



The Necessity Analysis of *Mind Mapping* Based *Pocket Book* with Materials of Diversities in Indonesia

Karmintoro^{1*}, Slamet Utomo², Suad³ & Paul, De Castro⁴

^{1,2,3}Muria Kudus University, Central Java 59327, INDONESIA

⁴California State University, Los Angeles, CA 90032, UNITED STATES of AMERICA

*Corresponding author Email: karmintoro@gmail.com

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Abstract: The Mind Mapping based pocketbook is a small-sized complementary book than the standard book. It is systematically based on brain mechanism principles and has a philosophy of “learning any time.” This research explores the potency of pocketbooks with civics material about the diversity in Indonesia based on Mind Mapping. This research is qualitative descriptive with a survey method, the samples consisted of 28 learners of the fourth grade of primary schools and two civics teachers in Gugus Rara Mendut cluster, Pati. A questionnaire instrument collected the data. The obtained results explained that 64.3% of respondents considered the materials about Indonesia’s diversity was challenging to learn. Most of them stated that the learning difficulties were due to many memorizations. The teacher respondents argued that complementary learning sources could stimulate the learners to gain better learning outcomes. Various complementary learning sources are expected to be the solutions of the learners’ learning difficulties. Based on the data, the learners needed innovative and exciting learning sources entailed by Mind Mapping.

Keywords: Pocket book, mind mapping, diversity

1. Introduction

Learning is a systematic activity an process. It consists of several components such as curriculum, teacher, learner, method, material, media, and learning evaluation. Each component is not partial. They should be integrated, supported, complemented, and enhanced each other (Ananda & Abdillah, 2018). The learning component is essentially a set of several related items. It is an essential matter in the learning process.

A pocketbook is a part of a learning component. It is a media functioning as the learning source. The 2013 Curriculum Integrated Thematic Book, published by the Ministry of Education and Culture of Republic Indonesia, is a student book. It is the main component of the present learning era. However, as stated in the Regulation of National Education Ministry of Republic Indonesia, Number 2 the Year 2008 about the uses of textbooks at Education Unit Level tells that in addition to the given textbooks, the educators could use the teacher handbook, complementary book, and referential book in a learning process. It has a function to enrich the learners' knowledge and insight.

The use of textbooks as media and learning sources should be based on human brain thinking patterns connected to the learning materials (Nur, 2015). One of them is the materials of Civics that have specific characteristics concerning Pancasila ideology and Indonesia citizenship. Its materials do not only concern the social facts about the concrete facts and citizenship but also the abstract objects, such as social processes. The nature of material learning objects is varied. The civics materials’ characteristics require high order thinking, such as cortically, logically, and combinatorially thinking.

On the other hand, primary school learners' cognitive development is mostly at the concrete operational level. Therefore, to design a civics learning requires several materials and supportive instruments. They are learning media implementation, learning sources, and other matters with concrete operational and practical characteristics learned anytime (Akporbaroh, Odunayo, & Onyinye, (2020).

Based on the observation from several primary schools in Rara Mendut cluster, Pati, such books' availability with the demanded characteristics was infrequent. The existing book as the media and sources to learn civics was only the revised version of the 2013 Curriculum Integrated Thematic Book published by the Ministry of Education and Culture

of Republic Indonesia in 2017. It was A4-sized with 176 pages (vi pages + 170 pages). The book was relatively thick and big. Thus, it was difficult to carry anywhere. The book also had a monotonous display in terms of the written text and the layout. It also had low-resolution colors or even had no colorful figures.

Those conditions were the reasons to carry out an accurate solution to improve the learners' civics learning outcomes. One of the proposed solutions is to create a learning media that functions as a learning source as well. It has a smaller size, such as a pocketbook, adjusted to the readers' preferences (the learners) (Mardatillah, 2018; Windayani et al., 2018; Asyhari & Silvia, 2016). A pocketbook is defined as a small, light, and easy to store book. Thus, it is practical to be carried anywhere and anytime. It also could be read anytime when it is needed (Setyono et al., 2013; Yuliani, 2015; Septiani et al., 2014; Sulistyani, 2012).

