

ANALYSIS ON THE INFUSION OF MICROLEARNING-BASED MODEL IN ENGLISH LANGUAGE LEARNING MATERIAL OF EIGHT GRADERS

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ABSTRACT

Microlearning model in English language teaching has advanced and is now widely used. There are only few researches which investigate the integration of microlearning in the English learning material. This study aims to analyze and investigate in to what extent microlearning infused in the English learning material for eighth graders. This study was conducted through content analysis which is textbook analysis as the existing materials used. The descriptors of microlearning are used for indicating the microlearning infusion on material presented by the book instructions as the data. The findings show a discrepancy between the descriptions of microlearning and the textbook. It is indicated that microlearning descriptors are not fully infused in the textbook of eight graders. The most descriptors of microlearning found in textbook are the ML 4 which refers to the resources are based on the school curriculum, 2013, and ML 8 which refers to the feature of students participating in the learning process distributed through the reflection tables provided in each book chapter (30% each).

Keywords: Analysis, English Language Learning Material, Microlearning-based Model

ABSTRAK

Model pembelajaran mikro dalam pengajaran Bahasa Inggris sudah meningkat dan kini banyak digunakan. Hanya sedikit penelitian yang menyelidiki integrasi pembelajaran mikro dalam materi pembelajaran bahasa Inggris. Penelitian ini bertujuan untuk menganalisis dan menyelidiki sejauh mana model pembelajaran mikro disisipkan dalam materi pembelajaran bahasa Inggris untuk siswa kelas VIII. Penelitian ini dilakukan melalui analisis isi yaitu analisis buku teks sebagai bahan ajar dan materi yang digunakan. Deskriptor pembelajaran mikro digunakan untuk menunjukkan sejauh mana model pembelajaran mikro disisipkan dalam instruksi di dalam buku sebagai data. Temuan menunjukkan adanya kesenjangan antara deskripsi pembelajaran mikro dan buku teks Bahasa Inggris sebagai materi ajar. Hal ini menunjukkan bahwa deskriptor model pembelajaran mikro tidak sepenuhnya disisipkan dalam buku teks siswa kelas delapan. Deskriptor model pembelajaran mikro yang paling banyak ditemukan pada buku teks adalah ML 4 yang mengacu pada sumber daya berdasarkan kurikulum sekolah, yaitu kurikulum 2013, dan ML 8 yang mengacu pada fitur siswa berpartisipasi dalam proses pembelajaran yang didistribusikan melalui tabel refleksi yang tersedia di setiap bab dalam buku (masing-masing 30%).

Kata Kunci: Analisis, Materi Pembelajaran Bahasa Inggris, Model Pembelajaran Mikro

INTRODUCTION

Learning materials making is at the forefront of teaching languages. A toolkit that contains materials is the most important one that language teachers and students can employ. The basis for students' exposure to and practice with language in the classroom is provided by the teaching materials (Richards, 1998). It follows that it is essential for the learning materials to be able to pique students' curiosity and excitement about studying. Pratiwi (2013) designed English learning materials for English Conversation Club for high school student which is designed for all the English skills. Furthermore, Faridah et al. (2018) created English learning materials for the engineering faculty's informatic study program. These materials consist of seven units, each of which covers three basic English competency areas: speaking, writing, and reading. Each unit also has multiple sections, including an introduction, the main lesson, and reinforcement. Lestari & Priyana (2020) used research and development to provide suitable learning resources for English reading and writing. According to Barwasser et al. (2020), exercises used in the classroom are planned and given in accordance with the requirements and skills of their students.

In addition, the material provided must be in line with the students' needs. The intended audience, grade 8 students who are digital natives, and the language learning content are not aligned. There is general agreement that younger people, including eighth graders, would prioritize technology more than older people (Patrika Rizal et al., 2022). They have traits based on learning flexibility since they are digital natives who are very experienced with using ICT (Information, Communication and Technology). One of the models that is considered which relate to ICT is microlearning (Ayu Kusmana et al., 2023).

In the recent years, a lot of research has been done on the use of microlearning-based models. The term "microlearning" was initially used in 2012 to describe a new method of learning with bite-sized stages and discrete pieces of information on small displays of portable devices (Giurgiu, 2017). According to Jomah et al. (2016), microlearning is a modern methodology that is believed to be able to improve students' learning capacity when compared to traditional learning. Moreover, according to other study, in terms of information technology,

microlearning is seen as an efficient supplement to traditional learning (Fedorova et al., 2022).

