Learning Materials and Their Prototypes for Academic Writing Skills: The Needs of Indonesian Lecturers in the Post-COVID-19 Era

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Abstract: This study aims to investigate lecturers' needs for academic writing learning materials and determine their prototypes. This study is qualitative research in the form of an exploratory case study. The research instruments were semi-open-ended questionnaires and unstructured and open-ended interview guides. The data were analyzed using content analysis. The results show that the developed learning material for academic writing skills contains seven needs for lecturers in the Department of Indonesian Language and Literature. Four of them have not been found by previous researchers. The results from this study provide new knowledge and contribution to the literature about the need to prototype the learning materials. The lecturers or other researchers can use these seven needs in prototyping learning materials for academic writing skills, such as the needs of learning materials, their forms, presentation system, language use, evaluation form, main menu design, and the way of creating learning materials.

Keywords: *Academic writing skills, learning materials, lecturers' needs, post-COVID-19, prototype.*

Introduction

The COVID-19 pandemic is a disease with a relatively high and rapid rate of spread worldwide (Wong et al., 2020). It claimed many lives (Jones & Strigul, 2021). It first appeared in Wuhan, Hubei, China (Hasanudin et al., 2020) in December 2019 (Ferrer, 2020). Globally, this pandemic has had a devastating effect (Zeng et al., 2022) on all aspects of life (Prajapati et al., 2022). Ong et al. (2022) explain that COVID-19 has replaced face-to-face learning with online learning worldwide. The Indonesian government switched learning to home education in March 2020 (Suyadi & Selvi, 2022).

Home education is also practiced in Indonesian universities. All courses have become home education, including the course on academic writing skills. Learning academic writing skills becomes the core learning for students (Chokwe, 2013). It consists of writing and critical thinking skills (Borglin, 2012). Learning academic writing skills can occur in many stages, including in Indonesian universities. A study in one of the Indonesian universities shows that learning academic writing skills can occur in four stages: observation, modeling, joint construction, and individual construction (Aunurrahman et al., 2017).

However, several obstacles have occurred since the introduction of home education during COVID-19. Wijaya and Setiawan (2021) stated that it is necessary to develop learning at the beginning of academic writing in COVID-19 through the learning material. Therefore, it is essential to investigate the specific learning material that Indonesian lecturers need.

Learning material is a learning tool that aims to support student achievement (Menristekdikti, 2015). It can also be defined as a design by educators (Saputra & Fahrizal, 2019) that is systematically arranged in written form or as an attempt to create a pleasant learning situation (Yulian, 2018). Learning materials can be tailored to students' characteristics (Wicaksono & Pristiwati, 2020). The provision of teaching materials by educators is an essential aspect of the learning process (Farrow, 2003), as several characteristics, namely simple, basic, and easy to understand, can be developed or revised based on the environmental conditions (Yanpar, as cited in Aydin & Aytekin, 2018) so that the

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learning activities leave a greater impression (Ariani & Yolanda, 2019). The learning materials allow students to observe, ask questions, collect or synthesize data, and explain and discuss their writing (Wale & Bogale, 2021). It creates autonomous students (Saddhono et al., 2019) in the era of pandemics or other similar conditions. Therefore, the learning material can support academic writing learning when there are obstacles.

The following research findings show the benefits of using instructional materials. A study by Saglam (2011) shows that learning materials are crucial in improving learning performance. Chen and Tzeng (2011) explain in their research that the learning material can be crucial by checking the learning factors. It improves students' motivation and the teaching-learning process (Simo et al., 2010) by making advanced knowledge usable (Zulaeha, 2013). It also has a long-term effect (Aghaebrahimian et al., 2014). The research conducted by Li in Leedham and Cai (2013) shows that the use of learning materials can influence students of the future in many ways, especially in language use, such as using learning materials to promote students' interests and writing skills (Friginal, 2013).

The weaknesses of the teaching materials are evident in the research of Putra and Pamungkas (2019), which reveals that the developed, printed teaching materials have limitations in terms of illustration and presentation. Fitriyah et al.'s (2018) research findings show that the developed teaching materials are limited. The research findings of Kapitan et al. (2018) show that the shortage of developed teaching materials is the availability of learning time. Suppose it is provided as supplementary teaching materials. In this case, it is limited by the effective learning time available in the school. In contrast, it is delivered as a limited enrichment material with a time allocation when it is in disposition with other basic skills materials.

Based on previous research on the advantages and disadvantages of teaching materials, it is necessary to have teaching materials for academic writing skills that contain complete materials and can be combined with materials on other basic skills in unprinted form. These materials will help increase students' interest in academic writing.

A study by Kamariah et al. (2018) showed that academic writing skills through learning materials might help students to use correct grammar, structure, pronunciation, and punctuation marks when writing. However, it has not met the learning process in the post-pandemic era. Therefore, this research aims to analyze the needs of lecturers in Indonesia. This study is crucial to investigate the need for learning materials for courses on academic writing skills to meet the lecturers' requirements and to know the prototype the instructors need.

Methodology

Research Design

This study is qualitative research in the form of an exploratory case study. Exploratory research aims to describe a topic based on observational findings (Pantano & Vannucci, 2019) and explore new results that are closely related to previous experiences (Casula et al., 2021), systematically moving toward scientific research (Franklin, 2005). In this study, the researchers observed and summarized Indonesian lecturers' responses regarding the need for learning materials for academic writing courses and the desired prototype. It was intended to investigate the needs of Indonesian lecturers in depth.

Samples and Data Collection

The samples in this study were male and female lecturers with available positions ranging from assistant professor to professor in Indonesian language and literature departments in East Java, Central Java, and West Java. The characteristics of the samples in this study are the lecturers who have taught academic writing skills and created learning material for academic writing.

