

NEEDS ANALYSIS OF READING MATERIALS WITH CASE-METHOD USING A MOBILE APPLICATION: INTEGRATING WETLAND TOPICS IN SOUTH KALIMANTAN

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Abstrak: One of the studied topics in teaching material that can be elaborated on and is relevant to students lives in South Kalimantan is the topic of wetland environment. This is due to the important role of the wetland environment and the need for an approach to enable students to have the knowledge and are aware of the importance of the surrounding wetland areas. With a student-centered case method, the urgency of this research is to analyze students' needs for developing reading materials on wetland topics in South Kalimantan with a case method using a mobile application. This study used a qualitative approach to analyze the needs of prospective users of the mobile application reading materials based on the case method based on the wetland environment at the college level in South Kalimantan. The population in this study were all students from nine English education study programs in South Kalimantan with respondents who voluntarily filled out a questionnaire provided via Google Form. The main target of this research is to develop an application that can be downloaded on the play store for Reading teaching materials based on a wetland environment for all English language education study programs in South Kalimantan in particular and the play store user community in general with the results to be obtained from this needs analysis. The data in the questionnaire would be confirmed through interviews with representatives of the English Language Education study program lecturers in South Kalimantan. Then, the data were analyzed descriptively. Through this needs analysis, it is hoped that it will be able to meet the needs and wants of prospective users of the mobile application of reading materials on wetland topics in South Kalimantan with case-method in higher education level South Kalimantan.

Keywords: mobile app, needs analysis, reading materials, wetland topics

INTRODUCTION

Reading is an inseparable skill in education and life. It has been taught from early childhood to university level to obtain information (Andoko et al., 2020; Dewi et al., 2020). In university level, reading various sources in English is done and needed in classes though students, especially in the context of English as a second or foreign language, have difficulties in reading (Dewi et al., 2020; Mohammad & Hasbi, 2021). Then, in life, reading is a survival skill that cannot be avoided. However, not all people find reading an easy skill to master. Maulida et al., n.d. mentioned several possible factors that caused difficulties in reading. They are limited availability of reading sources, limited exposure to various reading text, and traditional way of teaching reading employed by teachers.

An effort to overcome the abovementioned factors in reading difficulties is by providing a source that is not traditional. Nowadays, abundant applications for learning English are available in the application stores such as Playstore and Google Play (Maulida et al., n.d.; Maulida et al., 2020). Teachers and students can easily choose the app that fit to their needs.

Previous researchers in language learning such as Maulida et al., n.d., investigated the use of Slack. Slack is a messaging platform which can be freely accessed in Android and iOS based smartphone, personal computer or laptop. Direct call, handwritten notes, pictures, video, and hyperlink with easier, faster, and lighter access of transferring the data are available. What is more important, from these features, the reading materials will always be available. Their research explored the potentials of Slack and practical suggestions of employing Slack in a blended learning environment to enhance students reading skill in Senior High School level.

Besides using the ready-used apps, developing an application for learning language especially reading skill is another option. A study was done by (Agustini et al., n.d.) to develop an application on android platform aiming to help the students to increase their ability in reading comprehension particularly TOEFL anywhere and anytime. Then, Maulida et al., (2021) developed Readyread, a mobile application-based supplementary material for reading comprehension. The results showed that the app is found encouraging for students to achieve their learning goals. Through the development of any applications, teachers and lecturers can easily adjust several needed things from students' learning styles and preferences to teaching strategies. This development must be investigated through a needs analysis so that the learning language through mobile application can cater for students' needs (Maulida et al., 2021). Thus, the application will be perceived as an alternative platform for learning the materials taught at school or universities with richer resources and interactive activities as needed (Maulida et al., 2020). This adjustment will ease teachers and lecturers to cover the necessities, lacks, and wants of both teachers or lecturers and students.

