Sociology teaching materials development based on the inside out circle model to espouse learners' multiliteracies

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Abstract

This study aims to develop sociology teaching materials based on the inside outside circle (IOC) model to espouse students' multiliteracies. The 4D model was used in research and development (define, design, develop and disseminate). Out of 473 students, a sample of 194 students and 4 teachers purposively selected based on previous experience in teaching sociology. Questionnaires, expert validation sheets, user assessment sheets and interview guidelines were used to obtain the expected data. The results stated that all teachers had used sociology textbooks based on the IOC model to support multiliteracy, but not all teachers utilised government-provided enrichment resources. Furthermore, they expressed interest in the development of sociological teaching materials. The results of experts' validation show that the sociology teaching materials developed were feasible with very good predicates. It can be concluded that teachers and students in sociology have a prototype that is viable with excellent predicate based on a small number of user trials in the development of sociology teaching materials. The implications for sociology teaching materials development for learners' digital multiliteracies are discussed in this study.

Keywords: Digital, IOC model, multiliteracies, paradigms, printed media, sociology materials

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1.   Introduction

The multiliteracy learning model is a fresh approach to teaching literacy. Since its development, which was once only associated with reading and writing, as well as the idea of the interconnectedness of thinking, speaking, listening and viewing, as well as a learner's experiences (Saal & Dowell, 2014), literacy has expanded to include digital texts as well as represent meaning through still images, moving images, sound and gestures (Cope & Kalantzis, 2016). The application of social and cultural accuracies, which helps learners recognise, comprehend, apply and cultivate these sociocultural values, is more difficult.

In a world characterised by social diversity and multimodal communication, a new fundamental multiliteracy of the learning literacy way is emerging (Early et al., 2015; Hong & Hua, 2020; Thibaut & Curwood, 2018). This is in line with the opinion states that multiliteracy learning is multimodal in the various forms and formats of literacy that exist in real life, which are used as models for generating, forming, enriching and distributing skills and knowledge, hence the multiliteracy learning model can include textual models and digital models (Lim, 2021).

As Theoretical Framework, the New London Group coined the term of multiliteracy to define contemporary views on as literacy as reflected in multiple forms of communication in the context of linguistic and cultural diversity in a global society (The New London Group, 1996, 2000). Furthermore, multiliteracy is a variety of ways to communicate and make a meaning or understanding in several modes, such as visual, audio, spatial, behavioural and gestural. The increasingly complex forms of modern communication also increase the opportunity for people to further develop their literacy skills nowadays (de Roock, 2021; Penuel & O'Connor, 2018). Educators know from experience that students begin literacy classes with completely unequal opportunities to achieve them.

Currently, literacy raises various dimensions, such as moral literacy, media literacy, environmental literacy and literary literacy. The development of the idea of multiliteracy is affected by literacy learning. One type of multiliteracy that is highly developed in the 21st century is media literacy.

Media literacy is a set of abilities, attitudes and knowledge needed to understand and utilise various types of media (Koltay, 2012; Lin et al., 2013) and the format in which information is communicated from sender to receiver, such as images, sound and video, and whether as transactions between individuals, or as bulk transactions between a single sender and multiple recipients, or, conversely, resulting in a change in the concept of media literacy, collectively. Specifically, media has shifted from something printed to digital-based that could be accessed on the Internet. A person is considered to have mastered media literacy if he has the ability to know different forms of media and can use and understand the purpose of its use (Kress, 2003).

Several related research results state and argue that the emergence of new textual forms made possible by information communication and technology (ICT) also makes it possible to directly influence students' literacy creativity. The process of bridging old and new literacies through design is envisioned as creativity (Pullen & Cole, 2009), which is supported by the development of a multi-literacy repertoire of students involving complex interactions between available pedagogical movements, types of texts and various sociocultural factors that determine the actualisation of literacy in the classroom environment. Depending on the pedagogical absorption of texts and events, the effects of literacy transformation flow in highly unpredictable ways that sometimes facilitate, hinder or prove counterproductive in the process of becoming someone else (Shahzadi, 2022). Then, to guarantee that teachers have a wide range of resources from which to choose, it is crucial to leverage modern technology (Sukmawati & Nensia 2019; Sujarwo et al. 2020). The implications of these results emphasise the necessity of revving up beginning teacher training programmes to support diversity, equity and inclusion in literacy education (Drewry et al., 2019).

