



## Ethnopedagogic Based Teaching Materials Analysis For Senior High School Students: A Literature Riview

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### Abstract

Learning process at senior high school still based on textbook oriented. It makes students less concerned with the environment especially the school environment where they study. Such condition requires a real action to solve so that the level of environmental awareness of the students is increased. This research aims to determine the relevance of research on teaching materials, ethnopedagogics, and environmental awareness character as well as the effectiveness of ethno pedagogic-based-teaching materials on environmental awareness character for senior high school students based on literature review. This research uses the literature review method to obtain the data. Teaching materials provide added value when sourced from the environment around the school (ethnopedagogic). Ethnopedagogy-based-teaching materials will increase character cares for the environment of high school students.

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## INTRODUCTION

Learning at senior high school is mostly tends textbooks oriented and it's not associated with the school environment's condition. The situation makes students difficult to understand biological concepts that are often taught by teachers (teacher centered). They consider that it is due to the limited time, facilities, learning environments and the large number of the students in the class. The students pay less attention to the environment around the school, either as a source of learning or their care toward the school atmosphere. They do not know what kind of plants are in the school environment. On the other hand they often litter and do not care about the survival of the surrounding plants. It occurs because the teachers do not optimize the use of the school environment in the learning process (FGD MGMP Biology, 2019).

Biology learning has not used specific teaching materials based on the school environment (local wisdom) as a source of learning so it does not actively involve the students. In the learning process the teacher has not optimized the potential and condition of the school environment as a source of learning. It makes an impression for students that biology is an unattractive subject, makes them lazy in learning Biology. Biology learning requires innovation to increase the students' interests (FGD MGMP Biology, 2019).

The characteristic of biology learning in KTSP is that learning biology in learning science (Science) emphasizes on providing direct experience relating it to actual events in the environment. Biology learning that uses the school environment as a source of teaching materials will provide more value than books in general (Dewi et al., 2017; Gunawan et al., 2014). Learning should be carried out in pleasant situations (learning as an enjoy activity). It can be done by exploring nature around the school, using teaching materials based on the school environment. Effective biology learning according to KTSP guidance, requires an active role between teachers and students. In this learning, students act as the center of learning (student centered learning) and the teacher as a facilitator.

This research aims are to determine the relevance of research on teaching materials, ethnopedagogics, and character cares for the environment and the effectiveness of ethnopedagogic-based teaching materials on careness of environment character of senior high school students based on literature review.

## METHODS

The research method used in this study refers to the research method of Vojir & Rusek (2019) which has been modified according to the theme of this study. The steps in this research method, they are: 1) compiling a plan, 2) selecting articles, 3) analyzing articles, 4) educational stage, 5) types of research, 6) research topics.

### Make a Plan

The author compiles a plan to find a suitable journal with the chosen theme. The journals must be selected according to the theme of this study, namely the analysis of ethno pedagogic-based teaching materials for high school students (Chang et al., 2010; Lin et al., 2014; Teo et al., 2014). The author looks for journals that suitable with the theme using several key words, including: textbooks, teaching materials, ethno pedagogic, local wisdom, careness of environment character.

Research journals are searched through google scholar by typing keywords in the search box. International or national journals can be searched through this media by typing the type of journal before the keyword. The selected journal is a journal with publications between 2010 and 2019. It's done to get the latest information. The journals downloaded and keyword combinations to search are as shown in Table 1.

### Selecting Articles

The sorted journal taken to be analyzed as a literature review and as a materials based ethno pedagogic learning teaching for senior high school students is 156 copies. The 156 articles taken from google scholar and the rest it is taken from off line article. Then the articles are analyzed according to the theme of the research, just 97.