In the context of English learning in reading skill in South Kalimantan, the application development can be maximized not only to increase students' reading skill but also to increase their awareness of wetlands and provide meaningful learning. Wetlands are life support Aber et al., 2012 in (Amelia & Chandra, 2021). The existence of wetlands functions as a source of water, food, biodiversity wealth, and global climate controller Aber et al., 2012 in (Amelia & Chandra, 2021). Arini & Fadilla (2021) stated that reading materials related to wetlands might be an effective way to learn English related to wetlands. However, materials related to wetlands are rarely found or provided by the university (Febriyanti & Fadilla, n.d.). Understanding of wetlands in South Kalimantan should be taught in English classes even from an early age (Arini & Fadilla, 2021) to university level. In order to cultivate meaningful learning, case-method is an option to employ in the design. Therefore, this present study aims to find the students and lecturers necessities, lacks, and wants in developing reading materials with case-method using a mobile application by integrating wetland topics in South Kalimantan.

METHOD

This present study used a qualitative approach to analyze the needs of prospective users of the mobile application reading materials based on the case method based on the wetland environment at the college level in South Kalimantan. The qualitative data was obtained from multiple-choice questions about their experiences and expectations in learning reading skills. The population in this study were all students from nine English education study programs in South Kalimantan with respondents who voluntarily filled out a questionnaire as the instrumen provided via Google Form. There are 10 lecturers and 94 students from Universitas Lambung Mangkurat, UIN Antasari Banjarmasin, STKIP PGRI Banjarmasin, STKIP Islam Sabital Muhtadin, UNISKA, Universitas Muhammadiyah Banjarmasin, Universitas Nahdatul Ulama Kalimantan Selatan, Universitas Sari Mulia, and STAI Rasyidiyah Khalidiyah Amuntai who responded the needs analysis questionnaire. The questionnaire consisted of 20 items asking the necessities, lacks, and wants by Hutchinson & Waters (1988) of the current instructional learning in these all English Department study programs in South Kalimantan.

The questions included the reading skills in the current class (Items 1 - 3), reading materials and apps (Items 4 - 7; Items 16 - 20), wetland concern and case method (Items 8 - 15). The questionnaire was distributed on April - May 2023. The data was then analyzed and presented to find the necessities, lacks, and wants before developing the reading materials with case-method using a mobile application by integrating wetland topics in South Kalimantan.

FINDINGS AND DISCUSSION

The needs analysis in this current study covered three foci (necessities, lacks, and wants) by Hutchinson & Waters (1987). Rofii et al., (2019) stated that through the three foci, a product is arranged based on students' characteristics. At the same time, there are three sub-dimensions covered in this study: current reading course, reading materials and apps, as well as wetland concerns and case method. Table 1 shows the results of the first sub-dimension, current reading course.

Table 1. Current Reading Course

Current Reading Course	Responses (%)			
	Students		Lecturers	
	Yes	No	Yes	No
2. Does reading skill is taught separately as a course in your study program?	77%	17%	100%	0%
3. Are the reading courses given in a form of series?	76%	18%	9%	1%
4. When does the students take Reading Course(s)?	1 st semester 57%		1 st semester 50%	
	2 nd semester 85%		2 nd semester 80%	
	3 rd semester 58%		3 rd semester 90%	
	4 th semester 31%		4 th semester 90%	
	5 th semester 31%		5 th semester 40%	

Reading is a language skill provided in all participants' English Department Study Programs. Teaching reading at tertiary institutions especially English Department, reading is commonly given in reading comprehension series (Cahyono & Widiati, n.d.). In Table 1, all lecturers claimed reading is taught separately as a course though 17% of the students stated it was not. It probably due to their misunderstanding of what is mean by the word separately. The next question related to reading course series, almost all departments' curricula structured the reading course as series given in the first to the fifth semester. In the context of English as a foreign language, teaching reading is included in the reading comprehension aiming to improve students' skills (Mohammad & Hasbi, 2021; Andoko et al., 2020; Cahyono & Widiati, n.d.),

The second sub-dimension is reading materials and applications. The results are depicted in Table 2.

