Teaching of Scientific Articles Writing Based on Blended Learning

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Abstract. Scientific article writing is an output-based skill that must be learned by students in higher education. Students' scientific articles are based on observations, investigation, and literary studies, and they must adhere to Bahasa Indonesia regulations. Students acknowledge that it is difficult to find topics for scientific papers, synchronize primary concepts with issues, and have a practical habit of modifying quotations and opinions of others. Therefore, a mixed learning strategy is required to assist students in writing scientific articles. During the COVID-19 epidemic, the adoption of blended learning gives an alternative method for overcoming student difficulties in writing scientific articles. The method of research employed is qualitative. Based on the findings of the study, it was determined that the deployment of blended learning-based lectures on writing scientific articles was effective. Some students conduct face-to-face lectures in the classroom, while others study online from home using the Microsoft Teams 365 function. In teaching students how to compose scientific articles, lecturers utilize blended learning components. First, face-to-face lectures are rotated based on odd-even student identification numbers (NPM). Students who are physically present in class for odd meetings have an odd last number on the NPM, and vice versa. Second, the utilization of e-learning to access lecture materials and lecture reference sources is highly effective for students. Students are permitted to download programs related to writing scientific articles, such as the KBBI V application, Pedoman Umum Ejaan Bahasa Indonesia (PUEBI), and paraphrase. This makes mobile learning a highly useful tool. In addition, the use of mobile learning as a highly effective communication medium between professors and students and among students, particularly through WA groups, is gaining popularity. The study found that face-to-face learning was more active than internet learning. Moreover, students' learning motivation is greater for face-to-face learning than for online courses.

Keywords: scientific · article writing · blended learning

1 Introduction

Accepting the era of society 5.0, scientific publications employ learning technology to assist pupils in comprehending learning resources. Utilizing technology effectively

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enhances the learning process to produce effective and thorough learning. Students also monitor technological advancements so that they can confidently access journals, proceedings, e-books, book chapters, and other reference materials according to their individual needs. This technology facilitates the learning process of writing scientific articles, allowing students to become more skilled in producing scientific articles according to the systems of writing. Students can write scientific papers based on the outcomes of observations, experiences, literature studies, or mini-research that they do in accordance with the writing technique [1].

It is also in line with the optimization of campus facilities to support the implementation of learning to write scientific articles based on blended learning, the provision of a 24-h wi-fi network, the use of Microsoft Teams 365 accounts, the existence of e-learning http://elearning.upbatam.ac.id and a repository http://repository.upbatam.ac.id which can be accessed freely by students. These resources are used during the learning process to create scientific articles that combine face-to-face and online learning [2].

Students are encouraged to become more technologically savvy as a forum for students to find topics and express ideas practically and creatively, and learning to write scientific articles is done in an engaging manner [3]. Writing scientific articles is becoming increasingly popular among students and can provide benefits [4] because it corresponds to the curriculum with Merdeka Belajar Kampus Merdeka (MBKM). Students create published journals, seminar proceedings, and book chapters from scientific articles. As a result, learning to write scientific articles in general courses at universities based on blended learning becomes the basic foundation for students to apply in their field of science. Blended learning also creatively connects technology and can meet pedagogical needs during learning [5]. Using this blended learning method can help students comprehend the material [6].

Campus facilities are very technologically supportive, as are students' technological skills. This is consistent with the use of the blended learning method, which allows students to have flexible time during the learning process [7, 8]. However, students admitted that it was difficult to find scientific article topics while learning to write scientific articles. Lecturers have directed students to be able to find and contextually analyze the topic of scientific articles. In fact, students are constrained by the difficulty of locating the topic of the scientific article. Students' topics will also be developed into titles and scientific articles that will be published in journals with OJS or e-proceedings.

Furthermore, once students have identified an appropriate topic and title, they must align the main idea with the topic. The title and the scientific article must match in order to be consistent with the systematics of writing scientific articles. Students admit to developing paragraph by paragraph in order to produce high-quality scientific articles for publication in SINTA-accredited journals and other online journals.

Furthermore, students have a habit of committing plagiarism by adapting quotes and opinions from others. Students are only allowed a maximum of 20% for plagiarism in the systematic assignment of scientific article writing. In essence, paraphrasing can be done so that plagiarism is not detected. Using the blended learning method can help students overcome these issues and become proficient in writing scientific articles.

