Expert Validation and Students’ Initial Field Trial Responses toward M-Write Academic Essay Writing Application

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Abstract
Proficiency in academic writing is still a problem for many students because there are no such digital learning media that can facilitate academic writing practices. Considering this issue, this research tried to develop an M-Write application, a web-based learning media that combine metacognitive skill and process-genre approach. This paper aims to determine the feasibility level of M-Write. The method used in testing the feasibility of this product includes the alpha test and beta test. The alpha test was carried out by three English Education experts; each of them assessed the aspects of the content, language use, and design. While the beta test was carried out by 25 students of the Computer Science Faculty in one of state universities in East Java. The data collection technique was done by using a questionnaire and interview. Data analysis was carried out using quantitative descriptive techniques. The results of expert validation analysis indicated that the M-Write application reached appropriate criteria in terms of content, language use, and design aspects. The percentages of each of these aspects are 71.9%, 73.3%, and 71.9%. The initial field trial by students also showed that the application was appropriate to be used with an average percentage of 75.9%.

Keywords: expert validation, students’ responses, M-Write, writing application

Introduction
Academic writing is writing in an academic manner for academic purposes. It aims to produce a scholarly scientific piece of paper which contribute to the body of knowledge or science. Ideally, academic writing has a formal, systematic structure and uses scientific language. In academic writing, the writers are advised to avoid language that is emotional, inciting, or biased (Oshima & Hogue, 1994).
The writing format of an academic writing may vary depending on the discipline. Generally, academic writing is composed by lecturers, researchers, and students at universities as requirements of their graduation. Therefore, university students should be proficient in academic writing, both in Bahasa Indonesia or English.

Unfortunately, academic writing in English is seen as an obstacle and being feared by most of students. Yoon (2008) noted in her study that these students are lack of confident in writing using academic English, lack of model as well as exercises, poor time management and confuse to start the writing. Even so, they must still be able to write academically. As a consequence, they can only produce works of inferior quality.

To observe the actual condition of the students, the researchers conducted a preliminary research. It was found that unfavorable conditions were experienced in many of academic writing classes (Kwak, 2017; Rakedzon & Baram-Tsabari, 2017). To name but a few, the lack of face-to-face time to accommodate the process of writing activities (Aliweh, 2011; Moloudi, 2011), lack of ability to utilize learning resources (Holmes et al., 2018), lack of media to facilitate students' writing exercises (Bilal et al., 2013), and less involvement of the cognitive process to improve the writing quality (Knox, 2017).

Several previous studies have tried to provide alternative solutions to these problems, including the involvement of metacognition (Bassett, 2016; Negretti, 2012; Negretti & Kuteeva, 2011), process-genre approach (Knox, 2017), and developing online learning media (Åberg et al., 2016). However, the recent majority research were still limited to the provision of certain treatments to improve the quality of academic writing and were presented separately. No media that combines process-genre approach, metacognitive skills practices and digital learning in one platform has yet been found.

For these reasons, this research was conducted to develop and validate the feasibility level of M-Write. M-Write is a web-based digital application that can be used as a learning media to guide the students’ academic writing process. It integrates process-genre approach and metacognitive skills stimulation in the form of problematized scaffolding. The formulation of the problems in this development research is:

How is the properness of the digital application product has been developed based on the experts validation and students’ initial field trial assessment/responses?

**Characteristics of the Process-Genre Approach in Writing Classes**

There are some approaches in teaching writing, such as the process approach, the product approach, and the genre-based approach. The first focuses on how the text is written,which including the writing process (pre-writing, composing, revising, editing, and so on) while the second emphasizes the written product of the author and overrides the skills required to produce the text. The third, genre-based approach concerns on the purpose, linguistic features and particular generic structure to create a coherent composition. Each of them has advantages and disadvantages. Hence, there is an idea to combine two or more approaches to get the optimum results, like process-genre approach.
The process-genre approach in writing learning is an approach that combines the positive values of the three existing writing approaches, namely the product approach, process approach, and genre-based approach. In other words, this approach sees the writing process as knowledge of language as in the theory of genre-based approach, knowledge of the context as in the genre-based approach theory, and skills in using language such as in the process approach (Badger & White, 2000). This approach is also known as 'a process-product hybrid' (Tangpermpoon, 2008). Through the process-genre approach, it is hoped that student learning outcomes will be better than if the three approaches were implemented independently. Several studies indicated that the implementation of the process-genre approach can improve students' writing skills and awareness (Zhang, 2018), as well as effective for teaching writing introvert and extrovert students (Sumarno, 2015).