Learners have fully used the integrated civics book availability in the 2013 Curriculum Integrated Thematic Book as the learning source. It is because the books only display the question examples with linear data that are not stimulated learners to think more dynamic (Mohamed Ismail & Khalib, 2020). Based on the statements, the pocketbook needed to make it interesting with various visual data. The data should have a dynamic display, and the concept should adhere to the brain mechanism in the form of *Mind Mapping*.

Based on the explanation, a further investigation to find out the *Mind Mapping* based pocketbook development necessity was important. This research is preliminary research of research and development on learning media that could complement the existing thematic book. This learning media should also be applicable autonomously for the learners. It should be easy to carry and adhere to the human brain mechanism. The researchers attempted to investigate the independent learning sources of civics based on *Mind Mapping*.

2. Research Methods

Qualitative research design was employed in this study. Qualitative research can be interpreted as a phenomenologist, symbolic interaction, culture and ethnomethodology. The data subjects in this development research were students of class IV Elementary School in the Rara Mendut cluster, Pati District, Pati Regency. There are 28 students of the fourth grade of primary schools and two civics teachers in Gugus Rara Mendut cluster, Pati. Data collection techniques were mainly questionnaires, observation and documentation and interview.

3. Results and Discussion

The investigation results of civics book availabilities for the primary schools in the cluster showed only a type of civics book published by the Ministry of Education and Culture of Republic Indonesia. The book was a 2013 curriculum integrated thematic book. The pocketbook consisted of thematic materials and guidance for learners' activities. They were interestingly designed and did not only focus on certain fields. Therefore, the book made the learners more focus on a certain material.

The research results based on the information investigation on the learners (28 respondents), concerning the necessity of *Mind Mapping*-based civics pocketbook, are shown in Table 1.

Table 1: The Recapitulation of the Learners' Necessities for the *Mind Mapping*- based Pocket Book Learning Media

No	Questions	Answers	Score
1	The difficulty levels of the material about the diversity in Indonesia	Extremely difficult	5
		Difficult	18
		Not difficult	5
2	Being able to understand the materials about the diverse forms in Indonesia	Able	5
		Not able	23
3	The media availability in the form of books	Complete	8
		Less Incomplete	19
		Incomplete	1
4	Requiring additional referential or complementary books	Extremely Needed	19
		Required	6
		Less Required	2
		Not Required	1
5	The learners were aware of the pocketbook	Yes	28
		No	0
6	The responses toward the pocketbooks	Extremely agree	12
		Agree	16
		Less agree	0
		Disagree	0
7	The material delivery of the book applying <i>Mind</i>	Extremely agree	17

<i>Mapping</i>		Agree	9
		Less agree	1
		Disagree	1
8	The book packaging and arrangement are attractive	Extremely agree	10
		Agree	16
		Less agree	2
		Disagree	0
9	There is a need for evaluation for the end of the book	Extremely agree	13
		Agree	9
		Less agree	0
		Disagree	0
10	The evaluation of the question face	Multiple choice	27
		Correct	1
		The others:	0
11	The dominant color of the book	Bright	26
		Dark	2
12	Font Size	Large	0
		Moderate	25
		Small	3
13	The applied font to deliver the material	Calibri	24
		Trebuchet	4
		Berlins Sans FB	0
		The others:	0
14	The font type of writing the title	Comic Sans MS	0
		Time New Roman	22
		Berlins Sans FB	6
		The others:	0

Table 1 shows 18 respondents (64.3%) admitting the civics materials were difficult to learn. From the interview, the facts showed that most of the respondents had difficulties due to many memorizations. Only a few respondents stated that the materials were difficult due to less varied displays. There were also no engaging in learning media as attractive learning sources. A learning media that functioned as an exciting learning source for the respondents to read was also delivered variously and attractively. It will make the respondents interested and motivated. Then, they could also develop their creativity and provide the opportunity to understand civics materials better. It is in line with the findings of Djasmita (2017) and Widayat & Bawuk (2009).