Furthermore, a large body of research on the application of microlearning to language acquisition has been discovered. Jennie Chang de Gagne et al. (2019) describe a mobile application that enables microlearning to deliver content for language learning. More information about the research and development of microlearning in college English courses was provided by Meng et al. (2016). He claims that microlearning aids pupils in enhancing their general fluency in speaking, reading, and writing English. Furthermore, microlearning—which is generally defined as the delivery of learning sessions or activities of shorter duration than traditional instruction delivery—is an emerging paradigm made possible by technology (Hug, 2010). Hanson (2019) put a new technology-based instructional design for improving employee work abilities to the test using microlearning and social learning. All things considered, microlearning has shown to be highly advantageous when applied to a range of industries. It is generally accepted that the use of microlearning-based model in education, especially in English language teaching is still limited.

In brief, this research is aimed to explore the extent of microlearning-based infused English learning materials, in this case textbook for eighth graders. Consequently, the research question of this study was formulated as follows:

To what extent is microlearning-based model infused in the English learning material? The resources that students use is frequently referred to as "learning materials". The use of teaching tools can hasten the learning process and improve student performance. The most effective educational materials are those that are precisely designed for the instructor, the class, and the subject being studied. Learning tools come in a variety of sizes and designs, but they all naturally have the ability to promote student learning. Several researchers support the use of authentic text to expose students to language that is meaningful in use while teaching language use in real-life situations. According to Tomlinson (2012), material needs to have some aspects. The aspects are materials should be informative, materials can be instructional, materials can be experiential, materials

can be eliciting, and materials can be exploratory. Textbook is one of commonly learning materials used in teaching and learning process.

When it comes to microlearning, it is the use of complex knowledge in the form of bite-sized information or "nuggets" as a novel intervention to enhance a person's capacity for self-care (Wang et al., 2020). In the digital age, it is one of the most important components of teacher professional development (Wei, Darling-Hammond, and Adamson, 2010 as referenced in Iskandar, 2021). Microlearning participants don't have to invest a lot of time in learning because they have access to brief, asynchronous lesson materials that they can access whenever and whenever it's convenient for them (Patrika Rizal et al., 2022).

Likewise, Allela (2021) contended that microlearning alludes to the utilization of reduced down, all around arranged modules and momentary learning exercises can utilize normal innovation based objects. They are short pieces of message, intuitive/non-intelligent infographics, PDFs, show, short intuitive/non-intelligent recordings, digital books, flipbooks, book recordings, short webcasts, recorded online courses, versatile applications, short HTML pages, QR codes, student created blog entries, gamification, serious games, computer generated reality, increased reality, bit by bit agenda and tests. Allela's microlearning framework explains how microlearning is implemented into teaching and learning activities. It is presented in manageable portions to hide the learning objectives.

Table 1. Allela's Micro-learning Framework

What Structural Element	How Instructional Method	Medium Micro-learning Object
➤ Welcome to the Lesson	▪ Structured overview	▪ Video
➤ Awaken Prior Knowledge	▪ Inquiry ▪ Drill and practice	▪ Survey on Moodle ▪ Quiz
➤ Review Key Points	▪ Mental modeling ▪ Discovery learning	▪ Infographic
➤ Content	▪ Direct instruction ▪ Lecture ▪ Drill and practice	▪ Video ▪ Animation ▪ Infographic ▪ Interactive PDFs

What Structural Element	How Instructional Method	Medium Micro-learning Object
➤ Discussion	<ul style="list-style-type: none"> ▪ Reflective discussions ▪ Group discussion ▪ Debate 	<ul style="list-style-type: none"> ▪ Discussion forum ▪ Social-media posts
➤ Review Key Points	<ul style="list-style-type: none"> ▪ Question and answer ▪ Inquiry 	<ul style="list-style-type: none"> ▪ Video ▪ Infographic
➤ Assessment	<ul style="list-style-type: none"> ▪ Quiz ▪ Inquiry 	<ul style="list-style-type: none"> ▪ Moodle ▪ Quiz ▪ Google Forms

As indicated by Hug (2014), there are variants that are created by different translations of explicit microlearning factors, including time, content, educational program, structure, cycle, medality, and learning type. Moreover, Khan (2021) claimed that microlearning has dimensions which classified by their characteristics. In the dimension of pedagogy, it is interactive and engaging. It is device independent in the dimension of technology. Meanwhile, in the dimension of interface design, microlearning usable and accessible which adaptable of learning objectives for mobile learning. Next dimension is evaluation which character is single objective that covers all the learning process from planning to evaluating. Additionally, microlearning is addressing the short duration of management. The next dimension relates to the resource support which character retention boosting or just-in-time. Moreover, the dimensions are ethical which characteristic is independent of part of whole and institutional which is effective in cost. The framework for microlearning may be seen as the dimensions. Utilizing the proper instructional methodologies and delivery techniques, the microlearning developer or creator may design, develop, assess, and execute successful learning. It can be seen the figure of octagon as follows.