From some results of these studies, a common thread can be drawn that is still rare for researchers to raise multiliteracy studies in terms of learning media, especially sociology teaching materials at the high school level. So, the researchers found a gap in this research, namely the study of multiliteracy learning in terms of media literacy in the form of printed and online in sociology textbooks as teaching material for private senior high school in Makassar, Indonesia. This is in line with what was recommended by previous researchers that the educational methods in the developing digital classroom are strengthened through recommendations for future multiliteracies research (Hong & Hua, 2020).

Media literacy aims to identify different forms of media and understand what they intended to use. The development of types and forms of learning media from time to time is influenced by technological developments (Koltay, 2012). With the emergence of new media technology, the form of media has changed drastically and dramatically (Lin et al., 2013), so that learning media using low technology were born using high technology. Teachers as learning media users must always follow the development of the types and forms of learning media so that their use in the learning process is more optimal for pedagogic competence. Thus, teachers are expected to be able to utilise learning technology in every learning process. Moreover, the learning process is more effective and efficient in achieving learning objectives.

Regarding the execution of the teaching and learning process, teaching materials serve three basic purposes. The three roles are listed as follows: 1) teaching materials are both a substance of competence that should be taught or trained to students with directions for teachers who will direct all actions in the learning and learning process. 2) Teaching materials serve as both recommendations for students who will oversee activities during the learning and teaching process as a subject that should be studied and understood. 3) The evaluation of learning outcomes is done using the teaching materials.

The teaching materials must be in line with the teacher's expected basic competences and indicators as an evaluation tool. These benchmarks and fundamental skills have been achieved by the teacher. These indicators and basic competencies have been formulated in the subject syllabus. Teaching materials have benefits that have a major influence on the success of achieving learning objectives (Pursitasari et al., 2022). The benefits of teaching materials are grouped for both teachers and students.

The development of teaching materials can be done in several ways, namely (1) development: making teaching materials from scratch (blank) because what someone wants to convey is very unique and special. By developing teaching materials, the teacher will make teaching materials from zero or from nothing to exist because the teacher will explain a specific teaching material where the teaching material is the original idea of the teacher himself. (2) Utilisation: taking ready-made teaching materials without any modification. If the teacher gets a teaching material, the teacher will deliver the teaching material in the way where it is without any frills. For example, teachers get references from books from the government for K–13 learning (Kebudayaan, 2015). (3) Modification: adjusting the teaching materials taken by making modifications and adjustments.

This method tends to be similar to utilisation because it is obtained from a source. But in practice the teacher can modify the teaching materials; it can be reduced or added as needed. (4) Customisation, which is developing teaching materials by combining various content objects. In this method of developing teaching materials, the teacher will combine or mix the three previous methods.

Based on a study of the independent curriculum and learning theories, the researchers chose the inside outside circle (IOC) model because it emphasises the importance of the learning process carried out with a team that carries out its activities (Akhiruddin & Sujarwo, 2020; Akhiruddin et al., 2021; Arya Wiradnyana et al., 2020; Kagan & Kagan, 1994; Nahdi & Yunitasari, 2019). This IOC model

is to develop sociology teaching materials because teaching materials are an alternative that can help students achieve learning goals (Yao et al., 2022).

In addition, it can also ease the teacher's task as a substitute for explanations that take a relatively long time, which is in contrast to teaching materials that can be mastered pretty quickly. For teachers to implement the learning process, teaching materials are a crucial source of information. It seems that teachers would struggle to accomplish learning objectives without teaching resources. In theory, teachers must always develop lesson plans before putting the teaching process into action. To aid in the adoption of a new paradigm based on student multiliteracy as a means for enabling students to participate fully, communicate their ideas and successfully complete the learning process.