Data were collected using a semi-open-ended questionnaire. A questionnaire aims to quickly obtain general information (Black & Champion, 1999/2001). The technique of data collection in this study is a semi-open-ended questionnaire, which goes through the following steps: 1) compiling instruments on the aspects of the need for learning materials, need for teaching materials, need for presentation of learning materials, need for language components, need for evaluation, need for product specifications, and need for production components, 2) conducting content validity tests involving three lecturers of Indonesian language and literature and one lecturer of learning evaluation, 3) and conducting item validity tests using Alkin's model with Aiken's formula as follows:

$$S = r - l_0$$

(Aiken, 1985)

Direction:
r = scores given by experts
l_0 = the lowest score

Furthermore, to determine the value of the V index, Aiken uses the formula:

$$V = \frac{\sum S}{n\,(c-1)}$$

(Aiken, 1985)

Direction:
∑S = total scores
n = the number of experts
c = the highest score

The results of instrument validity are concluded by categorizing the item's validity as shown in Table 2.

Table 2. Range of Item Validity Categorization (Koestoro & Basrowi, 2006)

Range of Score	Category
0.8 – 1.000	Very High
0.6 – 0.799	High
0.4 – 0.599	Sufficient
0.2 – 0.399	Low
<0.200	Very low

Description:
- If the items of the evaluation instrument are categorized as very high, high, and sufficient, then the instrument's items are used.
- If the items of the evaluation instrument are categorized as low or very low, then the instrument's items are not used.
- If some of the instrument items, or even all items, are in a low category, it is necessary to re-examine or for the researchers to rearrange the items.

Moreover, 4) calculating the instrument reliability by using Cronbach's alpha. The formula of Cronbach's alpha based on the theory of Sugiyono (2009, p. 365).

$$R_{it} = \left[\frac{k}{k-1}\right] \left[1 - \frac{\sum Si^2}{\sum St^2}\right]$$

The instrument is reliable when the value of coefficient > 0.60 (Ghozali, 2002), so its reliability is accepted (Priyatno, 2013). 5) The valid and reliable instruments are filled in questionnaires and shared with all Indonesian language and literature department lecturers in East Java, Central Java, and West Java by facilitating Google forms. 6) The data obtained from Google Forms are tabulated and processed using descriptive statistics.

Secondly, the data was obtained by having open and unstructured interviews with the seven lecturers of Indonesian language and literature in East Java, Central Java, and West Java, who provided detailed reasons in the questionnaires. The interviews were conducted using an online video call on the WhatsApp application. The timing of the interviews was decided based on an agreement between the researcher and the lecturer.

Data Analysis

In this study, the data was analyzed using content analysis. In this case, the archive mode message was described; it made the researchers careful in concluding the findings (Neuendorf, as cited in Hasanudin & Fitrianingsih, 2020). The content analysis used in this study was adapted from Miles and Huberman (2007) which consisted of 1) data reduction, 2) data presentation and 3) concluding/verification. The implementation of those stages is as follows:

1. *Data Reduction*

In this stage, the researcher detailed the data from the lecturers' questionnaires using Google Forms. The data obtained were analyzed to simplify them that contain detailed reasons about the response to the learning materials for academic writing skills.

2. Data Presentation

After reducing the data from Google Forms, the researcher found seven pieces containing detailed reasons for the response to the need for learning material of academic writing skills. The seven data that had been determined were arranged in an orderly and detailed manner, making them easy to understand. Furthermore, the data were analyzed to describe and clarify each questionnaire item.

3. Drawing Conclusion/Verification

After the seven lecturers' responses were presented, the researcher made an initial tentative conclusion about the lecturers' responses to the need for learning material of academic writing skills. This initial conclusion was then verified by conducting interviews with the seven lecturers, who provided detailed reasons for the questionnaire and responded to the communication with the researcher. When strong reasons supported the interview results, the data were consistent or the same as the answers given to the questionnaire. The answers served as a basis for data verification on the questionnaire.

Findings/Results

The main objective of this study is to investigate Indonesian lecturers' needs for learning material for academic writing skills in the post-pandemic era and its prototype. The results for the needs of lecturers of this study, among others, are 1) the form of learning material, 2) the material forms, 3) the presentation systematics of learning material, 4) the language use of learning material, 5) the evaluation forms, 6) the main menu design of learning material, 7) the way to produce learning material. The seven results of this study will be described as follows.

The Form of Learning Material for Academic Writing Skills Needed by the Lecturers

The lecturer's need for learning material for academic writing was investigated using the question, "How is the learning material needed to make students easily study anywhere and anytime?" The lecturers' responses can be viewed in Figure 1.
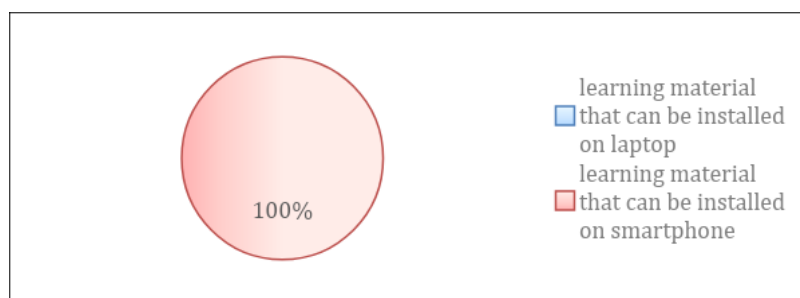

Figure 1. The Lecturers' Responses on the Learning Material Needed

Figure 1 shows that the percentage of lecturers who answered the learning material that can be easily installed on smartphones is 100%. The percentage of lecturers who answered the learning material that can be easily installed on a laptop is 0%. All lecturers agreed that the learning material for academic writing skills in the Indonesian Language and Literature Education Department has to be easily installed on smartphones.