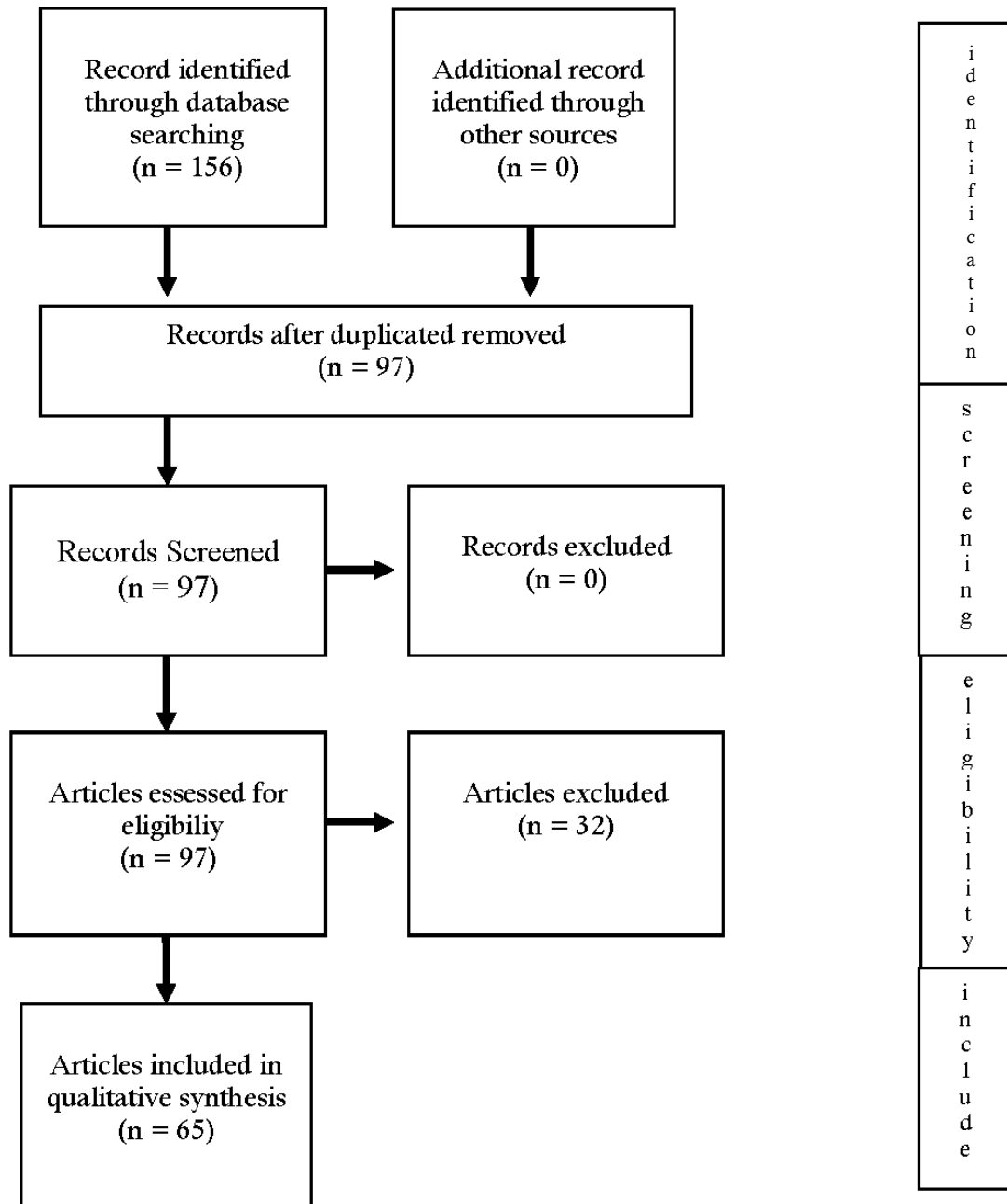
**Table 1.** The Number of Hits Corresponding to Keyword Combinations

Keyword 1	Keyword 2	Number of Articles
Textbook	Ethnopedagogic	17
Textbook	Careness of environment	19
Ethnopedagogic	Careness of environment	39
Teaching material	Local wisdom	18
Teaching material	Careness of environment	31
Local wisdom	Careness of environment	32

**Choosing Articles**

The journals taken for analysis as literature review material were ethnopedagogic-based teaching materials for high school students as many

as 157. The 156 articles were obtained from Google Scholar. The articles were then analyzed according to the theme of this study, leaving 97 articles.



**Figure 1.** A Prisma Flow 2009 Diagram to Depict the Process of Paper Selection for The Review. (Source: Vojir & Rusek, 2019) (Sumber: Vojir & Rusek, 2019)

**Article analysis**

The articles were analysed to find out the contents of the research articles. The sections of the discussion that are in accordance with the theme of this research are marked. The article was reviewed about its contents and then searched for parts that were related and supported the theme of this research.

**Analysis of the Article**

The article is analysed to find out the contents of the research article. The sections of the discussion that suit with the theme of this study are marked. The articles contents are reviewed. After being analysed, the articles are grouped according to their respective themes. Thirty-two less-qualified articles were separated, leaving 65 articles used in this review literature. After being analysed, they are grouped according to 1) Level of education, 2) Research type, 3) Research topic.

**Educational Stage**

Articles published in selected journals have objects of discussion at different levels of education. In this study the level of education is restricted to junior high, high school/ vocational high school, and university student.