Blended learning is an intriguing approach that combines in-person and online learning. During a pandemic, the blended learning method is extremely effective for learning

to write scientific articles [9] because it can limit the number of students who attend class alternately at each meeting and reduce crowding by adhering to the government of the Republic of Indonesia's health protocols. [10] the purpose of blended learning is stated to be to help students develop better in the learning process based on their learning styles and preferences in learning; to provide practical-realistic opportunities for lecturers and students to learn independently, be useful, and continue to grow; and the schedule can be completed independently. By combining face-to-face lectures with online learning, you can be more flexible.

Students complained about online learning when they first started learning to write scientific articles. Students complained about the unstable internet network in their respective homes and the large amount of internet quota usage when using a cellular data package, according to the results of interviews and information obtained from them. When students listen to information and materials delivered by lecturers online, they become disjointed, making them less effective at the start of learning. Learning materials in the form of scientific article definitions, systematic writing, and writing quotes [11]. However, as online learning has been implemented, kids have begun to adapt to it and stop griping about it. The use of blended learning serves as a framework for overcoming student challenges and achieving success in learning to write scientific articles.

Learning to write scientific articles in a hybrid format can help Putera Batam University students complete their lecture material delivery. Blended learning combines the material delivered by conventional classes into synchorous and asynchorous virtual classes, applies competencies in the form of skills, can participate in learning anywhere and at any time, and has the desire to be part of a learning community [12].

Students are directed to understand scientific articles, the characteristics of scientific articles, technical writing, and student publications during face-to-face learning. Guided students can consult with lecturers who support courses in person or online. This is done to ensure that students do not encounter any difficulties while learning to write scientific articles. E-learning is also used to support the implementation of blended learning. In e-learning, the menu consists of material slides for each meeting, and students can collect their assignments. Students can better understand the material by using the material that has been uploaded to e-learning. In a hybrid setting, students can download and comprehend the lecture material prior to the start of the lecture.

Furthermore, the blended learning component of mobile learning provides students with access and convenience. Students, in general, already have an android to confirm and coordinate their lectures. Students are instructed to download the KBBI V application, general Pedoman Umum Ejaan Bahasa Indonesia (PUEBI), paraphrase, and other applications that will help them learn to write scientific articles. According to [10] states that the nine advantages of m-learning are that there are more, cheaper, and sophisticated means, adapted to the development of wireless/cellular technology (2G, 3G, 4G), the demands of needs, especially in the field of education, ease of use anywhere and anytime, increasing student participation because m-learning utilizes technology that can be used in everyday life, interactive applications that can be downloaded easily and free of charge, and cost savings in communicating.

Based on this phenomenon, more research is needed to assist students in overcoming their difficulties in learning to write scientific articles. We hope to be able to create interactive learning using the latest technology with the help of blended learning. Blended learning plays an important role in keeping up with technological advancements in order to apply mixed learning in the form of face-to-face and online learning [13]. The use of blended learning makes learning to write scientific articles more interesting for students. Furthermore, it fosters intimacy between lecturers, students, and fellow students.

2 Method

The study employs qualitative methods. The study subjects were 26 students from the state administration study program for the academic year 2021–2022. Triangulation techniques, such as observation, interviews, and documentation, were used in the research instrument. The triangulation technique is used for data collection. The data analysis technique entails analyzing the observations made during the learning process in order to write scientific articles, analyzing the interview format given to students in the classroom, and obtaining documentation during hybrid learning.

3 Result and Discussion

Learning to write scientific articles in accordance with the university curriculum for Bahasa Indonesia courses. Learning to write scientific articles is a requirement for students, as is completing course assignments. Writing scientific articles that present facts in concrete language and use formal language styles [14]. The learning process for writing scientific articles is conducted in-person and online using blended learning. The implementation of blended learning presents a challenge for lecturers, students, and universities, particularly in terms of providing technology as a learning capital based on blended learning [15]. At the 12th and 13th meetings, students are taught how to write face-to-face scientific articles. Students are expected to comprehend the material on writing scientific articles, including the characteristics of scientific articles, writing requirements, and writing procedures. Students are also instructed in class to first read the journals that will be cited and used as a reference source in writing scientific articles.

Students are instructed to use Google Scholar and reputable international journals as reference sources when reviewing student journals. According to the student's confession, they were unable to access international journals because they needed to translate from English to Indonesian. However, this did not prevent students from producing scientific articles during the research. Students actively and intensively participate in the learning process. Students learn to write scientific articles with the help of lecturers who act as facilitators.

Students are instructed on how to write scientific articles in accordance with scientific principles and practical methods of writing them during face-to-face lectures. Lecturers give directions in front of the class, which students who lecture online via Microsoft Teams 365 can hear. Using this blended learning method can help students' creativity, especially when learning to write scientific articles [16].