Five lecturers provided different reasons. First, it is more practical. Second, it can be brought and studied everywhere; every student has a smartphone. Third, the smartphone is mainly used by society in the era of 5.0, so it is more effective when the learning material is installed on the smartphone. Fourth, it can be accessed every time and everywhere. Fifth, the smartphone is one's primary need. The number of smartphone users is more than that of laptop users. The smartphone needs an application containing learning materials to be accessed at any time. Moreover, the learning material has to be accessed without the internet. The interview is carried out to obtain the lecturers' reasons. The interview transcript with one of the lecturers is as follows:

R : "You answer that 'smartphone is one's primary need. The number of users is more than that of laptop users. It needs an application that contains learning materials to be accessed every time. In your opinion, what are the advantages of a smartphone compared to a laptop in the learning material installation?"

L1 : "Its advantage is that it can be carried everywhere because it is smaller than a laptop. Moreover, the smartphone does not take up space. Its price is lower than a laptop, so all students can afford it. However, several applications need an internet connection. In fact, not all areas can access the internet. Furthermore, some people say that the internet is expensive."

R : "So, how should the learning materials installed on smartphones be?"

L1 : "The application should not require an internet connection to access the learning material. So, the students can use it every time and everywhere."

Based on the data from the questionnaire and the interview results, the researchers arranged the prototype of learning material that can be easily installed on smartphones. It can be viewed in Figure 2.

Figure 2. Learning Material Prototype of Academic Writing Skill

In Figure 2, the prototype of learning material can accommodate learning in the era of society 5.0, in which students can study every time and everywhere. It can be viewed that the prototype is created on March 28, 2022 and modified on June 24, 2022.

The Material Forms of Academic Writing Skill Needed by the Lecturers

The lecturer's need for academic writing material was investigated using the question, "To increase the students' curiosity in writing skills, what elements should be added to the academic writing material?" The lecturers' responses can be viewed in Figure 3.
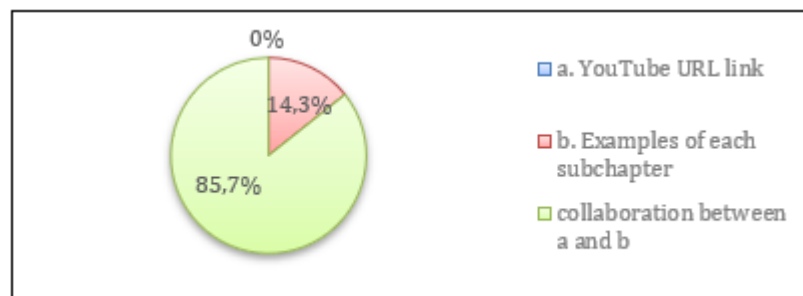

Figure 3. Lecturers' Responses About Additional Elements in the Learning Material to Increase the Students' Curiosity

Based on Figure 3, the percentage of lecturers who answered that the academic writing material needs a YouTube Uniform Resource Locator (URL) link about writing and examples of each subchapter is 85.7%. The percentage of lecturers who answered that the academic writing material needs examples of each subchapter is 14.3%. An interview was carried out to obtain the lecturers' reasons. The interview transcript with one of the lecturers is as follows:

R : "You chose an option of collaboration between a YouTube URL link and examples of each chapter that can increase the students' curiosity. What are the advantages of this collaboration?"

L2 : "Students will obtain more knowledge, and the knowledge can be easily implemented."

Based on the data from the questionnaire and the interview results, the researchers arranged the prototype of academic writing material that can be viewed in Figure 4.
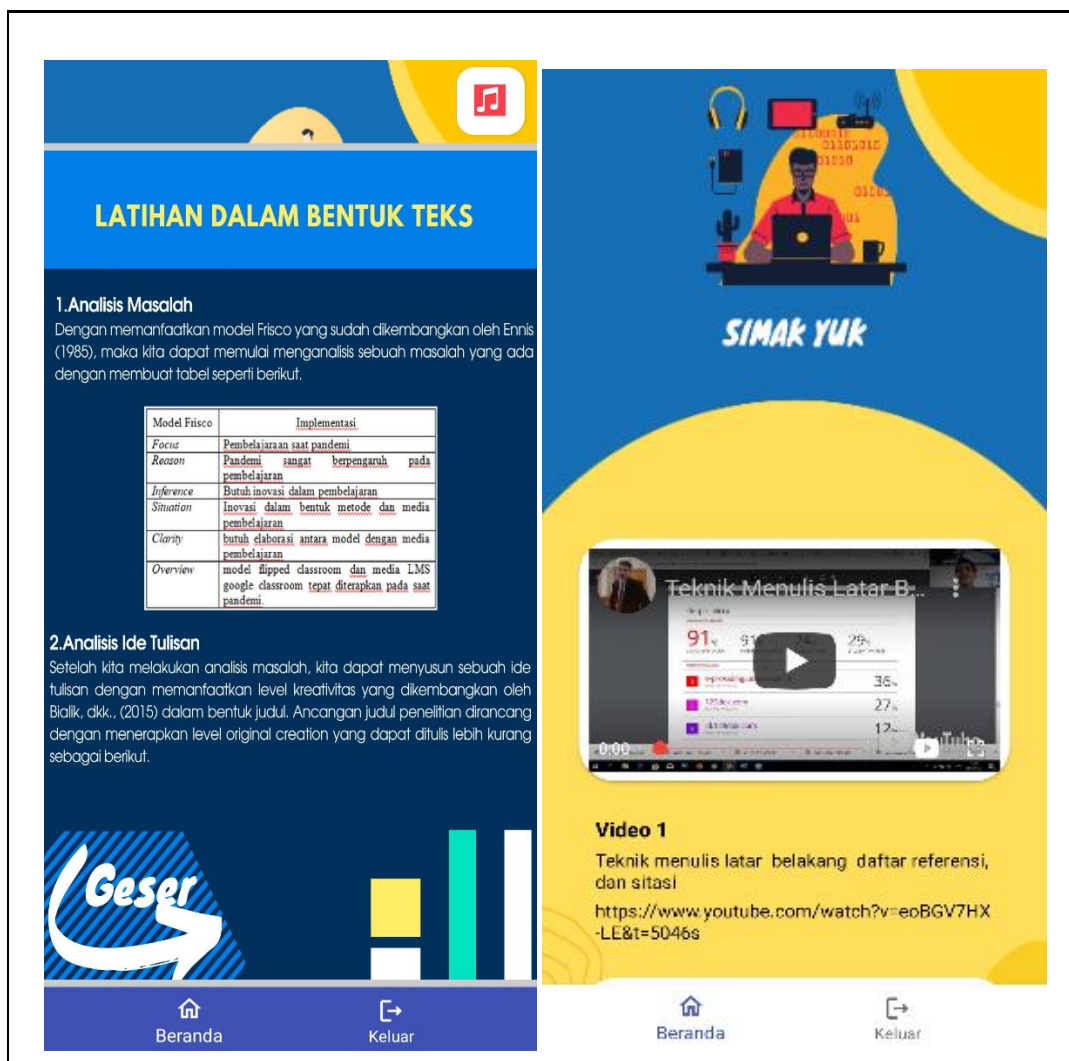
Translation: Exercise in form of text. 1. Problem Analysis. By utilizing Frisco model developed by Ennis (1985), we can start to analyze a problem by creating table. 2. Writing Idea Analysis. After we have analyzed problem, we can create a writing idea using creativity level developed by Bialik et al. (2015) in form of title. The future research title is planned using original creation level.

