



Development Learning Device Model of Environmental Education in the Character of Environmental Care at Senior High School in Solok Selatan Regency

Maisardi

Student of Master Program of Geography Education
Faculty of Social Science, Universitas Negeri Padang, INDONESIA
Email: nurmirudy@gmail.com

Abstract

Implementation of environmentally caring education in schools requires teachers to develop learning tools that can lead learners to achieve the expected growth of character. The purpose of this research to produce learning devices of environmental education (PLH) that can grow this characters in high school students in Solok Selatan Regency. Development method using the 4-D model which consists of four stages of defining, design, development and disseminate. Learning tools developed in the form of the syllabus, Lesson Plan, and students worksheet. The result of document analysis of learning devices shows that during this implementation of environmental character education through PLH at senior high school in Solok Selatan Regency has not been done properly. It is necessary to develop effective learning tools effectively to build the environmental caring character of learners. As a proven from the analysis of the validity of learning devices showed in a very good category, the device practicability by the teacher was very good and by the students of the good category. Effectiveness device seen from the learning of cognitive domain and effective were also in the good category. The character formed through the development of learning tools PLH classified into 2, namely individual characters, among others: religious, disciplined, creative, independent. Then the second was the social character, among others: environmental care, social care, responsibility. The study of learning device development only up to stage three development of four stages of development of the 4-D model. It would be better if the development model was done until the disseminate stage so that learning devices can be developed on a wider scale.

Keywords: Development of Learning Devices Model of PLH, Character Caring Environment

Introduction

Nowaday, environmental issues are not new, but the same as the age of our earth, according to experts is about five billion years old. A thousand species of animals and plants has been extinct as a proof. According to Soemartowo *in* Aziz (2013), their extinction may not come suddenly without associated with the ecosystem. Erwati *in* Aziz (2013) explains that in developing countries environmental problems are not less important than developed countries, but cases and causes are not the same. If in the developed countries the main cause is industrial wastes such as mercury, poison gas, smog etc., then in developing countries like Indonesia is the household waste and human waste. Furthermore, Zakiah Darajat *in* Aziz (2013) who is an educator and psychologist tend to argue that the cause of environmental degradation due to Islamic education is not embedded properly and cause not run the teachings of religion well. Thought the experts differ on the cause of the occurrence of damage but no one denied that humans are one the cause of the natural destruction. How to make people aware that no longer do the actions cause the declining quality of the environment, and their awareness to stop doing the deed fully, then turned to activities that can preserve the environment so that the ecosystem is safe and secure the sustainability. Much can be done to provide a good understanding of



the environment against any individual, such as lighting, counseling, guidance, and education (formal and nonformal from kindergarten, elementary to college) (Yafie, 2009).

Hamzah (2013) explains that environmental concern is a form of individual mental attitude that is reflected in his behavior. According to Tadkiroatun Musfiroh *in* Sulistyowati (2012), mental attitude and behavior can be called by character. A character can be interpreted as character, temperament, morality, and personality formed from the result of the internalization of virtues which is used as the base of the way of thinking and attitude and acting. (Sulistyowati, 2012). Shukri Hamzah (2013) states that environmental caring character is not entirely talent or innate instincts, but also the result of an educational process in a broad sense. False or wrong educate against an individual may be will produce a less commendable character toward the environment. Therefore, a good character must be formed for each individual, so that each individual can animate every act and his behavior. While we understand that character is not solely the innate talent of the individual, it is the result of the human form and the environment in which he lived, life, and raised. And how to form the character, academically certainly the answer is only one, namely "education". Education makes it possible to shape human characters as expected (Hamzah, 2013). Hamzah (2013) asserts that environmental education is an inevitable necessity if we want to bring about civil society as it is aspired to. It is important to underline here that environmental education has a mission to form human character in relation to its environment for the benefit of mankind in the earth. Then, Yusuf (2012) state that the experience of childhood has a strong influence on further developments. In the sense that experience and a good understanding of the environment are introduced from an early age it will have a positive impact and will shape the students' environmental cares in the future.