This writing platform will apply the process-genre approach procedure from Yan (2005) by combining it with the stages of writing academic writing from Oshima & Hogue (1994), namely pre-writing, planning/outlining, and writing and revising.

**Definition of Metacognitive Skills and Problematized Scaffolding**

Metacognition ability is the ability to be aware of what one is doing or thinking what to think (Flavell, 1979). By realizing what they are doing, students will reflect on what they have done with the theory they have learned so that the quality of their writing will increase. Many studies show that the more skilled students use metacognition skills, the higher academic achievement will be (Chekwa et al., 2015; Jaleel & Premachandran, 2016). Furthermore, many writing researchers state that activating metacognition is one of the important things to improve students' writing skills (VanKooten, 2016). However, there are few studies exploring the role of this metacognitive ability in writing classes. Therefore, the writers try to show the positive influence of metacognition in writing instruction.

One of the strategies to insert metacognition in the writing instruction is by delivering problematized scaffolding to the students. Problematized scaffolding refers to some questions that are given to stimulate the meta-thinking or reflection process of the students. These questions should be answered prior to performing each step of writing process. By getting used to it, the students will hopefully be able to instill their own self-reflection or metacognition whenever composing a paper.

Sumarno (2019) conducted a research to see the role of problematized scaffolding in an online writing class. She found that this scaffolding is useful and helps the students get better results. Faraj (2015) has also carried out a study that aims to present the effect of teacher scaffolding and the writing process on the writing ability of EFL students. This study concludes that the teacher's writing process and scaffolding have met the students' needs thus significantly improving
their writing skills. This means that any kinds of scaffolding are beneficial to use for novice writers.

This application tried to combine the positive role of problematized scaffolding in stimulating the metacognitive skills and the advantages of applying process-genre approach in the academic writing classrooms.

**Academic Writing Courses**
McWhorter (2006) mentioned some organizational patterns in academic writing, namely chronological/process essay, cause/effect essay, comparison/contrast essay, and argumentative essay. These patterns are different for their social function, generic structure, and linguistic features. In the university, the students will learn these four patterns in an academic writing course or a General English course. Through academic writing courses, the students can learn how to think critically in academic discourses and put their thoughts in the form of a scholarly article with the proper pattern. Academic writing is deemed necessary for university students (Ratnaewati et al., 2018). In other words, academic writing plays a significant role in students' educational purposes.

**Digital Writing Platforms**
Digital vibes has changed many aspect of life including education (Sumarno et al., 2017). Fatimah (2018) asserted that academic writing was still delivered traditionally. Students still listen while the teacher is explaining. Then, the students do the tasks. That could make academic writing boring and not interesting to follow. In addition, from a study conducted by Anisa & Widayanti (2019), students often face difficulties in academic writing. Therefore, the teacher should find a more interesting way to learn academic papers to be more actively involved. In addition, there should be an improvement in methods, technologies, and applications that enable the students to remember academic writing differently and excitingly; one of them is by using technologies and digital applications in developing writing.

Handayani & Handayani (2020) also utter the importance of online writing tools and platforms. They suggested the teacher to use writing tools in class and tell the students to be familiar with them. If the teacher and students can realize it, it will benefit distance and online class activities. Some platforms enable the students to learn academic writing, such as Grammarly, pro writing aid, Free Mind, Edusson, Focus Writer, etc. The development of digital writing applications and platforms continues as the need to learn academic writing also increases. There are some advantages to using digital writing platforms. Topacio (2018) asserted that it helps the teacher provide sources for students in the forum by just clicking the link. In this way, the students will have many resources and references that they can easily access. In addition, by using the platform, the students can also find their writings and interact with other writers or students who give inputs and suggestions to the shared report. Hewett (2006) stated that this process could help students who are often shy to share their writing in class to be more open with their writing work and share it on the internet and virtual space. In addition, students can find the internet as a space to explore their writing creativities and skills (Hyland, 2003).
Furthermore, as Strobl et al. (2019) stated in their study, the students use the platforms and tools to learn academic writing aspects that have not been covered or explained by the teacher in class. In other words, the students need and use the platforms or tools as they lack class time with their teachers to study academic writing skills. The media may also be beneficial for them to learn academic skills and style of learning, as needs and time for studying academic writing are different for every student.

The further benefit of digital writing platforms and tools is to make students more autonomous in learning. Dahlström (2019) divided the perspectives of digital writing tools affordance into four, Write-ability, edit-ability, story-telling ability, and accessibility. From those four divisions, it is revealed that the students can be more independent in developing their writing styles, interactions, stories, languages, focuses, and ideas in writing. It also trains them to be more creative in writing. However, the teacher should also consider whether or not the students can have the same opportunities in making use of the platforms and tools.