Based on the findings of student interviews, students are also assisted in accessing and registering scientific articles in online journal publications. Students understand the publishing process and the direct implementation of journal publications. This delivery occurs during face-to-face learning and is also provided to students who study online from the comfort of their own homes. Furthermore, lecturers deliver information for publication services to students via WA groups or androids owned by students, so communication is not only direct but can also be done online with this learning method.

Students benefit from e-learning because they can access learning materials on their own time. Students also feel at ease in front of the computer for extended periods of time. E-learning does not replace traditional learning models, but rather strengthens them through content enrichment and educational technology development. E-learning is intended to be appealing, simple, personalized, and quick. According to [17], e-learning serves as a supplement (additional), complement, and substitution (providing an alternative flexible learning model) [10]. The use of e-learning during the COVID-19 pandemic is extremely beneficial in terms of learning because it can assist students during an emergency [18].

Students use their Androids as a form of mobile learning component while learning to write scientific articles. Learning is carried out efficiently and effectively [19] and has the potential to increase long-term teaching resources, which is very interesting [20] because students can access lecture materials, reference sources, and other things that aid in the learning process. The use of mobile learning as a form of technological innovation development can improve student learning outcomes [21]. Furthermore, the use of mobile devices in the classroom can affect learning, provide interactive experiences [22], and allow students to share ideas [23].

Mobile learning is defined as learning that makes use of the most recent applications [24] to provide students with access to learning materials and directions that can be accessed at any time and from any location. Mobile learning can improve critical thinking skills [25, 26]; students' attention; make learning understandable; encourage learner motivation [27]; provide more opportunities to collaborate and interact informally with students; and move media that is relatively small in size so that students can use it anytime and anywhere.

Writing scientific articles has proven to be very effective when using mobile learning during learning because students are allowed to download applications related to writing scientific articles, such as the KBBI V application, Pedoman Umum Ejaan Bahasa Indonesia (PUEBI), and paraphrasing. The KBBI V application greatly assists students in the process of writing scientific articles because students can learn about using the correct words and following Bahasa Indonesia rules through existing applications. Vocabulary is essential for students to be able to write scientific articles [28]. Furthermore, students can easily access the Pedoman Umum Ejaan Bahasa Indonesia (PUEBI) via Android because they know which spellings, capital letters, loan words, and prepositions are used correctly. KBBI and spelling in PUEBI become the fundamental building blocks for students to be able and skilled at writing scientific articles that truly require it [29].

Students can also cite or cite other people's research results in the form of journals or proceedings that are relevant to student-written scientific articles. Students may quote, but doing so may increase Turnitin results from student scientific articles. Students are

Table 1. Publication Results and Outputs from Student Scientific Article Assignments.

No	Students Name	Link of Journal	Edition
1	Indar Jaya	https://idebahasa.or.id/escience/index.php/home/article/view/19	December 2021
2	Telutci	https://idebahasa.or.id/escience/index.php/home/article/view/20	December 2021
3	Stanley	https://jurnal.radenwijaya.ac.id/index.php/NIVEDANA/article/view/324	December 2021
4	Gusnia	https://journal.stisipolrajahaji.ac.id/index.php/jisipol/article/view/65/65	February 2022
5	Resa Desmisari	http://ejournal.baleliterasi.org/index.php/alinea/article/view/172	April 2022
6	Suryani Barimbing	https://idebahasa.or.id/escience/index.php/home/article/view/21	May 2022

also given the skills to paraphrase and the correct paraphrasing technique based on their constraints so that it does not indicate plagiarism and can meet the maximum requirements of 20%.

According to [10], the nine benefits of mobile learning are that there are more, cheaper, and sophisticated means, adapted to the development of wireless/cellular technology (2G, 3G, and 4G), the demands of needs, especially in the field of education; ease of use anywhere and at any time; increased participation of learners because mobile learning utilizes technology that can be used in everyday life [30]; interactive applications that can be done anywhere and at any time; and The mobile learning application that integrates mobile devices and gains benefits while learning [31]. The use of mobile learning facilitates learning, maintains e-learning, and allows for the incorporation of new features [32] (Table 1).

4 Conclusion

Based on the findings of the research and discussion, it is possible to conclude that teaching students how to write scientific articles is both interesting and interactive. This is demonstrated by the combination of three blended learning components, namely face-to-face, e-learning, and mobile learning. The study's findings indicate that the learning process is more lively, that students understand the learning material, and that this is demonstrated by the publication of student scientific articles in national journals indexed by Google Schoolar. The blended learning method is very appropriate and has been successfully applied to teaching students in higher education how to write scientific articles.

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