This shows that it is necessary to develop teaching materials to support thinking skills in sociology learning, one of which is the ability to think critically and innovatively. The teaching materials with the IOC learning model are prepared with clear language; the implementation instructions are brief and easy to understand; the content is in accordance with real life which makes it easier for students to express creative ideas in solving problems. And so, with this IOC learning model, students are required to understand the concept of sociology and relate learning to their daily lives.

Therefore, the researcher chose the IOC model to be applied in the sociology learning process in class X SMA National Makassar, which is an effort to develop students' understanding of sociological concepts, skills in developing creative ideas and critical and innovative thinking skills. To apply the IOC learning model, it is necessary to develop a multiliterate-based sociology textbook learning at the Makassar National High School.

Students who have intellectual development can construct their knowledge and are required to find their own concepts according to their environment, express creative ideas and have the ability to think critically and innovatively based on their experience. This is the basis for developing teaching materials with the IOC model where students are more creative in conveying ideas and developing creative thinking skills so as to facilitate students in the learning process.

In order to achieve the previously mentioned objectives, the following research questions prompted this research:

1) What are the results of the preliminary analysis of multiliteracy-based development needs from a practical point of view and the interests of teachers and students?

2) To what extent are the multiliteracy-based teaching materials developed worthy of expert consideration?

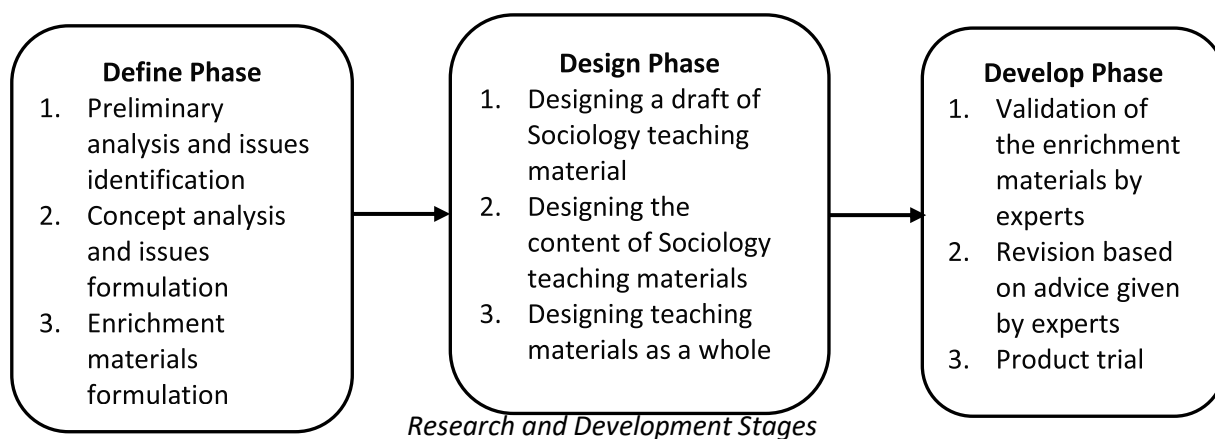3) How do teachers and students respond to the feasibility of the material?

The urgency of this research is to develop sociology teaching materials based on students' multiliteracy in the 21st century because of the problems often faced by teachers in picking or determining appropriate learning materials or teaching materials to help students attain competency is a challenge teachers frequently confront in learning activities. This is because instructional materials are only written in outline form as 'subject matter' in the curriculum or syllabus. It is the responsibility of the teachers to fully explain the subject so that it functions as a teaching resource. Another issue is knowing how to use the educational resources. The intended usage is to demonstrate how to teach it from the standpoint of the instructor and how to learn it from the viewpoints of the students.

2. Method

2.1. Research model

The current study is intended to be research and development (Gay et al., 2009; Mills & Gay, 2019) because the aim of the researcher is to provide a successful theory product for use in

classrooms rather than to formulate or test theory. The 4D model was chosen because it is comparatively more condensed and meets the requirements of this research: defining, designing, developing and disseminating. Because the current study is focused on describing the preliminary analysis to establish the need for the creation of a multiliteracy-based sociology textbook, validating the final product and gathering user feedback on the use of the created teaching materials, the dissemination stage was not also covered.