Figure 4. Prototype of Academic Writing Material

Based on Figure 4, the prototype of academic writing material needs to be added with several elements to increase the students' curiosity in writing skills. In figure 4, it can be viewed the table of the Frisco model which consists of the Focus, Reason, Inference, Situation, Clarity, and Overview stages. In the 'Focus' stage, it is stated that the learning process is carried out during the pandemic of COVID-19. In 'Reason' stage, it is stated that the pandemic of COVID-19 influences the learning process. In 'Inference' stage, it is stated that learning innovation is much needed. In 'Situation' stage, it is stated that the learning method and the learning media should be improved. In the 'Clarity' stage, it is stated that innovation is in form of elaboration between the learning model and learning media. In the 'Overview' stage, it is stated that flipped classrooms and Google classrooms can be implemented in the era of COVID-19.

The Presentation Systematics of Learning Material for Academic Writing Skill Needed by Lecturers

The need for presenting the learning material of academic writing skills was investigated using the question, "How is the systematic presentation of learning material needed in the academic writing skill?" The lecturers' responses can be viewed in Figure 5. The results of lecturers' responses are presented in percentage level which is explained later.
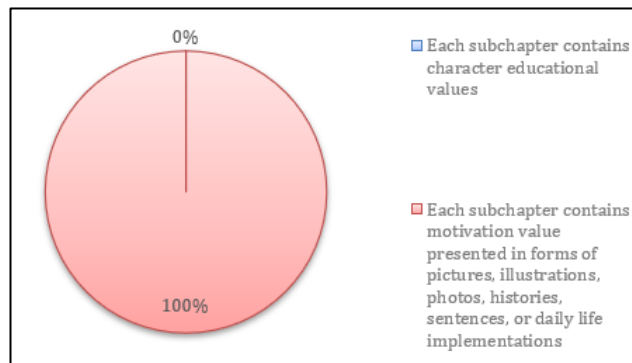
Figure 5. Lecturers' Responses to the Systematic Presentation of Learning Material

Based on Figure 5, the percentage of lecturers who answered that each subchapter contains motivation value presented in pictures, illustrations, photos, histories, sentences, or daily life implementations is 100%. The percentage of lecturers who answered that each subchapter contains educational character values is 0%. All lecturers agreed that each subchapter in learning material contains motivation value presented in the forms of pictures, illustrations, photos, histories, sentences, or daily life implementations. An interview was carried out to obtain the lecturers' reasons. The interview transcript with one of the lecturers is as follows:

R : "You answer that each subchapter in the learning material contains motivation value presented in pictures, illustrations, photos, histories, sentences, or daily life implementations. In your opinion, what kinds of photos or images must be added to it?"

L3 : "It can be an image of instruction to submit an article in a journal, illustrations in the form of flowchart or diagram, and the ways to paraphrase writing."