Table 2. Reading Materials and Applications

Reading Materials and Applications	Responses (%)			
	Students		Lecturers	
	Yes	No	Yes	No
5. Are there any printed reading materials?	53.2 %	46.8 %	70%	30%
6. Are there any android-based/ iOS reading materials?	87.2 %	12.8 %	50%	50%
7. Is a reading material necessary?	94.7 %	5%	100%	0%

8. How do you expect a reading material form?	Printed 5.3% Digital based 9.6% Both printed and digital 85.1%	Digital based 20% Both printed and digital 80%
16. Which of the following choices is the most appropriate text type to integrate the wetland topics?	General knowledge 7,5% Related to reading course 25,5% Various texts 67%	General knowledge 10% Related to reading course 30% Various texts 60%
17. Does the text need tables, graphs, and/or illustrations?	92,6% 7,4%	100% 0%
18. Which of the following choices is the most appropriate vocabulary focus to integrate the wetland topics?	General terms 10% Academic terms 16% Related to wetlands 74%	General terms 10% Academic terms 20% Related to wetlands 70%
19. Which of the following choices is the most appropriate vocabulary delivery to integrate the wetland topics?	Compulsory in reading 82% Not compulsory in reading 18%	Compulsory in reading 90% Not compulsory in reading 10%
20. Which of the following choices is the most appropriate grammar materials to integrate the wetland topics?	Included in reading 66% Not included in reading 34%	Included in reading 30% Not included in reading 70%

Both participants stated that printed reading materials are available in most English Department Study Programs while the android-based reading materials perceived different responses. Half of the lecturer participants (50%) said that the materials are android or iOS-based materials while most of the student participants (87,2%) stated the materials are android-based. This might be due to different perceptions of the term android or iOS based reading materials. However, both of them claimed reading material is necessary in the form of both printed and digital formats. Regarding the text type to include in the reading, the lecturer and student participants have the same preference that the texts are given in various texts. Then, tables, graphs, and/or illustrations are given in the texts. Two language components (vocabulary and grammar) are other consideration to include in the text. Most of the lecturer participants (70%) and student participants (74%) agreed to have vocabulary mastery related to wetlands and vocabulary delivery is compulsory in reading skill. However, different answer is found in grammar choice. The lecturer participants stated that grammar should not be included in reading (70%) while student participants answered differently (66%). The last sub-dimension is wetland concerns & case method as given in Table 3.

Numerous research studies explored the needs to provide reading materials for students. Mede & Korkmaz (2017) investigated the effectiveness of reading materials. Then, Beniario & Sari (2019) developed English reading materials by integrating cultural values. Meanwhile, Hidayat & Setiawan (2020) developed a software and CD of English reading materials to support the main course-book. These studies showed the importance of the availability of reading materials to support the learning. All participants of this study are also aware of the vital presence of reading materials. Thus, this study tried to find how the reading materials will be developed to fit the students' needs not only the reading as a language skill

but also involving language components namely vocabulary and grammar. Murtiningsih & Amelia (2023) study on needs analysis reported students' difficulties in grammar and vocabulary.

Besides the development of printed reading materials, online reading material is another alternative. Year by year, the advancement of technology forced teachers and lecturers in order to maximize the learning and adjust the students' comfortable way of learning. One of which is learning through mobile phone. The presence of many kinds of communication devices such as mobile phones, iPads, laptop, and computers have become the part of everyone's daily life including students (Elfiona et al., 2018). The participants stated that they prefer both forms of reading materials (printed and android or iOS-based. The printed materials are already provided; thus, the researchers concluded that the android or iOS-based is necessary to build to complete the printed reading materials. The android or iOS-based reading materials can be used to help students learn anywhere and anytime. The devices are flexible and easy to use to bridge the barriers of teaching reading in classroom (Elfiona et al., 2018).