Define Phase
1. Preliminary analysis and issues identification
2. Concept analysis and issues formulation
3. Enrichment materials formulation

Design Phase
1. Designing a draft of Sociology teaching material
2. Designing the content of Sociology teaching materials
3. Designing teaching materials as a whole

Develop Phase
1. Validation of the enrichment materials by experts
2. Revision based on advice given by experts
3. Product trial

Research and Development Stages

2.2. Participants

The population of this study were all grade students (X, XI and XII) with a study group of 14 classes at the Makassar National High School with a total population of 473 students (231 boys and 242 girls). The samples of this research were students of class X, XI and XII majoring in Social Sciences with a total sample of 194 students in a study group of 6 classes at the Makassar National High School. The sampling technique used is purposive sampling.

2.3. Data collection process and instrument

The data collection techniques carried out in the study are as follows: observation, where the researcher collects and filters all the existing observations and then relates them to the achievements and indicators that have been set; questionnaire, which was used to measure the feasibility of sociology teaching materials that have been developed using a Likert scale in the range of strongly agree, agree, disagree and strongly disagree; test, where multiple-choice and essay tests are used to collect data at the end of the lesson in the use of sociology teaching materials that have been developed; finally documentation, where the documentation used in this research is photos of research activities, sound recordings and videos as a completeness of the research results.

Table 1

Description of the Study

No	Research questions	Technique of data collection	Instrument	Expected results
1	What are the results of the preliminary analysis of multiliteracy-based development needs from a practical point of view and the interests of teachers and students?	Survey Interview	- Questionnaire - Interview Instructions	Answers from students and teachers Experience from students and teachers
2	To what extent are the multiliteracy-based teaching	Validation from	validation sheets	Validation sheets

	materials developed worthy of expert consideration?	Experts		Results
3	How do teachers and students respond to the feasibility of teaching materials?	Survey Interview	Assessment sheet Interview Instructions	· Assessment Sheet Results · Opinions and Suggestions of students and teachers

Data on product quality resulting from the development of multiliteracy-based sociology teaching materials through the IOC model can support learning a new paradigm in the formation of national character were obtained, and then analysed into quantitative data with the help of SPSS version 22. Data were analysed with descriptive statistics to obtain a score about the quality of the resulting product, development of sociology teaching materials and the percentage of student learning completeness.

2.4. Data analysis technique

Data on product quality as a result of the development of multiliteracy-based sociology teaching materials through the IOC model to support the learning of a new paradigm in the formation of national character were obtained, then analysed into quantitative data with the help of SPSS statistics 28.0.1 version. The data were analysed with descriptive statistics to obtain a score about the quality of the product resulting from the development of sociology teaching materials and the percentage of student learning completeness.

3. Results

The results of this study focus on defining, designing, developing and disseminating sociology teaching materials development based on the IOC model to espouse learners' multiliteracies to improve and overcome the learning sociology problems of students in private schools in Makassar. The presentation of the results data obtained in the research that has been done in detail below.

3.1. Preliminary analysis results

The results demonstrated that the teachers utilised instructional resources in the form of sociology textbooks distributed by the government entitled Sociology Social Studies for SMA/MA Class X; authors Kun Maryati et al. compiled the book; and published by Erlangga Publisher. The teachers said that they hardly ever use other enrichment items, including the e-book on the webpage for sociology enrichment tools. The Internet was not a primary source for teachers either because they still did not know to search sociology materials.