Character problems are currently discussed. Many problems that arise in society become a hot topic of discussion such as corruption, violence, sexual crimes, vandalism, mass fights, a brawl between students, decreased teacher authority in the eyes of learners, consumptive lifestyle, and so on. Various alternative solutions have proposed the creation of regulations relating to the reinforcement of national character among others. One of the regulations is the Presidential Instruction of the Republic of Indonesia Number 1 in 2010 on the Acceleration of Implementation of National Development Priorities in 2010 which mandates the program of strengthening the methodology and curriculum by improving the curriculum and active learning method based on the nation's cultural values to form the competitiveness and character. The implication of such instruction is character development through education. Education is chosen as the main character development alternative because education building a new generation become better nation. School as one of the educational institutions (formal), is expected to increase its role in the formation of the personality of learners through the increase in the intensity and quality of character education. Character education is done by integrating values with learning materials written in curriculum documents (KTSP), syllabus, lesson plans, and learning process. Geography as one of the subjects taught in high school can play a role in instilling positive values that will be the character of self-learners. One of the character values that can be built on the learners through the learning of geography is the concern for the environment. Various environmental problems that exist around the students is an interesting topic that can be used as a means to cultivate the attitude of environmental care to learners through learning PLH. Examples of environmental problems related to PLH materials are; floods, droughts, erosion, and landslides. Solok Selatan one of the areas that often experience landslides and erosion during the rainy season. This phenomenon is an interesting topic that can be used as a means to cultivate environmental care attitude in the students in Solok Selatan regency especially students in senior high school that exist in Sangir district through learning PLH. In fact, it still lacks socialization about the implementation of character education integrated into the subject, many teachers who have not been able to develop learning devices on existing competencies in accordance with the values of characters to be developed. Based on these facts, the researcher interested to develop the learning devices of PLH which can build the students' awareness to the environment of Solok Selatan area related to the

environmental phenomenon that happened. The learning devices developed in this research are, Syllabus, lesson Plan (RPP) and Student Activity Sheet (LKS) characterize the environment's main threats. Based on the background of problems above, then the formulation of the problems raised in the research are as follows: 1) How is the model of PLH learning devices on the subject matter of natural environmental threats that exist in senior high school at Solok Selatan? 2) How is the form of learning development of PLH model of environmental care in the material of natural environment threat required in senior high school in Solok Selatan? 3) How does the model of PLH learning devices characterize environmental concerns in the subject matter of effective natural environment threats? 4) How is the character formed in the development of PLH learning devices? The purpose of this research to 1) Analyze the learning device of PLH on the subject matter of natural environmental threats that have been made by teachers in senior high school at Solok Selatan; 2) Formulate the form of learning devices PLH environmentally concerned about the subject matter of natural environmental threats; 3) Prepare learning devices of PLH to characterize environmental caring in the material subject of effective natural environment threats. 4) Analyze the characters formed in the development of PLH learning devices. This research is expected to be useful: 1) For teachers, as a reference in learning devices PLH characterized operationally in school; 2) As input for senior high school in Solok Selatan State principal in implementing character education on every subject; 3) For the researcher himself can improve her knowledge insight and understanding in developing educational device based on character education 4) As reference material for the next researcher, who is interested in learning device development topic in school

Methods

The method used in this research was Research and Development using 4-D development model which consists of four stages: define, design, development and disseminate, But this study did not reach the stage of disseminating. Learning devices developed in the form of the syllabus, lesson Plan and students worksheet.