Table 3. Wetland Concerns & Case Method

Wetland Concerns & Case Method	Responses (%)			
	Students		Lecturers	
	Yes	No	Yes	No
9. Are there any wetland materials in reading course provided in your study program?	Yes 17% No 25,5% I don't know 57,5%		Yes 10% No 60% I don't know 30%	
10. Have you ever studied/ taught wetland materials in any courses including reading?	36.2%	63.8%	20%	80%
11. Do you think wetland materials can be integrated into reading courses?	79.8%	20.2%	100%	0%
12. Is it important to get/ deliver wetland material to students?	86.2%	13.8%	70%	30%
12. How important is it to get/ deliver wetland material to students?	Very important 15% Important 74% Less important 10% Not important 1%		Very important 10% Important 60% Less important 30% Not important 0%	
13. In your opinion, can you/ your students be given reading materials on wetland in a case method?	69%	31%	90%	10%
14. Can you/ your students discuss things related to wetland?	78%	22%	60%	40%
15. Can you/ your students follow every procedure in a discussion or other tasks provided in the class?	95%	5%	100%	0%

Wetland materials are not provided in the reading course provided in most of the participants study programs. In fact, wetland is familiar in Universitas Lambung Mangkurat (ULM) as ULM's effort is becoming the center of Asia-Pacific wetland development in 2027 (Febriyanti & Fadilla, n.d.) due to the crucial importance of wetland. However, wetland seems new to the rest of universities in South Kalimantan seen from the responses that they never study or teach wetland materials in the classroom on any courses. Although wetland is new to them and not the concern of their universities, they responded positively on the integration of wetland materials into reading courses (100% of the lecturers and 79.8% of the students).

Additionally, most of them (70% and 86.2% respectively) stated it is important to get/ deliver wetland materials. Thus, teaching materials focusing on the wetland environment are beneficial to students and even regions as well as the sustainability of living things in this case related to wetlands (Amelia & Chandra, 2021). In addition, the app could cover more types of texts of various and interesting topics (Maulida et al., 2020).

In order to facilitate and maximize the learning, case method was chosen and asked to participants. Almost all of the lecturers (90%) stated that students can be given reading materials on wetland in a case method as they are able to involve in a discussion and follow procedures or tasks provided in the class. Students also responded positively (69%) though they seemed unsure of their ability (31%). While the majority of research on reading was conducted using a genre-based or a task-based, few studies explored the application of case method in English learning integrating wetland topics. A previous study using on case-based method was reported by Hidayati (2021) on the implementation of English for medical purposes to express thoughts through reading and speaking skills. The results showed that case method help students learn and communicate successfully in the classroom.

Table 4 depicts the necessities, lacks, and wants of the reading materials.

Table 4. The necessities, lacks, and wants of the reading materials

	Objective as perceived by lecturers	Subjective As perceived by students
Necessities	Android or iOS-based reading material Various text types	Android or iOS-based reading material Various text types
Lacks	Wetland materials in reading Ability to study reading materials on wetland topics in a case method	Wetland materials in reading Android or iOS-based reading materials
Wants	Reading materials in various topics including vocab and grammar	Reading materials in various topics Including vocab

It is revealed from this study that there is a need to develop an android or iOS-based reading materials that cover various text types from wetland topics due to unavailability of wetland materials for English Department study programs in South Kalimantan. The current condition is that wetland concern is being studied at ULM, but it has not studied or explored at other universities while its existence is near students' life. The last one is in terms of what the participants (both lecturers and students) wants is the reading materials in various topics of wetland not only in reading skill but also integrating vocabulary and grammar.

CONCLUSION

This study highlighted the participants (lecturers and students) necessities, lacks, and wants as a stage in developing the reading materials. Three sub-dimensions explored in this study are current reading course, reading materials and apps, as well as wetland concerns and case method. The needs analysis as an initial stage of a research and development. The results of this needs analysis showed that there is a need to develop an android or iOS-based reading materials that cover various text types from wetland topics not only in reading skill but also integrating vocabulary and grammar. The results are expected to help the researchers to go further to the next stages in developing the target product. It is also expected that further

researchers find more insights in the procedure of a needs analysis and add some more improvement to complete it.

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