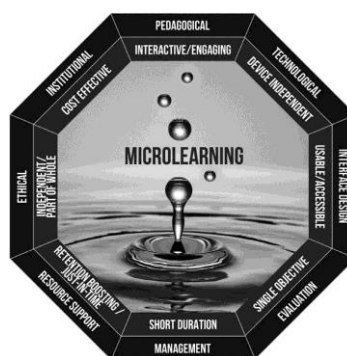


Figure 1. The microlearning perspective on Khan's e-learning framework

Additionally, De Gagne et al., (2019) indicated that microlearning has five aspects. They are (1) learning context and time spent, (2) content type and creation, (3) content aggregation and retrieval, (4) structure of the learning cycle and target group, and (5) learner's role and learner participation. Furthermore, according to Torgerson & Iannone (2020), microlearning refers to the delivery of knowledge in-depth and in discrete portions at the precise time it is needed.

To conclude, the table below displays the microlearning framework that was adopted and was created using Allela (2021), Torgerson & Iannone (2020), De Gagne et al. (2019), Li Zhang (2016), Hug (2005), and Khan (2021).

Table 2. Microlearning Descriptors
(Allela, 2021; Torgerson & Iannone, 2020; De Gagne et al, 2019; Li Zhang, 2016; Hug, 2009; Khan, 2021)

Microlearning Aspects	Descriptors
Learning Materials	<ol style="list-style-type: none"> 1. The materials are separated into small units 2. The materials are intended to last just temporarily (2-5 minutes, Allela, 2021; few second to 15 minutes, De Gagne, 2019) 3. The materials contents are based on the needs 4. The materials are based on the school curriculum 5. The materials are divided into categories of skills 6. The materials use technology 7. The materials are incorporated with several media
Learning Style	<ol style="list-style-type: none"> 8. Students participation 9. Students spend little time in learning the material

Based on the characteristics of microlearning, two groups of learning resources and learning styles have been identified. The simplest definition of microlearning is a brief learning objective that is completed in a matter of seconds to fifteen minutes through the use of digital technology in teaching and learning activities.

METHOD

The approach used in this study is qualitative since its goal is to investigate how microlearning is incorporated into English language learning materials.

Qualitative research, according to Busetto et al. (2020), is the study of the nature of occurrences. It is especially helpful for figuring out why something is observed (or not), assessing complex multi-component treatments, and focusing on making interventions better. The most common methods of collecting data are focus groups, semi-structured interviews, document analysis, and (non-) participant observations.

This study was conducted through content analysis. Content analysis is a widely used qualitative research technique. As long as the goal is to examine how microlearning is incorporated into the textbook's content, content analysis is employed. According to Stemler (2021), another advantage of content analysis is looking for trends and patterns in documents. Krippendorff (1980) stated that every content analysis needs to address six questions: (1) what data are analyzed, and (2) how are they defined? (3) From what demographic are they selected? (4) In what sense is the context of the data analysis relevant? (5) what are the analysis's bounds, and (6) what are the conclusions' intended outcomes? The scope of this study is restricted to the examination of textbooks as English learning materials.

The following are the steps involved in content analysis, per Lune & Berg (2017): 1) A collection of data is made into text or another structured format so that it can be "read"; 2) Codes are transformed into categorized labels or themes; 3) Materials are classified by these categories, identifying similar phrases, patterns, relationships, and similarities or differences; 4) Codes are analytically produced and/or inductively identified in data and attached to sets of notes or transcript pages; 5) Materials that have been sorted are assessed to find pertinent patterns and processes; 6) Patterns found are examined in the context of earlier studies and ideas, and a limited set of generalizations is created.