3.2. Development of sociology textbooks

In accordance with the concept analysis, the researcher developed a sociology textbook for class X SMA for 1 year consisting of two odd semesters and even semesters from the initial meeting to the last meeting. Each of the contents of the sociology textbook begins with a simple explanation of what will be studied. Through this simplicity, it is hoped that most students will be able to understand the existing material. After that, other materials were developed through the available questions. After thinking, students are expected to be able to work on their own. Thus, students will learn step by step actively and accustomed to constructing their own knowledge. The brief descriptions of the sociology textbooks that have been developed are shown in Figure 2.
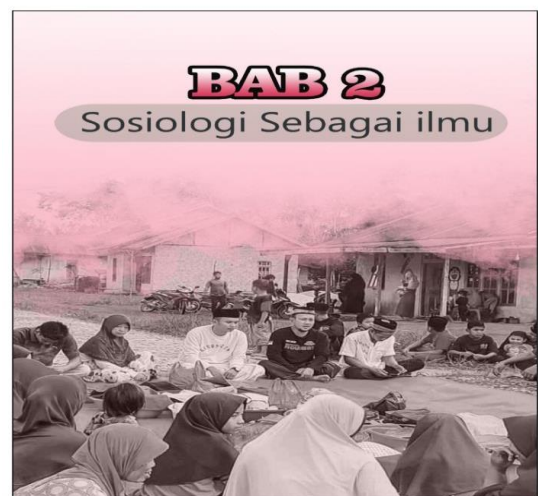
Figure 2

Sociology Teaching Materials

Furthermore, the validator's assessment of the sociology textbook includes several aspects, namely format, language, illustrations and content. The results of the assessment are presented in Table 2.

Table 2

Validation Result of Sociology Teaching Materials

No	Aspect	Average value of Expert I	Average value of Expert II	Average value of Expert III	Average value of Expert IV	Average value
1	Format	4.10	4.00	4.05	3.97	4.03
2	Language	4.00	3.97	4.03	4.00	4.00
3	Illustration	3.92	3.88	4.00	3.94	3.93
4	Contents	4.00	3.95	3.92	4.03	3.97
	Total	4.00	3.95	4.00	3.98	3.98

Table 2 presents the results of the validation of sociology textbooks obtained by each validator, namely (1) the average result of validator I assessment was 4.00, which was in the valid category; (2)

the average result of the assessment of validator II was 3.95, which was in the valid category; (3) the average result of the assessment of validator III was 4.00, which was in the valid category; and (4) the average result of the assessment of validator IV was 3.98, which was in the valid category. The total average rating of validators I, II, III and IV was 3.98, which was in the valid category. By matching the average (*x*) total with the specified category, the sociology textbook for class X senior high school was developed to be included in the valid category and the information can be used with minor revisions.

3.3. Recapitulation of teaching material validation results

Based on the validator assessment in the validation sheet, in addition to containing the assessment of the validity of teaching materials filled out by the validator, an assessment of the practicality of teaching materials is also included. The practicality assessment aims to determine whether the developed teaching materials can be implemented in the field based on the validator's assessment, when viewed from a study of the independent curriculum by looking at student characteristics, learning achievements and learning objectives of sociology through the IOC model based on multiliteracy. The results of the practical assessment of the teaching materials developed are the sociology textbook based on the validator's assessment, which are presented in Table 3.

Table 3

Results of the Practicality Assessment of Teaching Materials with the IOC Model

Teaching material	Validator	Value	Explanation
	1	B	Usable with minor revisions
Sociology textbook	2	B	Usable with minor revisions
	3	B	Usable with minor revisions
	4	B	Usable with minor revisions

3.4. Limited product trial

The limited trial was carried out in four meetings. In the limited trial, data were obtained about the IOC model's use, student activities, instructor reactions, student reactions and sociological learning results. The results of this trial will be used to revise the teaching materials (draft II) and produce draft III of teaching materials (the results of the development of teaching materials). The details of the data obtained in the limited trial are as follows:

The observations results of the model's implementation during instructional activities using instructional materials and the IOC learning model in the sociology subject of class X high school by two observers.

3.5. Results of the implementation of the multiliteracy-based IOC model

The results of observing the implementation of the model's application during learning activities involving instructional materials and the multiliteracy-based IOC learning model in the class X sociology subject by two observers are briefly presented in Table 4.