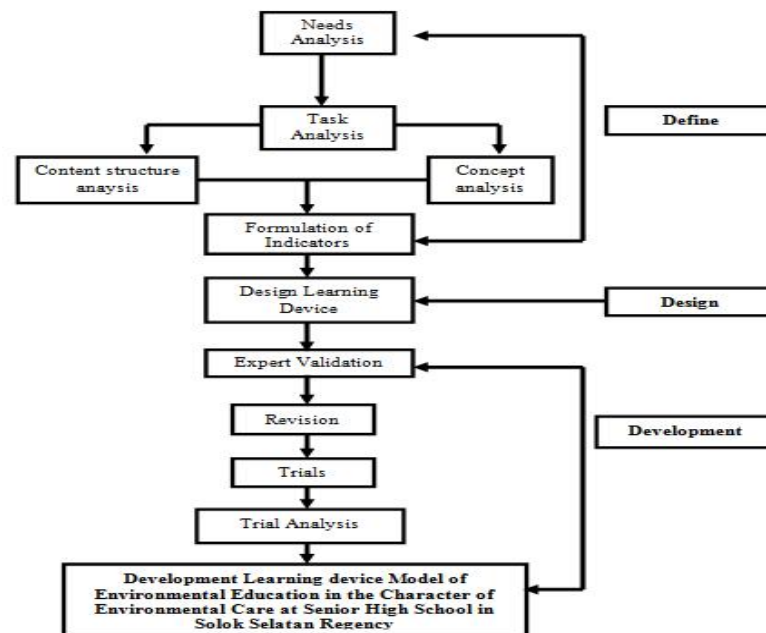


Figure 1. Stages of Research on Development Model Implementation of Learning Device of PLH in Character Building for Environmental Care In senior high school at Solok Selatan Regency



To explain the development diagram of devices design above each stage is described as follows:

Define Stage

Define stage consists entirely of two steps, that is requirement analysis and task analysis. In requirement analysis phase, analysis of learning tool (syllabus, lesson plan, and students worksheet) of XI IPS that exist nowadays, for consideration to develop learning devices of PLH characterize care environment on the subject matter of natural environmental threats. In addition, identification of character values to be achieved after the learning process. In the task analysis phase is a set of procedures to determine the contents of the unit lesson. This analysis conducted to detail the content of teaching materials in the form of an outline, including content structure analysis, concept analysis and formulation of indicators.

Design Stage

The design stage is the designing prototype learning device. The activities that undertaken at this stage are: a) analyzing existing learning device formats, b) adopting learning device formats in accordance with the device to be developed, c) designing learning devices containing competencies, character values, indicators, learning materials and tasks that lead learners to the formation of environmental caring characteristics, d) searching / selecting pictures and environmental cases related to the hydrosphere phenomena to be inserted /displayed in learning devices, e) designing the display of learning devices , f) making initial design of learning tools in the form of syllabus, lesson plans and student activities sheets, g) developing cognitive and effective assessment instruments.

Development Stage

The aims of development stage to produce a learning device PLH valid character, practical, and effective. This stage includes expert validation, revisions, trials, and trial analysis. After the analysis of the test results and then revised again, it will be obtained the design of learning tools PLH character caring environmentally effective. Expert validation is done after initial design of learning device was made, then validation is done to expert environmental (lecturer) and educational practitioner (teacher). To get input from field to learning tool of PLH which has been compiled and developed in order to know practicality accessibility) and the effectiveness of instructional devices through trials test. A limited trial was conducted for students at XI IPS class in SMAN Solok Selatan as much as 1 class, by conducting teaching and learning activities (KBM) and then doing a final test (post-test) and filling out the questionnaire scale of an environmental caring attitude of learners after the whole learning process implemented. Instruments that used to collect data in this research in the form of questionnaires to determine the validity, practicality and learning outcomes, affective learners. Besides, it is used the test of cognitive domain learning results. The overall research data of learning device development was analyzed descriptively. Obtained from the results of expert validation lecturers), teachers, and learners.

Results and Discussion

Condition Of PLH Learning Devices In Senior High School

The result of the study on the document of learning devices (syllabus, lesson plan, and students worksheet) of the natural threat material that teachers have used in Solok Selatan at senior high school shows that the values of environmental cares were listed in the syllabus and lesson plan, while learning activities have not been directed to the formation of environmental caring character in the students themselves. What to do and how to be able to build the character through the learning process has not been implemented in the learning activities. The subject matter of the study materials has not been adapted to the conditions and needs of the environment, schools, and regions. In addition, assessments made by new



teachers in the cognitive domain and not yet touched on the affective sphere. This was indicated by the absence of effective instruments as evidence that learners already have the environmental cares expected of the learning process undertaken. Similarly, the students worksheet used in the teaching and learning process has not been designed by the teacher but still using the students worksheet offered by a particular publisher that has not contained environmental caring content of character education. Should the subject matter in the students worksheet can be inserted material containing the content of the formation of environmental care, eg displaying environmental issues related to the subject matter of learning. Learning activities that will be conducted in students worksheet should lead learners in the formation of environmental caring character in the students themselves.