As long as the aim of this study is to investigate the infusion of microlearning-based model in English learning materials, the researcher used descriptors of microlearning to find out to what extent it is integrated. The data from this study is the instructions which cover microlearning descriptors. The data source is an English textbook which is being used by eighth graders used because of the preliminary analysis on some textbooks which based on current curriculum

before it was switched to the *Kurikulum Merdeka* . It is called Bright an English: Course for Junior High School Students.

As can be seen in table 1, there are nine descriptors of microlearning that represents two aspects of learning materials and learning style. Those descriptors can be indicated by codes as follows.

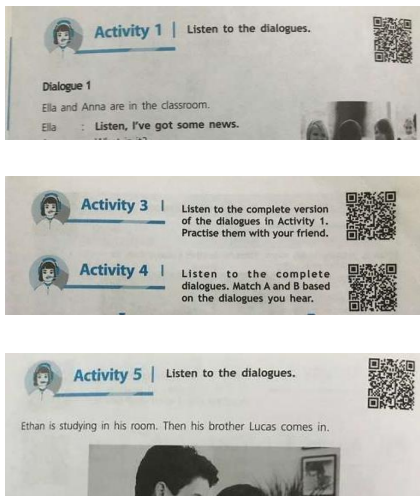
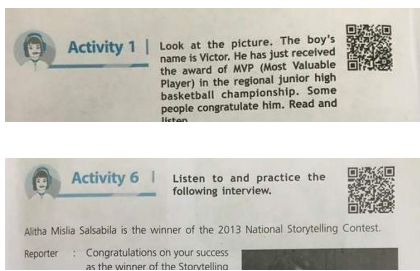
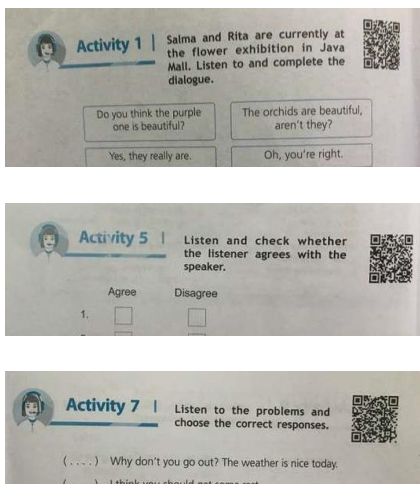
Table 2. Microlearning Descriptors Codes
(Alella, 2021; Torgerson & Ianonne, 2020; De Gagne et al, 2019; Li Zhang, 2016; Hug, 2005; Khan, 2021)

Microlearning Aspects	Descriptors No.	Codes
Learning Materials	1	ML 1
	2	ML 2
	3	ML 3
	4	ML 4
	5	ML 5
	6	ML 6
	7	ML 7
Learning Style	8	ML 8
	9	ML 9

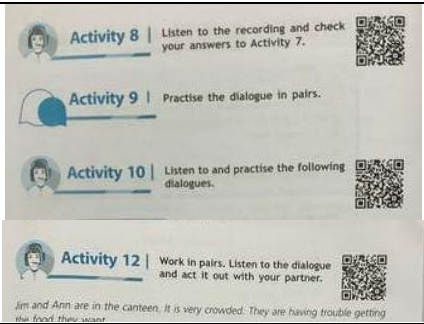
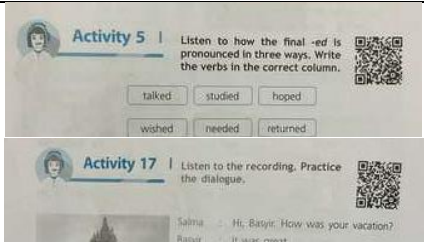
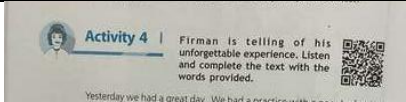
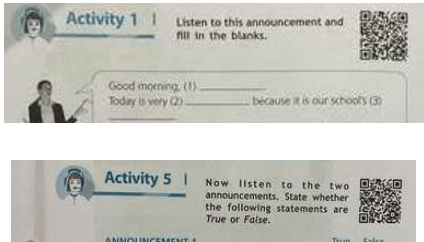
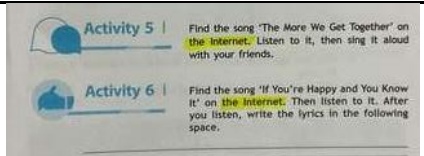
RESULTS AND DISCUSSION