**Method**

The method used in this study was adapted from Thiagarajan et al. (1974) Research and Development (R and D) model. Based on this model, there are four stages to follow, namely define, design, develop, and disseminate. This article discussed only the develop stage, especially the validation from the experts and the early/initial field trial. The results of this paper will be considered for the next stage of the model, which are revision and advanced field trial in the dissemination stage.

In develop stage, the researchers and technicians developed a web-based learning media, called “M-Write”, based on the existing experiences, potentials, and conditions. Then, the application has been developed was assessed with the following procedures:

1. Product feasibility analysis by a team of experts

The expert team consists of three (3) English education experts who were judged in terms of material or content, language use, and design. To analyze the collected data, the researchers conducted an Alpha test. The results of this validation were then interpreted based on the media eligibility criteria by Arikunto (2010) as follows.

<table>
<thead>
<tr>
<th>Percentage Points</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>81 - 100%</td>
<td>Very Appropriate</td>
</tr>
<tr>
<td>61 - 80%</td>
<td>Appropriate</td>
</tr>
<tr>
<td>41 - 60%</td>
<td>Quite Appropriate</td>
</tr>
<tr>
<td>21 - 40%</td>
<td>Less Appropriate</td>
</tr>
<tr>
<td>0 - 20%</td>
<td>Not Appropriate</td>
</tr>
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</table>
The expert team also provided input via interviews which were analyzed descriptively after the questionnaire results interpretation.

2. Initial Field Trial
This trial stage includes initial product trials and supporting equipment in the laboratory. The equipment used in this stage is precisely the same as will be carried out in subsequent tests. This stage involved twenty-five students of the Faculty of Computer Science in one of state universities in East Java to test and give responses through 1-5 Likert scale questionnaires and interviews.

The data were gained using a questionnaire. To analyze the data, a beta test was carried out. The results of the questionnaire were analyzed descriptively and interpreted based on the criteria of students’ responses by Arikunto (2006) as follows. The descriptive analysis was also done to the interview afterward.

<table>
<thead>
<tr>
<th>Percentage Points</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>91 - 100%</td>
<td>Very Good</td>
</tr>
<tr>
<td>61 - 90%</td>
<td>Good</td>
</tr>
<tr>
<td>41 - 60%</td>
<td>Quite Good</td>
</tr>
<tr>
<td>11 - 40%</td>
<td>Poor</td>
</tr>
<tr>
<td>0 - 10%</td>
<td>Very Poor</td>
</tr>
</tbody>
</table>

Findings and Discussions
This paper intends to analyze the stage of expert validation and initial field trial. These two stages are conducted prior to the actual classroom trial. The results of expert validation measure three aspects, namely material/content, language, and design. The elements in the content aspect are product relevance, accuracy, updates, and curiosity building. The results of expert validation on the content aspect are shown in Figure 1.

Figure 1. Experts Validation Results on the Content Aspect
Figure 1 shows that the average percentage of content aspect validation is 71.9%. From these results, it can be concluded that the material or content of the M-Write application is suitable for use as an academic essay writing media. To see in more detail, in terms of the product relevance element, it is noted that the application is “very appropriate” to use with a percentage of 86.7%. A similar result is also shown in the ability to build curiosity elements with the percentage of 83.3%. Meanwhile, regarding the accuracy and product updates, this application is validated as quite proper with a percentage of 57.8% and 60%, respectively.

Furthermore, expert validation for the language aspect includes five elements, namely straightforwardness, communicative language use, dialogic language, conformity with the time development, and conformity with the rules. The results of expert validation on the language aspect are shown in Figure 2 below.

Figure 2 shows that the average percentage of expert validation on the language aspect is 73.3%. From these results, it can be concluded that in terms of language use, the M-Write application is suitable for use in classroom practices. All of the elements in the language aspect get appropriate criteria, with 80% for the element of directness, 73.3% for the communicative element, 66.7% for the dialogical element, 73.3% for the element of conformity with time development, and 73.3% for the element of conformity with the rules.

The next expert validation assessed the design aspect of the media which includes elements of presentation techniques, support, efficiency, graphics, and buttons. The results of expert validation on design aspects are shown in Figure 3.
Figure 3 shows that the average percentage of expert validation on the design aspect is 71.9%. These results indicate that the design of the M-Write application get appropriate criteria. In detail, in terms of the presentation technique, it shows that the media are very feasible with a percentage of 86.7%. Meanwhile, in terms of efficiency, graphics, and button function, it is in an appropriate category with the percentages of 68.3%, 76.6%, and 70% respectively. However, for supporting elements, this application is categorized as quite proper with a percentage of 57.8%.