**Types of Research**

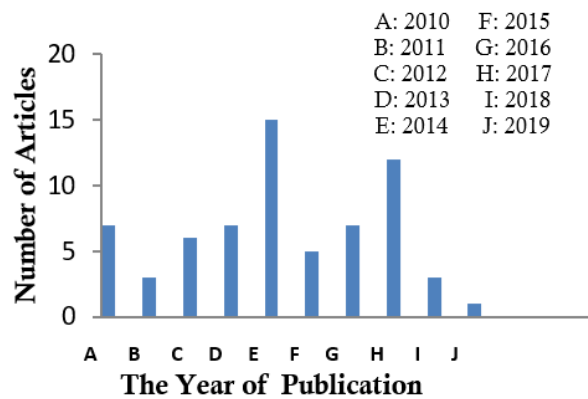
There are many types of research, as well as the selected articles taken. They include survey, research and development, classroom action research, experimentation, and mix methods.

**Research Topic**

Being analysed, the theme of the articles can be divided into several groups, namely: 1) articles on teaching materials and ethnopedagogics, 2) instructional materials and environmental awareness characters, and 3) ethnopedagogics and environmental awareness characters. The articles with 14 copies of ethnopedagogic teaching and materials, 20 copies of themed material and environmental awareness characters, 31 copies ethnopedagogic and environmental awareness of characters articles.

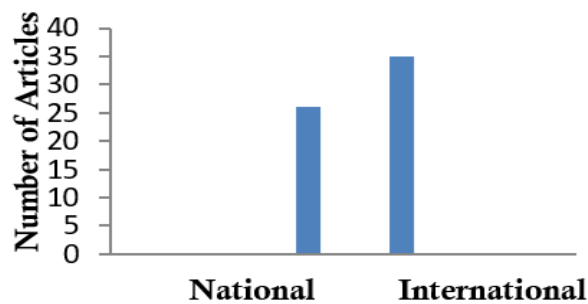
**RESULTS AND DISCUSSION**

The research articles reviewed are articles published between 2010 and 2019. They show that research on teaching materials, ethnopedagogic (local wisdom), and character cares about the environment there is continuity. Continuous research shows that the linkages of teaching materials, ethnopedagogic (local wisdom), and interesting environmental carelessness characters as research material and the findings that are delivered are always the latest as shown in Figure 2.



**Figure 2.** Number of Articles Selected per Year

The types of journals as publication media for the selected research articles are national and international journals. Articles from national journals have 25 copies, while from international journals there are 35 copies as shown in Figure 3.



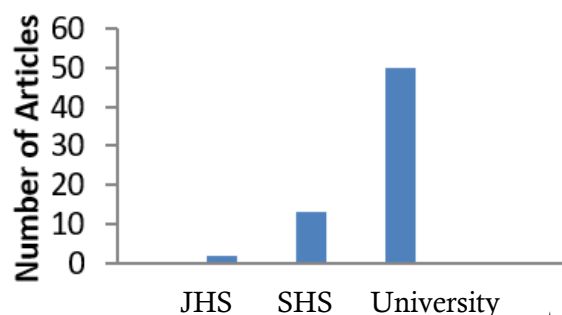
**Figure 3.** Number of Selected Articles Based on National and International Type

This shows that research on teaching materials, ethnopedagogics, and environmental carelessness characters is of national and international interest, so the findings obtained from studies are accurate and valid (Putu, 2012; Lestari, 2013; Novian et al., 2014; Ramadhani, 2014; Gunawan et al., 2014; Fitriyati et al., 2015; Suratno, 2010;

Tiezzi et al, 2012; Chattopadhyay, 2013; Holgado et al., 2013; Wagner, 2013; Basyari, 2014; Fahrutdinova, 2016; Yachina et al., 2016; Zhang et al., 2016; Arsaliev, 2017; Dewi et al., 2017; Tufekcic, 2017; Shih et al., 2017).

### Educational Stage

The educational level chosen for the literature review are articles to students of junior, senior/vocational high school, and university. Two articles for students at junior high school (Maskhuliyah & Bungkang, 2017; Lepiyanto, 2011), 13 articles for senior high school (Sujanem, 2012; Sufinah et al., 2013; Landriany, 2014; Susilo et al., 2014; Tampubolon et al., 2015); and 50 articles for university students (Zuchdi et al., 2010; Parmin & Peniati, 2012; Tannir & Al Hroub, 2013; Al Azri. & Al Rashidi, 2014; Celik, 2014; Novian et al., 2014; Khaimar, 2015; Satriawan & Rosmiati, 2016); Fadilah et al., 2016; Nisrina et al., 2016; Komang et al., 2017; Maskhuliyah et al., 2017; Nihayah et al., 2018) as shown in Figure 4. The literature selected is mostly articles for students, so that the findings obtained are wider in scope than the findings for junior and senior high school students.