Designing Development of Learning devices PLH Characterize Environmental Caring

Need Analysis of Development of Learning devices of PLH Characterize Environmental Caring

From the description of the condition of learning devices used by teachers, it is obtained that the learning devices used by teachers have not been designed by teachers in accordance with the demands of character education. The results of document analysis of existing learning devices indicate that are needed that can be used as a reference by teachers to build the character of learners. The character that will be built through the learning tools developed in this study that was care about the environment. This was in accordance with one of the missions of Senior High School in Solok Selatan where the research was done to cultivate the spirit of environmental care for all the citizens of the school, so that it becomes the reference of environmental education for the school other in Indonesia. Caring character of the environment that will be built through the devices developed in this study was integrated in the subject matter of the lesson. Integration of the value of environmental care characters into the subject matter of the lesson in accordance with the conditions of the Selatan environment that experienced floods, erosion and landslides one of the consequences damaged environment.

Curriculum Analysis Basic Matter of Natural Environment Threat

At this stage, the curriculum analysis was done on the subject matter of natural environment threat. This analysis was done to elaborate the content of teaching materials in the form of outline. In this analysis, SK and KD were studied in PLH subjects as contained in the Content Standards (SI). Based on the syllabus issued by BSNP (National Education Standards Agency) in 2006, the subject matter of PLH was in SK and KD, that was Understanding the kinds of natural and artificial environment threat to life. The results of SK and KD analysis were used as the basis for determining the main concepts of the main subject of natural environment threats that serve as the content of instructional devices that will be developed. SK and KD were further translated into several indicators shown in Table 1.

Table 1. Explanation of SK, KD and Indicators For Natural Threats environmental

Standard Competence	Basic Competence	Indicator
Understanding the types of natural and artificial environmental threats to life	Analyzing natural environmental threats to life	<ol style="list-style-type: none">1. Describe some natural happened as environmental threats to life.2. Explain flood events, droughts, erupting volcanoes, earthquakes, erosion and landslides3. Explain how to anticipate the threat of the natural environment to life.

Form of Learning devices PLH Character Caring Environment

In the developed learning devices identified one character value to be achieved after the learning process that is environmentally concerned. The subject matter of the natural environment threats to be



studied by the students was adapted to the environmental conditions in Indonesia and the Solok Selatan area, by inserting environmental cases related to the phenomena in the environment. Teaching and learning process using methods of group discussion, question and answer and assignment directed at the formation of character caring environment. Learning media in the form of pictures relating to the subject matter and cases occur in the environment, but it also uses the internet and students worksheet being developed. Learning activities in the students worksheet were directed to the formation of environmental caring character in the students themselves. For the assessment of learning outcomes of learners were made not only measuring the cognitive domain but also using the questionnaire of the students' attitude scale for the affective domain in order to know the extent to which learners have mastered the concept of the subject matter of the threat of the natural environment and has the value of environmental care characters.

Development of Learning Devices PLH Character Caring Environment and Learning Device Validation

Development stage aims to produce learning tools PLH character of care for the environment that was effective in building the environmental character of the learners. Activities of learning device validation include validation by experts and teachers consisting of two lecturers of post-graduate geography education UNP Padang and one teacher at senior high school in Solok Selatan. Based on the results of validator assessment of learning devices in the form of lesson plan was considered very good by the validator with an average score of 4.81. When viewed from the interpretation of data analysis validity RPP by validator including category validity very good that was 96,20%. For the Student Worksheet that has been developed, based on the average score data analysis obtained from the validator 4.75 or with the validity level of 95%, it means that this students worksheet has a very high level of validity. Based on the validation of lesson plan and students worksheet it can be said that in general, this learning tool was feasible to be used as an example in character education-based learning.