Based on the data from the questionnaire and interview results, the researcher arranged the prototype of academic writing material presentation that can be viewed in Figure 6. It can be viewed that in the stage of integrating idea and reference, it adopts four phases in reflective thinking by Rodgers (2002).
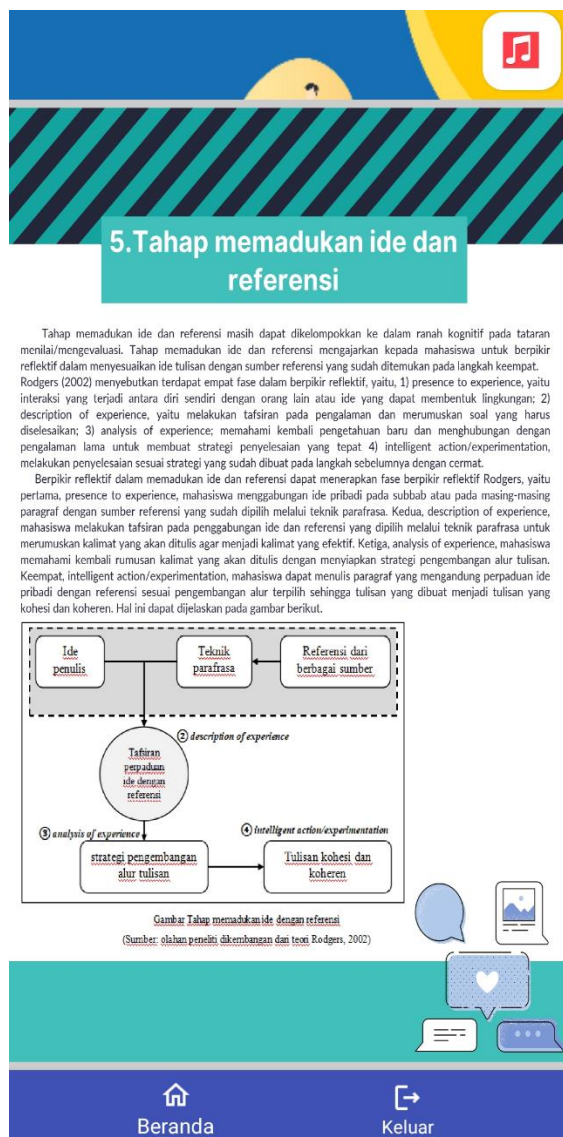
Translation: 5. Stage of integrating idea and reference. It is included into cognitive realm in evaluating. It educates students to thinking reflectively in creating writing idea and references. Rodgers (2002) states that there are 4 phases in reflective thinking, namely presence to experience, description of experience, analysis of experience, and intelligent action/experimentation.

Figure 6. The Prototype of Learning Material Presentation in the Academic Writing Skill

Based on Figure 6, the prototype of learning material has to follow the systematics of learning material which contains the motivation values presented in the forms of pictures, illustrations, photos, histories, sentences, or daily life implementations. Moreover, it attracts students' attention to learn.

The Language Use of Learning Material for Academic Writing Skill Needed by Lecturers

The need of language components in the learning material was investigated using the question, "How is the indicator of language use which is appropriate to the students' development level in the learning material of academic writing skills?" The lecturers' responses can be viewed in Figure 7. The results of lecturers' responses are presented in percentage level which is explained later.
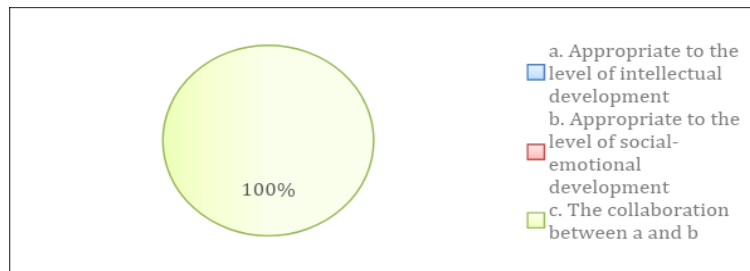
Figure 7. The Lecturers' Responses to the Indicator of Language Use Which is Appropriate to the Students' Development Level in the Learning Material of Academic Writing Skill

Based on Figure 7, the percentage of lecturers who answered that the indicator of language use appropriate to the students' development level in the learning material of academic writing skill has to be adjusted to the students' intellectual and social-emotional development levels is 100%. It can be said that all lecturers agreed that the indicator of language use appropriate to the students' development level in the learning material of academic writing skills has to be adjusted to the students' intellectual and social-emotional development levels. An interview was carried out to obtain the lecturers' reasons. The interview transcript with one of the lecturers is as follows:

R : "You answer that the indicator of language use appropriate to the students' development level in the learning material of academic writing skill has to be adjusted to the students' intellectual and social-emotional development levels. Why are both components important?"

L4 : "In my class, learning material is basically to help students understand the material easily. When its language use is adjusted to their conditions, it will help them to understand the material."

Based on the data from the questionnaire and the interview results, the researchers arranged the prototype of language components in the learning material for academic writing skills, which can be viewed in Figure 8.
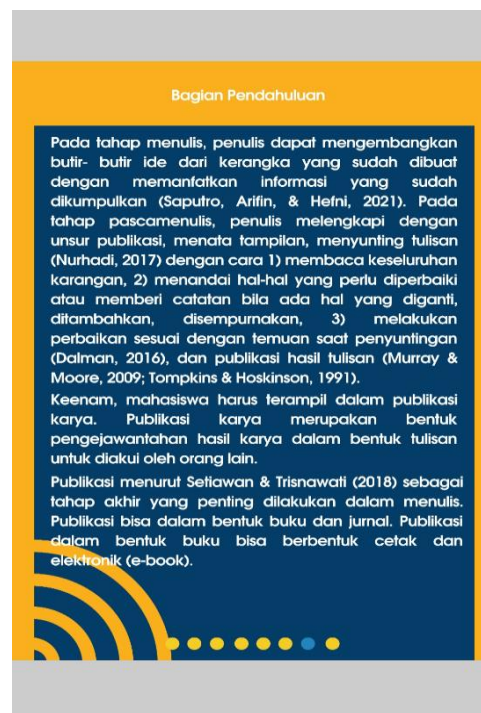

Translation: Introduction. In writing stage, the writer is able to develop ideas using the information collected (Saputro et al., 2021). In the stage of post-writing, the writer completes the publication elements, sets the appearance, edits writing (Nurhadi, 2017) by 1) reading all writing, 2) marking things that need to be revised, 3) revising (Dalman, 2016), and publishing writing (Murray & Moore, 2009; Tompkins & Hoskinson, 1991). According to Setiawan and Trisnawati (2018), publication is final stage in writing. It can be in form of book and journal. The book can be textbook and e-book.