The data also showed 67.86%, or 28 surveyed respondents, arguing that learning media in the form of a book was not maximum. It was a potency or an opportunity for teachers to improve their learners' achievements. They could use either the primary textbooks or the complementary textbook (Su'udiah et al., 2012). Moreover, when the learners are encouraged to ask while reading, finding the answers in the text, and identifying other sources to explore ideas from any found information, they could be active learners and maximize the book they read (National Research Council, 1997). Thus, a textbook with various figures or illustrations, communicative languages, colors of writing, applicable information, egocentrism, summary in the form of colorful *Mind Mapping* became the respondents' necessities. It is in line with the findings of Elita (2018) and (Septiani et al., 2014).

The information investigation on the teachers concerning the necessity of *Mind Mapping*-based civics pocketbook is shown in Table 2.

Table 2: The Recapitulation of the Teachers' Necessities toward the *Mind Mapping*- based Pocket Book

No	Questions	Answers	Reasons
1	A necessity of learners' tasks based on the materials about the diversity in Indonesia	Extremely Needed	Keeping the diversity in unity of Indonesia (Bhineka Tunggal Ika)
2	The material flexibility	Yes	Indonesia's many diversity forms.
3	The book availability to learn the materials about the diversity in Indonesia	Insufficient	Only available in the form of the integrated thematic book. The materials are not flexibly provided completely
4	Requiring additional referential or complementary books	Extremely Needed	To decrease the thematic book weaknesses
5	Responses upon the new media	Extremely agree	Having the opportunity for a more

	availability (books)		efficient and effective learning
6	The responses toward the pocketbooks	Extremely agree	The pocketbook made learning more practical anywhere and anytime
7	The material delivery of the book applying <i>Mind Mapping</i>	Agree	<i>Mind Mapping</i> simplifies the complicated and broad materials
8	The implementation of <i>Mind Mapping</i> based pocketbook was believed being capable of improving the learning outcomes	Yes	Believing hypothetically
9	Requiring further adjustment to the curriculum	Yes	Having the purpose of reaching the curriculum objective
10	The ways to deliver the materials	Brief and clear	In line with the learners' cognitive developments
11	The book packaging and arrangement are attractive	Extremely needed	Eliciting the learners' curiosities
12	The figures' introductions entailed the material delivery	Required	Recognizing diversity by identifying the figures' identities
13	Evaluation at the end of the book	Extremely needed	Measuring the delivered material mastery
14	The evaluation of the question face	Short blanks and essays	Encouraging learners to think creatively
15	The dominant color of the book	Bright color	Interesting
16	Font Size	Moderate	In line with the learners' ages
17	The applied font to deliver the material	Varied	Not boring
18	The font type of writing the title	Varied	Not boring

The teachers argued that the learners needed to understand the materials about diversity in Indonesia from the recapitulation. The reason was to keep diversity in Indonesia (Bhineka Tunggal Ika). The learners mostly used only one book, the thematic book published by the ministry of education and culture. Thus, they needed a learning media in the form of an innovative and attractive book.

The teachers strongly agreed with the *Mind Mapping* based pocketbook, adjusted to the given Core and Basic Competencies. The pocketbook had been designed attractively to elicit the learners' curiosities. The expected pocketbook was colorfully and interestingly designed. It was also convenient for learners because of its moderate font size.

The teachers' answers from the questionnaire were then investigated by conducting the interview. The interview questions were such as "is there any difficulty engaged by you, the teachers while presenting the materials?" For this question, the teachers answered that their difficulties were due to the material amount and complexity.

Concerning the suggested learning source questions for the learners to be learned, the teachers proposed to read the textbook (the 2013 curriculum thematic textbook). It was assumed that the learners had already had the book.

Based on the interview, the respondents also stated about the use of *Mind Mapping* in civics learning. The respondents stated that *Mind Mapping* was needed to learn civics, especially for the fourth grade, concerning diversity realization in Indonesia. The reason was this material showed the characteristics of the tribal, cultural, religious, and economic diversities plus the tolerance to keep the unity.