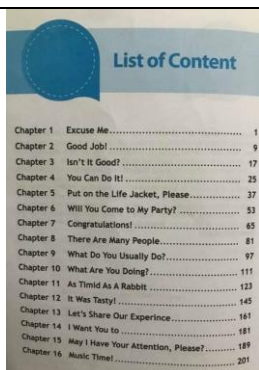

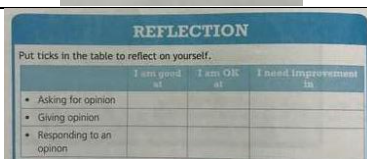
This study is conducted through content analysis, specifically document analysis. By using the codes in the table 2 above, the researcher analyzed the microlearning descriptors by using the codes. The table 3 below indicates the result of this study. It explains each book chapter and also which code or descriptors they belong to. The data found are provided by pictures shown from the text book. Additionally, to justify the data, the justifications are also described in the table.

Table 3. An Overview of Microlearning Descriptors Found in the English Learning Materials

Book's Chapter	Code of Microlearning Descriptors	Data Found	Justification
1	ML 6, ML 7		It is evident that the current textbooks and English language materials include QR codes, which need students to install a connected application. It indicates that the content incorporates a variety of media and uses technology.
2	ML 6, ML 7		Based on these data, it is evident that the materials utilize technology and are integrated with various media that offers QR codes.
3	ML 6, ML 7		These data include a variety of media, including QR codes, and are classified as materials that use technology.

Book's Chapter	Code of Microlearning Descriptors	Data Found	Justification
4	ML 6, ML 7		It is evident that the current textbooks and English language materials include QR codes, which need students to install a connected application. It denotes that the content incorporates a variety of media and uses technology.
5	ML 6, ML7, ML 2		<p>The data makes it abundantly evident that this book unit incorporates media and technology.</p> <p>Furthermore, it is clear from the highlighted passage of the instruction that students don't spend much time on the exercise.</p>
6	ML 6, ML 7		It has been discovered that four activities incorporate QR code-based microlearning about technology use.

Book's Chapter	Code of Microlearning Descriptors	Data Found	Justification
			
7		No data found	
8		No data found	
9		No data found	
10		No data found	
11		No data found	
12	ML 6, ML 7		These data include a variety of media, including QR codes, and are classified as materials that use technology.
13	ML 6, ML 7		This data is classified as a material's use of technology and is integrated with various media, including QR codes.
14		No data found	
15	ML 6, ML 7		It has been discovered that two activities incorporate QR code-based microlearning about technology use.
16	ML 6, ML 7		The data makes it abundantly evident that this book unit incorporates media and technology.

Book's Chapter	Code of Microlearning Descriptors	Data Found	Justification
Whole Book Units	ML 1		This book includes a list of contents that allude to the ways in which the materials are grouped together under a single theme, as indicated by the titles of each unit or chapter.
	ML 4		The data indicates that the book has been incorporated into the updated 2013 Curriculum.
	ML 8		It is stated that the data represents a component of the students' involvement in the educational process. It can be found in every book unit.

The elements of microlearning that are incorporated into the English textbooks, existing materials, and extra resources that the English teacher has used are what catch attention in Table 3. The analysis revealed that not every facet of microlearning is included in the current English language resources. The aspects found are the materials are separated into small units (ML 1), the materials contents are based on the school curriculum (ML 4), the materials use technology (ML 6), they are incorporated with several media (ML 7), students participate in the learning process (ML 8), and the materials are intended to last just temporarily (ML 2). Anyhow, there is no evidence that the aspects of the materials contents are provided from the needs (ML 3), the materials are divided into categories of skills (ML 5) and the students spend little time to learn the materials (ML 9). To better comprehend the general picture of how frequently each description occurs, refer to the figure 2 below.