Figure 8. The Prototype of Language Components in the Learning Material of Academic Writing Skill

Based on Figure 8, the prototype of language components in the learning material of academic writing skills is adjusted to the students' intellectual and social-emotional development levels. Figure 8 provides the information related to the nature of writing and publication based on experts' opinions.

The Evaluation Forms in the Learning Material of Academic Writing Skill Needed by Lecturers

The need for evaluation in the learning material of academic writing skills was investigated using the question, "How is the evaluation in the learning material of academic writing skill?" The lecturers' responses can be viewed in Figure 9. The results of lecturers' responses are presented in percentage level which is explained later.
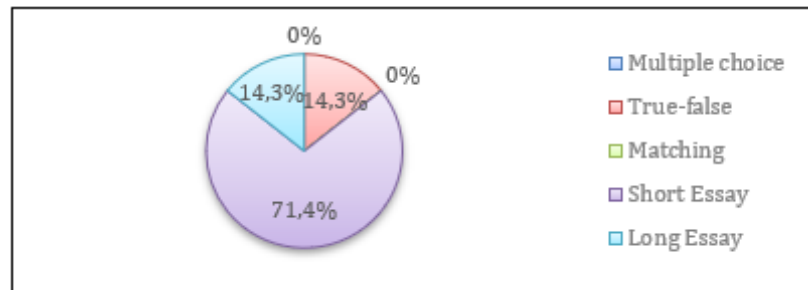
Figure 9. The Lecturers' Responses to the Evaluation of Learning Material

Based on Figure 9, the percentage of lecturers who answered that the evaluation of learning material has to be in the form of a short essay is 71.4%. The percentage of lecturers who answered that the evaluation of learning material has to be in the form of a long essay is 14.3%. The percentage of lecturers who answered that the evaluation of learning material has to be true-false is 14.3%. No lecturer answered that the evaluation of learning material has to be in the form of matching. An interview was carried out to obtain the lecturers' reasons. The interview transcript with one of the lecturers is as follows:

R : "You answer that the evaluation of learning material has to be a short essay. What are the advantages of it?"

L5 : "There will be a level of questions, Sir."

R : "What do you mean by level?"

L5 : "The level of questions starts from easy to difficult."

Based on the data from the questionnaire and the interview results, the researchers arranged the evaluation prototype in the learning material of academic writing skills which can be viewed in Figure 10. It shows the question number 8 from 10 questions provided.

Translation: Question number 8 from 10 questions. 8. Industry including shopping center and offices still need to conserve electricity for the next two to three months until the power supply problem is resolved. The government promises that the electricity crisis, especially in Jakarta and its surroundings, will end on December 19, 2009. The minister of industry confirmed this in Semarang, Central Java on Wednesday, November 10, 2009. This affirmation seemed to answer the complaints of the industrial sector, who said that they would suffer even more losses if the electricity crisis was not resolved immediately. This electrical problem must be resolved immediately, said Hidayat. The electricity crisis caused rotating blackouts in a number of areas. The production process of a number of industries was disrupted. The theme of the discourse above is?

Figure 10. The Prototype of Evaluation in the Learning Material of Academic Writing Skill

Based on Figure 10, the evaluation prototype in the learning material of academic writing skills is a short essay. The question number 8 requires students to read and understand the short essay provided.

The Main Menu Design of Learning Material for Academic Writing Skills Needed by Lecturers

The need for product specification in the learning material of academic writing skills was investigated using the question, "How is the main menu design of the application in the learning material of academic writing skills?" The lecturers' responses can be viewed in Figure 11. The results of lecturers' responses are presented in percentage level.
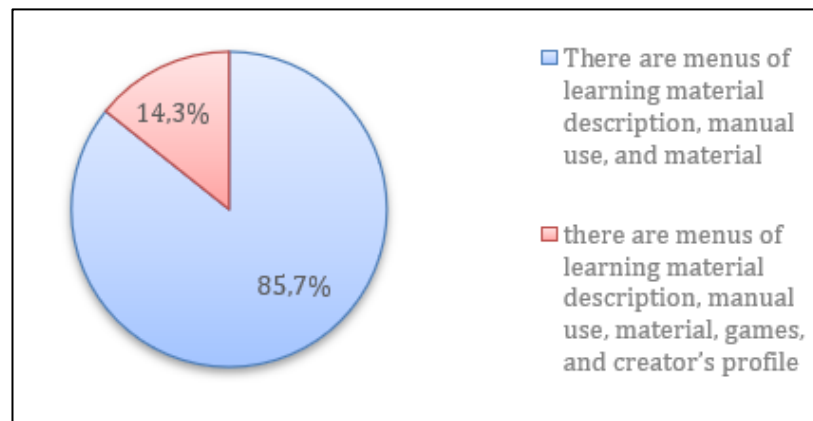
Figure 11. The Lecturers' Responses to the Main Menu Design of Application in the Learning Material

Based on Figure 11, the percentage of lecturers who answered that the main menu design of the application in the learning material requires the menus of learning material description, manual use, material, games, and creator's profile is 85.7%. The percentage of lecturers who answered that the main menu design of the application in the learning material requires the menus of learning material description, manual use, and material is 14.3%. An interview was carried out to obtain the lecturers' reasons. The interview transcript with one of the lecturers is as follows:

R : "You answer that the main menu design of the application in the learning material requires the menus of learning material description, manual use, material, games, and creator's profile. In your opinion, what kind of games can be added to it?"

L6 : "It can be animation-based games in compiling words."