Table 4: Observation Results of the implementation of the multiliteracy-based IOC model

No. Aspect	Observer I				Observer II			
	P. I	P. II	P. III	P. IV	P. I	P. II	P. III	P. IV
1	4	4	5	5	4	4	5	5
15	3	3	4	4	4	4	5	5

Number	51	54	60	66	52	58	63	67
Average	3.4	3.6	4.0	4.4	3.46	3.86	4.2	4.46
Total	3.85				3.99			

Based on Table 4, regarding the observation of the implementation of the multiliteracy-based IOC model during the learning process with teaching materials for the sociology subject for class X SMA, it can be seen that the observer 1 assessment at meetings I, II, III and IV in 15 respondents showed an overall average of 3.85 in the good category, while the value of observer 2 at meetings I, II, III and IV shows an overall average of 3.99 in the good category. This shows that the results of the classical observer assessment from observer 1 and observer 2 are in the good category.

3.6. Student response results

The results of student response questionnaires during learning activities with teaching materials and IOC learning models on sociology subjects for class X SMA by nine students are briefly presented in Table 5.

Table 5

Results of Student Response in Questionnaires

No.	Initial name	Questions									Number	Average
		1	2	3	4	5	6	7	8	9		
1	AEK	3	4	5	4	3	3	4	5	4	35	3.88
21	IND	4	4	3	5	5	3	5	4	3	36	4
Total											751	83.5
Average											3.97	

Based on Table 5, regarding the questionnaire students completed after using teaching materials and the IOC model based on multiliteracy in the sociology class X SMA with a total of 21 respondents, it can be seen that the average score for student responses in the category of quality responses is 3.97. This demonstrates that the student's reaction falls under the category of good response after using the multiliteracy-based IOC learning paradigm.

3.7. Teacher response results

The results of the questionnaire given to teachers during sociology lessons using instructional materials and IOC learning models for class V SMA by two teachers are briefly presented in Table 6.

Table 6

Teacher Response Questionnaire Results

Questions	Teacher I	Teacher II
1	4	4
12	4	4
Number	44	47

Average	3.66	3.91

Based on Table 6, regarding the teachers' response to the questionnaire after the learning process with teaching materials and the multiliteracy-based IOC model on sociology subjects for class X SMA, totalling 12 respondents, as the following can be seen: (1) The average value of teacher I's response is 3.66, which is in the good response category and (2) The average value of teacher II's response is 3.91, which is also in the good response category. This shows the average value of the teachers' response questionnaire classically from the responses of teachers I and II was in the good response category.

4. Discussion

The purpose of this study is to gather data from a preliminary investigation of the demand for multiliteracy-based IOC for sociology teaching materials support multiliteracy learning for teachers' practices and interests, the degree to which the created sociology teaching materials are practicable based on the opinions of experts, and the sociology teachers' and students' reactions to the materials' viability.

Based on the preliminary analysis, multiliteracies-based enrichment resources must be created as supplementary teaching tools to be employed in the classroom learning process. The results of the interviews demonstrate that cultural and social knowledge can be used to enhance the presentation of sociology teaching materials. The survey's findings show that the majority of respondents are interested in sociology textbooks.

The respondents also agree that it indicates that the application of the multiliteracy-based IOC learning model is in the very good response category. Materials of sociology as knowledge in the three paradigms, namely social fact paradigm, social definition paradigm and social behaviour paradigm, are presented through the Internet and are considered more accessible. In addition to the internet as a medium for obtaining references and the material is theoretical, another factor supporting the increase in digital literacy is the attitude of student acceptance in learning. The good attitude of acceptance from students has the potential to make them digital literate, which is to be smarter in using ICT for their present and future lives.

This can improve digital literacy through multiliteracy learning. Because multiliteracy learning provides various learning strategies to help students gain a deep understanding of important ideas and concepts in various subjects, especially sociology learning in high school. Learning is focused as intellectual tools and techniques that enable students to access, process, communicate important information and ideas to foster and enrich abilities. Literacy has emerged in recent years as an important concept in the teaching and learning process in the classroom (Hong & Hua, 2020).