Microlearning Integration Found in the Textbook Percentage

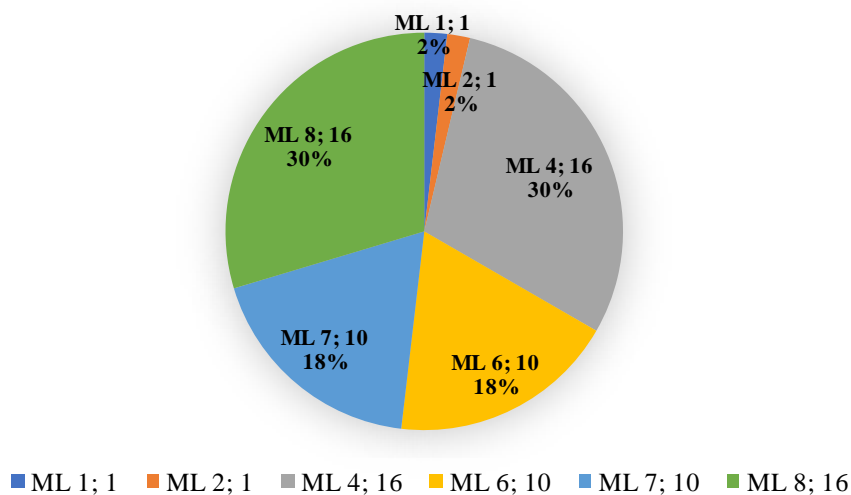


Figure 3. Summary of Microlearning Integration in the Existing English Language Textbook

As shown in figure 2, the two aspects most integrated in the textbook are ML 8 which refers to the aspect of students participate in the learning process spread out by the reflection tables (30%) and ML 4 which refers to the materials are based on the school curriculum, 2013 curriculum (30% each). Followed by the percentage (18% each) of the aspects of ML 6 and ML 7 which keywords are “technology” and “media”, the textbook provides QR codes which belong to those aspects.

From the data found, it is generally indicated that the microlearning aspects or descriptors are not fully infused in the textbook, Bright an English Course for Junior High School Students. The result indicated some findings.

Firstly, the descriptor of ML 1 which states the materials are separated into one theme (small units) is found in the textbook. It can be identified from the table of contents which serves the 16 units by their own themes. Additionally, the presently being used textbook plainly supports indication ML 4's assertion that "the materials are based on the school's curriculum". This is due to Indonesia currently using the 2013 curriculum before switching to the *Kurikulum Merdeka* in 2022.

In addition, strong evidences of the descriptors of ML 6 and ML 7 were found in almost book units, so ML 6 and ML 7 among all the descriptors are the

most descriptors found in the textbook. They can be indicated in the book units 1, 2, 3, 4, 5, 6, 12, 13, 15, and 16. In those units, the materials provided QR (Quick Response) codes to be scanned as the activities. Moreover, the QR codes are also provided to link listening audios for some activities. Additionally, as the aspect of incorporation with varieties of media (ML 7), the textbook also instructs the students to use internet as the other learning materials. From the interview result, the teacher said that the students are allowed to bring any technological devices which support the learning process as long as they are supervised when using them.

Furthermore, by including reflection tables in every book unit, the ML 8 descriptor—which asserts that students engage in the learning process—is demonstrated. The textbook requires the students to report their improvement by using the reflection table which means they participate in the learning process. As stated before, the units end with reflection. Lastly, the aspect of ‘students spend little time to learn the materials’ is indicated in an activity in the unit 5. The students are required to do the activity in five minutes.

In conclusion, there are two main viewpoints on learning materials and learning styles in microlearning, as mentioned in the literature study. The learning materials, which were adapted from Allela (2021), De Gagne (2019), Li Zhang (2016), Hug (2005), have five aspects, whereas the learning style perspective has two. The bite-size component is found in the coursebook and web-based resources that are now available. It is consistent with a previous study (Wang et al., 2020; Hug, 2010; Zhang & West, 2019) that found that complicated knowledge is delivered in bite-sized chunks through microlearning-based materials. Furthermore, this findings supports the evidence from the previous study by Fedorova et al. (2020) who discovered in their study that microlearning can be considered an efficient technological addition to traditional education.

CONCLUSION

This study focuses on 8th graders' microlearning-based English learning material, which is a textbook entitled Bright an English course for Junior High School Students. This study discovered that the current English textbook is still

insufficient and does not properly incorporate microlearning, based on the analysis. In English textbook, there are just six features or descriptors of microlearning found.

The content for the microlearning descriptors is based on the 2013 national curriculum, which has sixteen English-themed units. It is clear from the table of contents that this book is divided into one topic, which relates to the first microlearning descriptor (ML 1). Meanwhile, there is an activity instruction which requires the students to do it in only 5 minutes. This indicates the microlearning descriptor of the materials are intended to last just temporarily (ML 2). In addition, it is indicated that the indicator displayed in the unit are relevant to the basic competencies so that it is proven that the material provided is in accordance with the school curriculum (ML 4). While it provides some QR codes, this proves that the teaching materials already use technology and variety of media even though there are limitations (ML 6 and ML 7). Lastly, the most descriptor found averagely in the textbook belong to students participate in the learning process (ML 8).

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