The practicality of the device by the user of teachers and learners, obtained through questionnaires of practicality for teachers and questionnaire responses learners of learning devices developed. Based on the analysis of questionnaires that have been filled by teachers shows that from 2 aspects assessed by teachers namely lesson plan and students worksheet obtained average score 4.90 with 98% practicality value. From the data, it can be concluded that the practicality value of instructional devices based on teacher questionnaire was a very good category. Assessment by learners from questionnaires given to learners to see the level of device practicality in the form of students worksheet obtained data that developed learning tools were able to attract the interest/attention of learners of 79.60%, in accordance with the time allocation and learning materials of natural environmental threats 81, 80%, can fulfill the learners' expectation towards learning environmentally characterized 81.00%, and satisfied with the students worksheet used 80.20%. Overall practice of learning device according to the students' appraisal obtained the average score of 4.03 with practicality value 80.60%. Thus it can be concluded that the practical value of learning devices used was good.

The learning outcomes of the cognitive domain were derived from the tests given after all the learning process using the learning devices developed implemented. From the learning result data that has been achieved can be known the effectiveness of the use of learning tools developed in the learning process of PLH including good category, because it has reached KKM established by the school that was 78. This can be seen from 26 students who took individual tests 21 people reached minimum completion criterion with the acquisition value ≥ 78 and only 5 unfinished with \leq value. 78. When viewed from the grade point average, the learning of PLH using learning tools of environmentally care-friendly PLH on the subject matter of the threat of natural environment can be said to be finished because the value of KKM that was 79.35. Data of learning result of effective aspect was taken through the questionnaire of attitude scale of learners that filled



after teaching and learning process as much as four times meeting using learning device of PLH characterize care about environment matter of natural environment threat that done. The results of data analysis of learning outcomes effective learners showed that the average value of effective learning achievement obtained by learners was 84.21% including good category. The lowest score obtained by the students 74% while the highest score of 92%. When viewed further from the acquisition of effective value, in general attitude of care of learners to the environment after the learning process using learning devices PLH characterize environmental care, it can be seen that from 26 students 25 students or about 96.2% showed good environmental attitude and very good, and only 1 person or 4% are in enough category. This means that from the answers given learners provide a picture that learning through the development of learning devices PLH environmental careers can foster the positive attitude of learners to the environment.

Condition of Learning Devices PLH in Senior High School

RPP is one of the learning devices used by teachers in the learning process in the classroom. In the implementation of character education in schools, teachers were required to make lesson plan character. In this case, the teacher was given the flexibility to analyze the lesson plan in accordance with the needs of school environmental and regional conditions. In relation to the character formation of learners, in the lesson plan the character must be clear that character must be possessed by the learner, how to study it and how the assessment. As stated by Mulyasa (2011) that "in the lesson plan must be clear the character and competence that must be possessed by the learner, what to do, what to learn, how to learn it, and how the teacher know that learners have certain character". Furthermore, Mulyasa (2011) also stated that "the standard material developed and used as the study material by learners should be tailored to their needs and abilities, contains functional, practical value, and adapted to the conditions and needs of the environment, school and region".

In addition of lesson plan, the development of students worksheet character in the implementation of education in schools should be done by teachers to be able directly the learning activities on the formation of characters expected in the students themselves. Development of students worksheet character can be done by integrating learning materials with phenomena that exist around the learner in accordance with the subject matter that will be made in teaching materials of learners. Activities undertaken by using students worksheet was more directed to the formation of characters that will be built on the students themselves. From this statement was associated with the results of document analysis of learning devices that have been made by teachers can be disclosed that the learning devices (syllabus, lesson plan, and students worksheet) which have been used by teachers as senior high school in Solok Selatan Senior does not contain the character education accordance with school characteristics, environment, and region. Teachers have not been able to develop their own learning tools because of the limited knowledge of teachers on how to develop learning devices based on character education.