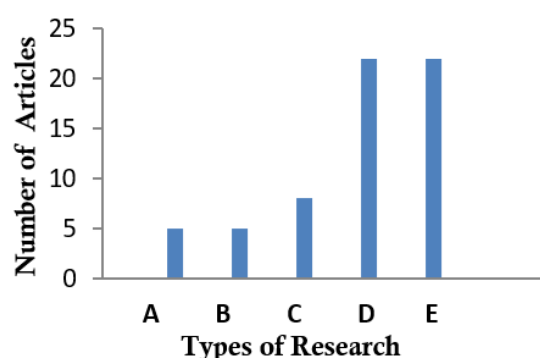


**Figure 4.** Number of Articles Selected According to Level of Education

### Types of Research

In Figure 5, there are five types of research selected in this paper. Articles as publications 5 copies Action Research Class (ARC), 5 articles as a result of mixed method research, 8 articles of survey, 22 articles experimental, and research and development articles 22 copies (Snyder et al., 2010; Srikala & Kumar, 2010; Effendi, 2011: 164; Lepiyanto, 2011; Chattopadhyay, 2013; Holgado et al., 2013; Syafii & Yasin, 2013; Wagner, 2013; Yunus, 2014:37; Genao, 2016, Fahrutdinova, 2016; Irmayanti, 2017). The articles selected are in

accordance with the themes discussed in this paper, which are about teaching materials, ethnopedagogics, and environmental careness characters. Most of the articles selected were experimental and research and development types of research. The articles describe the relationship between teaching materials, ethnopedagogic (local wisdom), and the character of caring for the environment. In these articles it can be seen that ethnopedagogic-based teaching material was able to improve the character of caring for the environment for students.

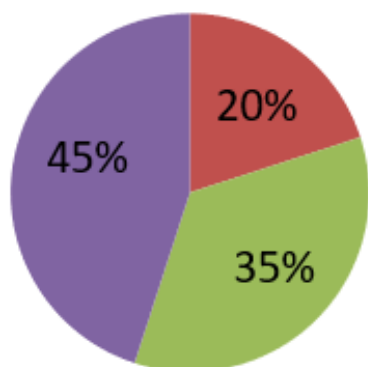


**Figure 5.** Number of Articles Selected According to Research Type

A: ARC      B: Mix Method      E: R & D  
C: Survey      D: Experiment

### Research Topic

In Figure 6, it can be seen that, 25% of articles selected are related to ethnopedagogic teaching materials, 35% articles are related to teaching materials with environmental careness characters, and 45% are related to ethnopedagogic relationships with environmental careness characters (Nurgiyantoro, 2011; Nalan, 2012; Wagiran, 2012; Gunawan et al., 2014; Landriany, 2014; Machin, 2014; Sabunga, 2014; Saripudin, 2014; Tamalene et al., 2014; Ulger et al., 2014; Saragih et al., 2017; Daud et al., 2015; Desfandi, 2015; Aziz et al., 2017; Dewi et al., 2017; Ghufroudin & Demartoto, 2017; Oktaviani et al., 2017; Soltaninejad et al., 2017; Rachmadi, 2018; Sulaksono & Sadhono, 2018).



**Figure 6.** Proportion of Number of Articles Selected per Research

Information:

20%: Topic of articles about the relationship of teaching and ethnopedagogic materials

35%: Topic of the article about the relationship of teaching materials and environmental awareness characters

45%: Topic of articles on ethnopedagogic linkages and environmental awareness characters

From the Articles, 25% suggest that teaching materials that utilize local characteristics of a place (ethnopedagogic) will improve student learning outcomes, 35% suggest that teaching materials that have added value can improve the character of caring for the environment for students, while 45% of articles suggest that ethnopedagogic (local wisdom) of a place is able to improve the character of caring for the environment. Thus, from the 65 articles, there is a great connection between teaching materials, ethnopedagogics, and environmental awareness characters. In addition, from these articles, it indicates that ethnopedagogic-based teaching materials will improve the students character caring for the environment.

## CONCLUSION

Based on the literature review, can be c there are links between teaching materials, ethnopedagogics, and environmental students care characters. Ethnopedagogic-based teaching materials are improved the students' environmental careness character.

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