructional Design)*; 2014.
 55. Kanbur R, Rhee C, Zhuang J. (Eds.) *Inequality in Asia and the Pacific: Trends, drivers, and policy implications*. Routledge. ISBN: 1134670206. *Affecting e-learning adoption in developing countries—empirical evidence from Pakistans higher education sector*; 2014. IEEE Access, 5, 10968-10978. DOI: 10.1109/ACCESS.2017.2714379
 56. Khalil MK, Elkhider IA. Applying learning theories and instructional design models for effective instruction. *Advances in physiology education*. 2016;40(2):147-156. DOI: 10.1152/advan.00138.2015
 57. Kruse K, January 1, *Introduction to Instructional Design and the ADDIE model*; 2009. Retrieved March 14, 2015, http://www.transformativedesigns.com/id_systems.html Mang,
 58. CF, Wardley LJ. Effective adoption of tablets in post-secondary education: Recommendations based on a trial of iPads in university classes. *Journal of Information Technology Education*. 2012;11(1):301-317. Available:<http://jite.org/documents/Vol11/JITEv11IIPp301-317Mang1138.pdf>
 59. Manning ML, Bucher KT. *Classroom management: Models, applications, and cases*. Pearson; 2013. ISBN: 9780132693233
 60. Martin S, López-Martín E, Lopez-Rey A, Cubillo J, Moreno-Pulido A, Castro M. Analysis of new technology trends in education. 2018;2010–2015. IEEE Access, 6, 36840-36848. DOI:10.1109/ACCESS.2018.2851748
 61. Marx A, Backes C, Meese E, Lenhof HP, Keller A. EDISON-WMW: exact dynamic programming solution of the Wilcoxon–Mann–Whitney test. *Genomics, proteomics & bioinformatics*. 2016;14(1): 55-61.
 62. McKenzie BK, Mims N, Bennett E, Waugh M. Needs, concerns and practices of online instructors. *Online Journal of Distance Learning Administration*. 2000;3(3).
 63. Mohammadyari S, Singh H. Understanding the effect of e-learning on individual performance: The role of digital literacy. *Computers & Education*. 2015;82: 11-25. DOI: 101016/j.compedu.2014.10.025
 64. Mok KH. *Education reform and education policy in East Asia*. Routledge; 2006.

65. Montrieux H, Vanderlinde R, Schellens T, De Marez L. Teaching and learning with mobile technology: A qualitative explorative study about the introduction of tablet devices in secondary education. *PloS One*. 2015;10(12):e0144008. DOI: 10.1371/journal.pone.0144008
66. Mulet J, Van de Leemput C, Amadiou FA. Critical Literature Review of Perceptions of Tablets for Learning in Primary and Secondary Schools. *Educational Psychology Review*. 2019;1-32. DOI: 10.1007/s10648-019-09478-0
67. Muruganantham G. Developing of E-content package by using ADDIE model. *International Journal of Applied Research*. 2015;1(3):52-54. Available:<http://www.allresearchjournal.com/vol1issue3/PartB/pdf/67.1.pdf>
68. Nazief B. Development of computational Linguistics research: A challenge for Indonesia. In *Proceedings of the 38th Annual Meeting on Association for Computational Linguistics*. Association for Computational Linguistics. 2000;1-2.
69. Nedungadi P, Ramesh MV, Pradeep P, Raman R. Pedagogical Support for Collaborative Development of Virtual and Remote Labs: Amrita VLCAP. *Cyber-Physical Laboratories in Engineering and Science Education*. 2018;219-240. DOI: 10.1007/978-3-319-76935-6_9
70. Nevins J, Peluso NL. (Eds). *Taking Southeast Asia to market: Commodities, nature, and people in the neoliberal age*. Cornell University Press; 2018.
71. Nguyen L, Barton SM, Nguyen LT. IP ads in higher education—Hype and hope. *British Journal of Educational Technology*. 2015;46(1):190-203. DOI: 10.1111/bjet.12137
72. Nichols Hess, Greer K. Designing for engagement: Using the ADDIE model to integrate high-impact practices into an online information literacy course. *Communications in information literacy*. 2016;10(2):6. DOI: 10.15760/comminfolit.2016.10.2.27
73. Nurhaeni IDA, Nugroho RA, Kusumawati NS. Developing Strategic Plan for Supporting Internationalization of Technical and Vocational Education and Training. In *5th UPI International Conference on Technical and Vocational Education and Training (ICTVET 2018)*. Atlantis Press; 2019. DOI: 10.2991/ictvet-18.2019.74
74. Orange G, Seitz V, Kor A. Information dissemination needs of Indonesian migrant domestic workers in Malaysia. *Journal of Southeast Asian Research*; 2012. DOI: 10.5171/2012.492902
75. Osín L. *Computers in education in developing countries: Why and how?*. Education and Technology Team, Human Development Network, World Bank; 1998.
76. Palaigeorgiou G, Papadopoulou A. Promoting self-paced learning in the elementary classroom with interactive video, an online course platform and tablets. *Education and Information Technologies*. 2019;24(1):805-823. DOI: 10.1007/s10639-018-9804-5
77. Panen, P., dan Purwanto. (2004). *Penulisan Bahan Ajar*. Jakarta: Ditjen Dikti Depdikbud.
78. Patel SR, Margolies PJ, Covell NH, Lipscomb C, Dixon LB. Using instructional design, Analyze, Design, Develop, Implement, and Evaluate (ADDIE), to develop e-Learning modules to disseminate Supported Employment for community behavioral health treatment programs in New York State. *Frontiers in public health*. 2018;6:113. DOI: 10.3389/fpubh.2018.0011
79. Peterson C. Bringing ADDIE to life: Instructional design at its best. *Journal of Educational Multimedia and Hypermedia*. 2013;12(3):227-241.
80. Price JH, Murnan J. Research limitations and the necessity of reporting them; 2004.
81. Puspitasari L, Ishii K. Digital divides and mobile Internet in Indonesia: Impact of smartphones. *Telematics and Informatics*. 2016;33(2):472-483. DOI: 10.1016/j.tele.2015.11.001
82. Rodrigo MMT, Baker RSJD, Rossi L. Student off-task behavior in computer-based learning in the Philippines: comparison to prior research in the USA. *Teachers College Record*. 2013;115(10):1-27. ISSN-1467-9620
83. Sabani A, Deng H, Thai V. A Conceptual Framework for the Adoption of E-Government in Indonesia. In *Proceedings of the Proceedings of the 29th Australasian Conference on Information Systems (ACIS)*; 2018. Available: http://www.acis2018.org/wp-content/uploads/2018/11/ACIS2018_paper_56.pdf