Designing Learning devices PLH Character Caring Environment

Learning device developed has been designed in accordance with the needs of senior high school Solok Selatan where the conduct of this research. The value of environmental cares that were expected to awaken in the learners themselves identified based on one of the school's mission to cultivate the spirit of environmental care for all citizens of the school so that the reference to education the environment for other schools in Indonesia. The subject matter of natural environmental threats serve as the study material of the students has been adapted to the environmental conditions in Solok Selatan. Learning activities were directed at the formation of the environmental caring character of learners by using methods and instructional media that were adapted to an expected character. Assessment of learning outcomes of learners not only in the realm of cognitive, affective sphere also assessed to see how far the value of the caring character of the environment has been owned by students.



Development of Learning devices Model PLH Character Caring Environment

The aims of learning devices development to produce learning devices of PLH have an environmentally-effective character to develop the environmental character of the learners, starting from the validation of the device by the validator and ending with a limited trial at senior high school in Solok Selatan to see the students' learning outcomes and learning after the learning process by using developed learning devices. From the analysis of content validation of data conducted by 3 validators stated that the validity of the learning devices of PLH has developed environment characteristic including very high category. As stated by Azwar (2011) that "A measuring instrument can be said to have high validity if the tool it performs its measuring function, or gives a measurable result in accordance with the purpose of doing the measurement ". From this statement linked to the results of data analysis can be disclosed that this developed learning tool has been able to measure appropriately. That was the learning tool developed this can help develop the attitude care about the environment of learners, especially the attitude of environmental care related to the phenomena that exist in the hydrosphere because it has a very high level of validation.

Practicality can be known after the trial of a test. Tests conducted to see the use of learning devices by teachers and learners in the learning process. From the teacher's questionnaire analysis, it was found that learning devices based on character education geography were categorized both in their use in the learning process. This means that the tools developed can help and facilitate the teacher in providing the correct explanation of natural environmental threat concepts to the learners and can assist the teacher in developing the environmental caring attitude to the learners especially the attitudes of environmental care related to the existing phenomenon of the environment of the place. Previously, teachers in providing learning materials still focused on the cognitive aspect and have not really able to link learning materials with affective aspects that must be cultivated in learners through the learning process undertaken. Teachers in providing learning activities to learners still use the students worksheet offered by a particular publisher that has not been in accordance with the demands of character education. Based on the practical assessment of learning tools by students through questionnaires given, this learning tool was a good category. This indicates that the learning devices used in this study can attract interest/attention and increase the knowledge/understanding of the students about the environment related to the phenomenon in an environment. Thus, the use of learning devices developed will be able to develop an attitude of environmental care for learners because it has a good level of practice.

In this research, learners' learning results in one of barometer to know the effectiveness of learning device developed. The learning result of learners was seen from the cognitive and affective areas to know the achievement of learning objectives and the formation of environmental cares. The learning result of both domains was taken after all process learning consisting of four meetings completed done. Cognitive domain learning outcomes conducted to determine the extent of mastery of learning materials hidrosfer by learners. The test was given after the whole learning process done (post-test). The average test results compared with KKM. Accordance with KTSP provisions determination mastery learners themselves determined by each school. KKM subjects PLH in high schools in Solok Selatan was 78. Based on the results of cognitive learning test results obtained level description mastery of learners individually, from 26 students who took the test 21 students ≥ 78 , and 5 ≤ 78 , thus 21 people expressed and 5 people unfinished, but when viewed from the value of the average class value was located above the KKM of 79.35 this figure indicates that learning by using learning device developed give positive influence to learning result of cognitive aspect of learners. The learning outcomes of the affective domain relate to the attitudes of learners to the environment as indicated by the tendency to care or not and love or not the natural environment. Based on the description and data analysis, it was known that the effective learning achievement obtained by learners during learning through learning devices of environmentally caring average 84,21%. This result shows the attitude of the students' care towards the environment including the good category. But this attitude must certainly be shown



through the real behavior of learners to the environment. Still the learner on the limit enough concern for the environment as possible because it has not really understood the importance of the environment for his life.