Moreover, the researchers also interviewed one of the lecturers from a different university. The interview transcript is as follows:

R : "You answer that the main menu design of the application in the learning material requires the menus of learning material description, manual use, material, games, and creator's profile. In your opinion, what kind of games can be added to it?"

L2 : "I think it can be in the form of guessing the words, such as crossword puzzles."

The answers of both lecturers support the concepts developed in the learning material of academic writing skills. Based on those answers, it can be concluded that the games are compiling words. It will be one of the menus in learning material for academic writing skills.

Based on the data from the questionnaire and interview results, the researchers arranged the prototype of product specification in the learning material of academic writing skills that can be viewed in Figure 12.

Translation: Learning Material of Academic Writing Skill Oriented to Higher Order Thinking Skill. Instruction for Use. Learning Description. Introduction. Content. Closing. Games. References. Index. Glossary. About Author.

Figure 12. Prototype of Product Specification in the Learning Material of Academic Writing Skill

Based on Figure 12, the prototype of product specification in the learning material of academic writing skills will contain the menus of learning material description, manual use, material, games, and creator's profile. In figure 12, it can be viewed that it provides several icons which can be chosen by students.

The Way to Produce Learning Material of Academic Writing Skills Needed by Lecturers

The need for production components in the learning material of academic writing skills was investigated using the question, "What is the software that can be easily used to produce the learning material of academic writing skills using the application?" The lecturers' responses can be viewed in Figure 13. The results of lecturers' responses are presented in percentage level.
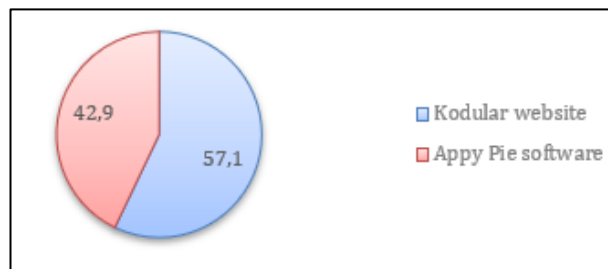
Figure 13. Lecturers' Responses on the Software Used in Producing Learning Material

Based on Figure 13, the percentage of lecturers who answered that the Kodular website could be easily used to produce learning material for academic writing skills is 57,1%. The percentage of lecturers who answered that Appy Pie software could be easily used to produce the learning material for academic writing skills is 42,9%. An interview was carried out to obtain the lecturers' reasons. The interview transcript with one of the lecturers is as follows:

R : "You answer that the Kodular website can be easily used to produce the learning material for academic writing skills. In your opinion, what are the advantages of the Kodular website?"

L7 : "This website is free and can be easily operated without coding."

Based on the data from the questionnaire and the interview results, the researchers produced the learning material for academic writing skills using the Kodular website, which can be viewed in Figure 14. It shows the prototype of production components in the learning material of academic writing skill.
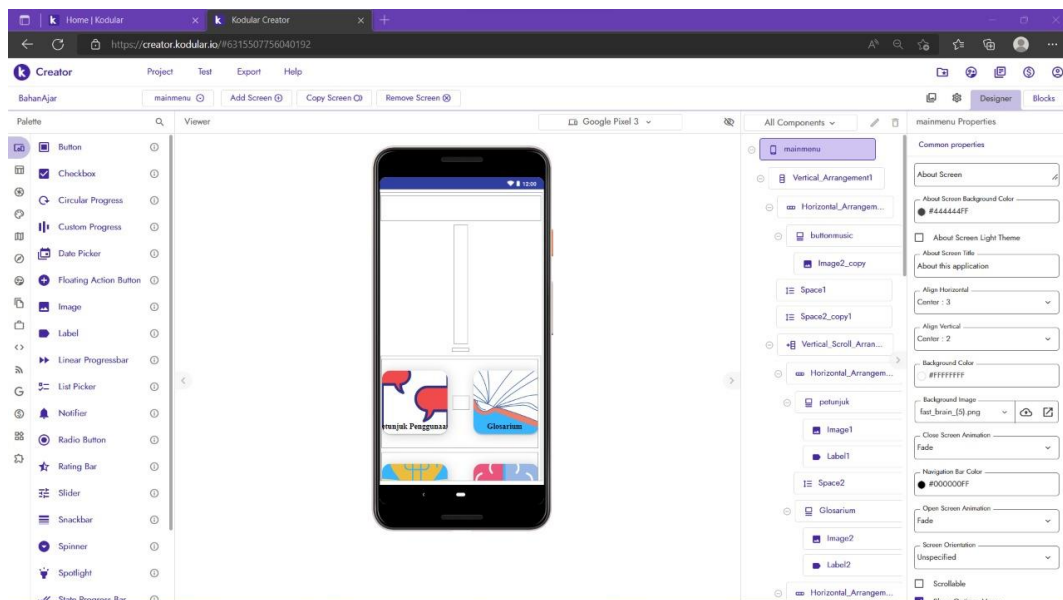

Figure 14. The Prototype of Production Components in the Learning Material of Academic Writing Skill

Based on Figure 14, the Kodular website is chosen to produce the learning material for academic writing skills because it can be operated easily. It provides several tools which can be utilized to create learning material.

Discussion

The academic writing skills learning materials were designed and developed based on instructional principles (Sarmadan, 2017) to meet the needs of students (Dick & Carey, 1994). Helaluddin and Awalludin (2020) and Hendriwanto and Mahaputri (2021) developed learning materials for academic writing skills. It has a positive effect on making learning more fun and achieving the goal of learning in the Indonesian language and literature (Ulumuddin, 2013).

This study highlights the needs of lecturers in the Indonesian language and literature department in the post-pandemic era in terms of learning materials for academic writing skills. The results of the study show that there are seven needs of the lecturers, namely 1) the form of the learning material, 2) the form of the material, 3) the presentation systematics, 4) the language use, 5) the evaluation form, 6) the design of the main menu, and 7) the way of production.