84. Sarwiji. Kecerdasan Ekologis Siswa SMP di Surakarta. *Jurnal Pendidikan*. 2018;221-22.
85. Sadiman AS. Challenges in education in Southeast Asia. In *International Seminar on Towards Cross Border Cooperation between South and Southeast Asia: The Importance of Indias North East Playing Bridge and Buffer Role*, Kaziranga, India. 2004;16-19.
86. Salloum SA, Al-Emran M, Shaalan K, Tarhini A. Factors affecting the E- learning acceptance: A case study from UAE. *Education and Information Technologies*. 2019;24(1):509-530.
87. Selwyn N. Data entry: Towards the critical study of digital data and education. *Learning, Media and Technology*. 2005;40(1):64-82. DOI: 10.1080/17439884.2014.921628
88. Songhori MH. Introduction to needs analysis. *English for specific purposes world*. 2008;4(20):1-25.
89. Sujarwoto S, Tampubolon G. Spatial inequality and the Internet divide in Indonesia 2010–2012. *Telecommunications Policy*. 2016;40(7):602-616. DOI: 10.1016/j.telpol.2015.08.008
90. Tang CM, Chaw LY. Digital Literacy: A Prerequisite for Effective Learning in a Blended Learning Environment?. *Electronic Journal of E-learning*. 2016;14(1):54-65. ISSN: EISSN-1479-4403.
91. Teräs H, Kartoğlu Ü. A grounded theory of professional learning in an authentic online professional development program. *International Review of Research in Open and Distributed Learning*. 2017;18(7). DOI: 10.19173/irrodl.v18i7.2923
92. Thornberg R. Informed grounded theory. *The BERA/SAGE handbook of educational research*. 2017;1:355-375. DOI: 10.1080/00313831.2011.581686
93. Urick M. Adapting training to meet the preferred learning styles of different generations. *International Journal of Training and Development*. 2017;21(1):53-59. DOI: 10.1111/ijtd.12093
94. Van Laar E, Van Deursen AJ, van Dijk JA, De Haan J. The relation between 21st-century skills and digital skills: A systematic literature review. *Computers in human behavior*. 2017;72:577-588. DOI: 10.1016/j.chb.2017.03.010
95. Wang L, Liu C. The mobile Internet underclass: Reality or hyperbole?. *Journal of Information Science*. 2018;44(5):569-579. DOI: 10.1177/0165551517690083
96. Wolf A, Jenkins A, Vignoles A. Certifying the workforce: economic imperative or failed social policy?. *Journal of education policy*. 2006;21(5):535-565.
97. Yim JSC, Moses P, Azalea A. Predicting teachers continuance in a virtual learning environment with psychological ownership and the TAM: a perspective from Malaysia. *Educational Technology Research and Development*. 2019;1-19.

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