Environmental Caring Character Formed in Development of Learning devices of PLH

Individual characters that are formed are related to environmental concerns developed in PLH learning tools, among others: (1) Religious; Preserving the environment was a manifestation of human gratitude to the creator for the blessings of nature, humans always take advantage of the surrounding environment, because the created nature was a manifestation of Allah SWT affection to humans, thus maintaining the integrity, sustainability of the part of worship. (2) Discipline; Discipline was a pattern of attitudes formed by habit, the character of discipline was closely related to the activity of preserving the environment, that how to treat the environment as it should, do not perform destructive actions, or do excessive exploitation. The attitude of discipline in treating the environment, part of efforts to prevent the occurrence of environmental damage. (3) Creative; Creative characters related to the environment is how an individual able to make innovations in environmental conservation efforts such as making biopori and waste processing in an effort to prevent flooding (4) Mandiri; Independent character in the context of environmental maintenance that can start from itself independently, which of course efforts related to saving the environment independently can have a social effect to save the crowd. The social characteristics that formed were related to environmental awareness developed in the learning devices of PLH, among others: (1) care for the environment; Caring for the environment covers a wide range of aspects, such as family environment, school environment, and community environment. The caring character of the environment in an effort to preserve the environment can start from each environment where an individual lives. (2) Social care; Social care was needed in an effort to prevent the occurrence of environmental damage, social care attitudes related to an individual's sensitivity to environmental conditions, such as cleanliness, beauty, and beauty. (3) Responsibility; In an effort to keep environmental conditions comfortable to live in, the character of responsibility was implied more on social responsibility to provide public comfort by creating a clean environment free from pollution.

Conclusion

Based on the findings and the results of data analysis stated conclusions as follows: 1) Learning tools that are characterized by the environment is a learning device that contains the clear character values and competencies that must be possessed by learners, learning activities that lead to the formation of characters, standard materials tailored to the needs and abilities of learners, conditions and needs of the environment, schools and regions, as well as effective assessment to know the extent to which learners have a certain character. These indicators are not all contained in the learning devices created by the teacher. Syllabus and lesson plan have not included activities that lead learners to the formation of environmental cares. In the students worksheet does not insert the subject matter related to environmental issues the natural phenomenon contained in Solok Selatan area. Assessment to know the extent to which learners already have environmental cares have not been created by the teacher. Thus, it can be concluded that the implementation of character education of environmental care through the learning of PLH at senior high school in Solok Selatan has not been well wired; 2) Educational devices based on the education of environmental caring character of the natural environment threat includes basic competence component, environmental caring character value, standard materials and environment-based learning materials adapted to the environment, area, vision and mission of the school, learning activities that lead to the formation environmental caring character and attitude scale instrument to know how much students care about the environment; 3) Learning devices (syllabus, lesson plan, and students worksheet) developed in this study, effectively used as a learning device in the school to build the environmental character of the learners on the subjects of PLH in high school. 4) The character formed through the development of learning devices PLH classified into 2, namely



individual characters, among others: religious, disciplined, creative, independent. Then the second is the social character, among others: environmental care, social care, responsibility.