From the presentation angle, it is possible to see the benefits of multiliteracy in sociology teaching materials based on the IOC learning model. This information is presented using websites and other online media. This is undoubtedly a benefit that has been tailored to contemporary or 21st-century learning. All that is needed to access this enrichment material is a device with a strong internet connection. The enrichment material's multimedia component confirms that learning materials given in a multimedia environment are advantageous for greater retention (Sato & Burden, 2020).

By following the theory of media literacy, namely the extension of the multiliteracy that has long been proposed by the New London Group, the factor of digital consumption demonstrates that students need to learn how to create digital multimedia content in addition to using the multimodal learning tools that are available if they want to compete worldwide (New London Group, 2000).

The findings of this study are consistent with those of other studies. For instance, in this classroom, teachers believe in teaching students new literacy skills (Jacobs, 2013), while also allowing them the space, time and flexibility over several lessons to experiment with various tools, practices and representations (Thibaut & Curwood, 2018). Other study argued that, to refute the idea that literacy

is changing as a result of the broad adoption of ICT, research shows that internet literacy is very different from print and audiovisual literacy (Livingstone, 2004). This study conveyed by additional research that argues that in order for media literacy educators to comprehend where we have been and where we are going, we must first understand where we have been. The whole range of digital media and technology tools must be made available to kids so they can actively create media messages for self-expression, advocacy and education (Hobbs & Jensen, 2009). Most media literacy researchers support a comprehensive understanding of media literacy that encourages group sense-making, critical thinking and meaningful engagement with the goal of improving communities (Hobbs & Jensen, 2009). Teachers believe in equipping students with new multiliteracy in the classroom (Thibaut & Curwood, 2018). The teachers are actively adapting multiliteracy skills to teach literacy by leveraging postgraduate programmes in multiliteracy (Kim & Xing, 2019).

Some studies above were found to just focusing on literacy skills, literacy media, new multiliteracy and adapting literacy; in this study, it is found that multiliteracy-based sociology teaching materials was more interactive, and so the created new colours, namely social fact paradigm, social definition paradigm and social behaviour paradigm that presented through the Internet are considered more accessible. Further refine the product. First, users suggest larger font sizes especially on practice pages. Second, they argue that the content of explanations used IOC-based sociology textbooks support multiliteracy in a more interactive way. In terms of reading activity, users suggest several things: 1) add difficult terms/words after the text; and 2) easier to understand the text. Regarding other content on the website, users suggest adding the explanation and examples of completion of evaluation exercises. Another issue among them is the simplification of instructional.

To maximise the reflection session, users suggest providing space for users to comment or ask questions and provide clear feedback after the assessment is made. The total average rating of the four validators is in the valid category. By matching the total (x) average with the specified category, the sociology textbook for class X at the Makassar National High School was developed to be included in the valid category and the information can be used with slight revisions.

5. Conclusion

The needs analysis results show that it is necessary to enable multiliteracy learning for teachers and students based on their present practices and interests, expert validation of the product and users' reactions to the content provided. Sociology teaching materials based on the IOC model must be created. The results showed that sociology teaching materials based on the IOC model support multiliteracy learning can be presented, accompanied by knowledge of digital-based media literacy. The students show that most of them have an interest in media literacy.

The results of experts' validation and users' responses inform that sociology teaching materials based on the IOC model support multiliteracy learning are considered suitable to be used with good predicate. This study can be used as teaching materials for sociology based on the IOC model to support multiliteracy learning that can be accessed online (website) in the sociology learning process. Sociology teaching materials based on the IOC model support multiliteracy learning can be used as a source of independent learning for the students. They can improve media literacy in Makassar National High School. This can be used as complementary teaching materials.

As recommendation, it is feasible for further research to initiate collaboration with various related institutions such as the Education Office and universities that organise multiliteracy programmes to develop multiliteracy-based sociology teaching materials. In addition, the effectiveness of multiliteracy-based sociology teaching materials should be tested in improving media literacy skills. Furthermore, researchers should analyse multiliteracy learning on a larger scale to support diversity and inclusion in literacy education.

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