Concerning the question about the pocketbook as they implement, the teachers argued there were possibilities for the book to facilitate learners to learn. It was since the book was easy to carry. However, after being given an example of the pocketbook illustration, the teacher respondents shared positive responses. It was due to the attractiveness of the book. The book was simple, had various displays and designed, and was based on the demanded concept and curriculum. It is in line with Wibowo & Suryani (2013). They argue that a printed media as intervening media must trigger the targeted group's intention to read its content. Here are several illustrations and displays of the *Mind Mapping* based civics pocketbook.

BUKU SAKU PPKn KELAS 4
BERBASIS MIND MAPPING

BENTUK KEBERAGAMAN
DI INDONESIA

Karmintoro



Fig. 1: The Pocket Book Cover



Fig. 2: The Example of Mind Mapping Display

TARGET KOMPETENSI

Kompetensi Inti	Kompetensi Dasar
Memahami pengetahuan factual dengan cara mengamati (mendengar, melihat, membaca) dan menanya berdasarkan rasa ingin tahu tentang dirinya, makhluk ciptaan Tuhan dan kegiatannya, serta benda-benda yang dijumpainya di rumah dan di sekolah.	Mengidentifikasi berbagai bentuk keberagaman suku bangsa, sosial, dan budaya di Indonesia yang terikat persatuan dan kesatuan.

Fig. 3: The Learning Objectives

The pocketbook was also enriched with several reading texts such as comics. It had the purpose of avoiding any monotonous patterns of a textbook (Fig. 4). It also had content summaries to facilitate the learners to learn (Fig. 5). The learners' preferences to read interesting reading texts with a little explanation were due to the learners' preferences, but it had many figures or colors (Rahmawati, 2013; Eliana & Solikhah, 2012).

KEBERAGAMAN DI INDONESIA

Keberagaman di Indonesia terbagi dalam beberapa bentuk. Antara lain keberagaman suku bangsa dan budaya; keberagaman agama, dan keberagaman aktivitas ekonomi. Mengapa di Indonesia terdapat banyak keberagaman? Perhatikan peta konsep berikut!

Fig. 4: The Pocket Book Illustration

1. ACEH

Teuku Umar, Pahlawan dari Aceh

Peta Aceh

Suku Bangsa

Aceh, Alas, Gayo, Gayo Lut, Gayo Luwes, Singkil, Simeulue, Aneuk Jame, Tamiang, dan Kluet.

Fig. 5: The Material Display

The *Mind Mapping* based civics pocketbook was enriched with illustration and colors.

**Fig. 6: The Full Colored and Interesting Pocket Book**

From the illustration, the teachers perceived positively upon the proposed question about pocketbook development.

The learner necessity analysis and the information shared by the civics teachers became the standard and basis to produce the book so that it would be accurate. The book was also expected to be a learning source alternative for learning so that there would be a learning outcome improvement.

It is in line with findings of Qurrota'aini & Sukirno (2013); Dyah et al. (2013); Adodo (2013); Radix & Abdool (2013). They found that *Mind Mapping* based pocketbook was worthy of being applied as a learning source. It also could influence the learning outcome of the learners. The information mapping display on the *Mind Mapping* adopted the brain nerve cells. Thus, it expected the learners to create such mind mapping to think more dynamically by following the curve, which was likened as brain cells (Buzan, 2007).

The learning media implementation and its function as a learning source needed to be understood. Therefore, the preliminary data were required to enhance the urgency of the concerned learning source. These findings would be further developed into a *Mind Mapping* based civic pocketbook. Then, a validation process, concerning the material, language, and media, would be carried out.

4. Conclusion

This research concluded that the *learners needed the Mind Mapping based civics pocketbook learning media development*. The development plan followed the brain system mechanism. It was dynamic with various visual data, varied displays, and various colors. Thus, they made the development expected. The *Mind Mapping* based pocketbook media development success was the book design. Thus, further collaboration or cooperation concerning expert graphic parties was required.

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