Insightful comments were gained from the interview session with the three experts. Their suggestions are important for the development of the media in the next stage. Overall, all of the experts appreciate the effort of the researchers that have successfully brought up the materials of problematized scaffolding to improve students’ writing skills which are rare in Indonesia. One of them even said that “This application obviously meet my needs to record all of the students’ writing process in an all-in-one system.”

Regarding the content, the three experts agreed that the app is good as it has already given various examples and hints to help students write. The problematized scaffolding in the form of questions is relevant to each step of writing and relatively simple. However, one of them argued that “For better scaffolding, I wonder if it is possible to scaffold students from the basic writing steps, such as providing mentor paragraph/mentor sentences (models of high-quality writing for students) in the forms of smaller pieces. Deconstructing a large piece of writing into smaller parts is at the heart of scaffolding; so, I wonder if the app can also convey these basic steps before the students jump into the creation of a full draft with some pre-writing activities.” Another expert
also suggested that the theme for the essay example in the hints should be a more student-related topic.

In terms of language use, the three of them are like-minded, saying that the language app should be short, concise, and communicative. Therefore, they suggest that the questions in the scaffolding should be broken down into some shorter sentences. They also said “The scaffolding calls for patience, and baby steps piece-by-piece from the lecturer to the students. Try to avoid rushing, or bombard students with series of questions, even they are in the form of sentences or apps. When we teach writing, we might want to show the best examples of writing.” Besides, one of them also found a few grammatical mistakes and ask for revision. Another expert also recommended more interactive words that are motivating, such as “Well, done! You’ve completed the preparation stage!”

In regard to the design aspect, the experts agreed that the application is simple enough and easy to use. Yet, they said that improvement to each button function is necessary. “The background color and font type are good enough.”, they add.

Student responses to the M-Write application include five elements, namely usefulness, ease of use, language, functionality, and attractiveness of appearance. Student responses to the M-Write application are shown in Figure 4 below.

![Figure 4. The Students’ Initial Field Trial Responses](image)

Figure 4 shows that the students’ responses toward the M-Write application are in good criteria with a percentage of 75.9%. All of the elements in the student’s response, namely usefulness, ease of use, language, functionality, and attractiveness of appearance, are in good criteria, with the percentage of 78% for usability, 72.9% for ease of use, 74.1% for language, 75.9% for functionality, and 72.9% for attractiveness.
Almost all of the students responded that M-Write is the first platform that they ever used to facilitate their process of writing practices. They said, "It was amazing that now we can do each step of writing practices online, remembering that the time for these are limited in the class." They also argued that the web is simple enough to make them understand and use it. Furthermore, they hope for motivating words added in each step of assignments they have accomplished and more interactive pictures in the hint. Yet, overall, they agreed that this application can be used in the class.

Based on the analysis above, it can be said that M-Write has solved some of the writing class obstacles, namely the lack of face-to-face time to accommodate the process of writing activities (Aliweh, 2011; Moloudi, 2011), lack of ability to utilize learning resources (Holmes et al., 2018), lack of media to facilitate students' writing exercises (Bilal et al., 2013), and less involvement of the cognitive process to improve the writing quality (Knox, 2017). With this platform, which is evaluated as “appropriate” by both expert validators and students in the initial field trial, the very limited time allotment for students’ practices in each step of writing can be facilitated. Although it is conducted online, control guidance by the teachers will help. Besides, the problematized scaffolding in the form of questions and hints in every step of the writing process before doing the assignment has also facilitated the involvement of the cognition process to improve the writing quality. Hence, the search for learning resources and media for writing classes that combine process-genre approach, metacognitive skills practices, and digital learning in one platform can be found in M-Write.

Furthermore, the validators’, as well as the students’ suggestions for the improvement of the application in the interview sessions, are valuable and helpful. The researchers will consider them when revising the media in the next stage before the advanced trial or actual classroom trial. Although the current application has been proper enough to be used, revision is necessary for a better dissemination stage result.

Conclusion
Based on the results, analysis, and discussion, it can be concluded that the M-Write application is suitable and proper for use as a medium for academic essays courses. The evaluation of the content, language use, and design aspects carried out by the expert validators, as well as the responses of the students indicated that the M-Write application is feasible for use. Suggestions gained from the interview are precious and will be considered in the next stage, the dissemination stage.

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