The first need is that the lecturers demand the learning material as an application. The current learning applications can help students complete the learning process anywhere and anytime to learn the learning material's objectives and

outcomes (Khaddage et al., 2016). Liu et al. (2018) also explain that using learning applications on smartphones results in high user satisfaction regarding learning content and context on smartphones. In addition, the use of applications as technology serves to support the era of Society 5.0, which is convenient, high-value, and active (Roring & How, 2022), as Millennial generations are reported to be more interested and active in using technology (Widyaningrum et al., 2022).

The second need is that the lecturers demand the material from YouTube. YouTube is a trending and popular website for sharing videos worldwide (Nason et al. in Bozkurt et al., 2019). In addition, it is also a form of helpful digitalization in education, which is a medium for providing material inside or outside the classroom (Srinivasacharlu, 2020). Therefore, lecturers can use YouTube videos to achieve learning objectives in the teaching and learning process because they can help to integrate the materials to make them more relevant to the students and implement them (Burke & Snyder, 2008).

The third need is that lecturers need presentation systematics with pictures. Pamela in Hallahan (2000) says that the use of prominent figures (picture, illustration, and photograph) or formal messages (history, sentences, and implementation in daily life) effectively serves as motivation for processing the material. The forms of pictures, illustrations, photos, histories, sentences, or everyday life implementations can be in the form of the latest multimedia using a computer system to share information or materials (Komalasari & Rahmat, 2019). Thus, the presentation and sharing of material can be more widely (Fang et al., 2006).

The fourth need is for lecturers to use language appropriate to students' intellectual and social-emotional development. The intellectual developmental stage consistently introduces the alphabet, sentences, paragraphs, writing skills, and written communication (Joseph & Konrad, 2009). The introduction links intellectual development and writing skills, as evidenced by the assessment of intellectual ownership through evaluating students' written forms (Lunsford et al., 2013). Students' written forms are evidence that language skill is built based on students' social-emotional development in the learning process, and development becomes a significant factor in improving other cognitive skills such as problem-solving, creativity, and mastery of language skills (Burrington, 2006).

The fifth need is that the lecturers want the evaluation in the form of essays. Miller (2003) states that a short essay is a test with the best quality to measure students' knowledge because it requires coherent answers after compiling, analyzing, synthesizing, and merging information. Moreover, it can help students to think critically and logically when expressing their opinions and making decisions (Noroozi et al. in Haro et al., 2019). It also becomes a test with the most straightforward question asked by the educator (Hamdi et al., 2018).

The sixth is that the lecturers need the main menu from the description of the learning material to the creator's profile. These menus support more systematic learning and allow lecturers to easily guide students when they make mistakes (Ariyana et al., 2022). The manual use, material, and creator profile menus help explain the operation, provide material, and give information about the creator (Pratiwi & Setiana, 2022). The game menu is an additional activity that interests students (Koh et al., 2012).

The seventh need is that the lecturers demand a way to create them using the Kodular website. Using the Kodular website can create an electronic learning product that can be used anywhere (Sarita et al., 2021). Hasibuan et al. (2022) indicate that producing learning materials using the Kodular website creates an efficient, interesting, and interactive learning medium that helps students achieve their learning goals. Kodular-supported learning materials allow students to learn independently (Fauziyah et al., 2022).

Kamariah et al. (2018) conducted a previous study on learning materials, revealing eleven essential needs in developing learning materials. The previous research is similar to the three needs of lecturers in learning materials, including the need for learning materials, presentation systematics with pictures, and language use appropriate for students' intellectual and social-emotional development. This study differs from previous studies because it adds four new needs to the findings in the literature. They are the form of the material, the evaluation form, the design of the main menu, and the way the learning material is created. These seven needs are the reason for the researcher to develop the prototype of the learning material for academic writing skills so that the Indonesian language and literature department lecturers can use it in the post-pandemic era. In addition, this study also differs from the study by Putra and Pamungkas (2019). In that study, lecturers required instructional materials that could be installed on devices, whereas Putra and Pamungkas' (2019) research created printed instructional materials.

The research conducted by Friginal (2013) is similar to this study: Writing skills and instructional materials can spark students' interest in language learning. The language in academic writing skills required by lecturers in this study is adapted to intellectual development and socio-emotional students.

Conclusion

The study results show that the academic writing skills for learning material to be developed consist of the needs of seven lecturers in the Department of Indonesian Language and Literature, four of which were conducted in the previous research. The results of this study add more knowledge and information about the needs in composing the

prototype of the learning material. The lecturers or other researchers can use the seven needs in composing the prototype of the learning material for academic writing skills, such as the needs on the form of the learning material, the form of the material, the presentation systematics, the language use, the evaluation form, the design of the main menu, and the way to produce it.

Recommendations

Based on these findings, the seven needs of the lecturers in this study can be merged with the aspects of students' Pancasila profiles and local wisdom in composing learning materials. They can also be combined with the need for a publication to produce more maximized learning materials. The results of this study can be used in designing learning materials for other subjects/courses so that the learning materials in the university can be more developed and diverse.

Limitations

This study has limitations regarding the sample. The sample is lecturers of the Department of Indonesian Language and Literature who taught writing skills. Therefore, it is not aimed to generalize the data. The data obtained from the sample helped the researchers describe the things needed in the learning material for academic writing skills.

Authorship Contribution Statement

Hasanudin: Conceptualization, design, analysis/interpretation, and writing. Subyantoro: Conceptualization and final approval. Zulaeha: Reviewing and supervision. Pristiwati: Reviewing and critical revision of manuscript.

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