Reference

- Abbas and Zainudin, (2014). Integrated Learning Model Cultural-Art And Character Education. *International Journal for Innovation Education and Research* www.ijer.net Vol.2, 08.
- Badan penelitian dan Pengembangan Kurikulum. (2010). *Pengembangan Pendidikan Budaya dan Karakter Bangsa : Bahan Pelatihan Penguatan Metodologi Pembelajaran Berdasarkan Nilai-nilai Budaya untuk Membentuk Daya Saing dan Karakter Bangsa*, Jakarta : Kemdiknas.
- Battistich, V. (2001). Character Education, Prevention, and Positif Youth Development, *Journal Of Moral Education*, vol 2, 3.
- Beachum, F.D, Carlos, R McCray. Christopher D Yaw, Festus E Obiaker. (2009). Support and Importance of Character Education : Pre-Service Teacher Perception, *International Journal Education* vol.133, 4.
- Beninga, J.S. Berkowitz, M.W. (2003). Support The Relationship Of Character Education Implementation And Academic Achievement In Elementary Schools, *International Journal Of Research In Character Education* 1(1), ISSN 1543 – 1223.
- Chiras, D. D. (1993). *Eco-Logic: Teaching the Biological Principles of Sustainability*, *The American Biology Teacher*: Volume 55 No. 2: 71-76
- Erdoğan, Mehmet. (2011). The Effects of Ecology-Based Summer Nature Education Program on Primary School Students' Environmental Knowledge, Environmental Affect and Responsible Environmental Behavior, *Kuram ve Uygulamada Eğitim Bilimleri, Educational Sciences: Theory & Practice* (Online) vol- 11(4) Autumn (<http://files.eric.ed.gov/fulltext/EJ962697.pdf>)
- Ernawati. (2016). *Tourim Based Geography Subject Learning to Form Environmental Care Behavior at Public High Schools in Belitung Regency, Bangka Belitung Islands Province, Indonesia*. *Proceedings Seminar International Study and Research of Geography*.
- Hidayati, Abna dkk. (2014). The Development of Character Education Curriculum For Elementary Student In West Sumatera. *International Journal Of Education and Research*, Vol.2 No.6.
- Husen, A., Japar, M. dan Kardiman, Y. 2010. *Model Pendidikan Karakter Bangsa: Sebuah Pendekatan Monolitik di Universitas Negeri Jakarta*. Jakarta : PT. Universitas Negeri Jakarta.
- Komalasari, Kokom. (2014). Living Values Education Model in Learning and Extracurricular Activities to Construct the Students' Character. *Journal of Education and Practice* www.iiste.org ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.5, No.7.
- Kunandar. (2010). *Guru Profesional: Implementasi Kurikulum Satuan Pendidikan (KTSP) dan Sukses dalam Sertifikasi Guru*. Jakarta : PT. RajaGrafindo Persada.
- Lee, J. (2001). The Proper Directions and Practical Ways for Character Education in the Korean Elementary School. *Gwangju National University of Education. The Institute of Asia Pacific Education Development Journal* 2 (2): 72-84.
- Mulyasa, E. (2011). *Manajemen Pendidikan Karakter*. Jakarta : Bumi Aksara. Mulyasa, E. (2009). *Implementasi Kurikulum Tingkat Satuan Pendidikan: Kemandirian Guru dan Kepala Sekolah*. Jakarta : Bumi Aksara.
- Nurani, dkk. (2014). "Pengembangan Modul Pendidikan Lingkungan Hidup (PLH) Berbasis Karakter untuk Menumbuhkan Wawasan dan Karakter Peduli Lingkungan" *Unnes Journal of Biology Education* 3 (1) (2014) file:///C:/Users/User%20pc/Downloads/4155- 8500-2-PB.pdf
- Pala, Aynur. 2011. The Need For Character Education, *International Journal Of Social Sciences And Humanity Studies* Vol.3, No. 2, 2011 ISSN: 1309-8063.
- Rawana, Justin., dkk. (2011). The application of a strength-based approach of students' behaviours to the development of a character education curriculum for elementary and secondary schools. *The Journal of Educational Thought*, 45.2: 127-14



- Revell, L. And Arthur, J. (2007). Character education in School and The Education Of Teachers, *Journal Of Moral Education* 36 (1), 79-82.
- Samani, M. dan Hariyanto. (2011). *Konsep dan Model Pendidikan Karakter*. Bandung : PT. Remaja Rosdakarya.
- Stevenson. T. Kathryn, dkk. (2014). Role of Significant Life Experiences in Building Environmental Knowledge and Behavior Among Middle School Students, *The Journal of Environmental Education*, (Online), Vol 45:3, 163-177, (<http://www.tandfonline.com/loi/vjee20>)
- Sugiyono. (2010). *Metode Penelitian Pendidikan: Pendekatan Kuantitatif, Kualitatif Dan R&D*. Bandung: Alfabeta
- Williams, Mary M. (2000). Models of character education: perspectives and developmental issues. *Journal Of Humanistic Counseling, Education And Development* 39,1: 32.