



# A Learning Model of Writing Scientific Articles for Non-Native Speakers Based on Blended Learning

## Karma Öğrenme Temelli Yabancı Dilde Bilimsel Makale Yazımını Öğrenme Modeli

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**Abstract.** Indonesian for Non-Native Speakers learning is mostly implemented in various universities in Indonesia through various programs. Along with the government's policy, various Indonesia universities encourage their students to write scientific articles for publication, both for proceedings and journals. Therefore, it is needed a learning model to write scientific articles. Generally, these learning activities have learners who come from the digital or Z generation. Referring to the characteristics of learners, learning activities to write scientific articles can be done based on blended learning. This research aims to discuss the theoretical studies which are needed in developing a model of learning to write scientific articles based on blended learning. In accordance with the purpose of writing, this research describes theoretical studies of learning models, second language writing, scientific articles, blended learning, and the development of blended learning.

**Keywords:** Learning model, Indonesian, writing, scientific articles, blended learning.

**Özet.** Yerli olmayan konuşmacılar için Endonezya Dili (YOKED) öğrenimi, Endonezya'daki çeşitli üniversitelerde farklı programlarda uygulanmaktadır. Hükümetin politikasıyla birlikte, Endonezya'daki üniversiteler, öğrencilerini hem bildiri kitaplarında hem de dergilerde yayınlamak üzere bilimsel makaleler yazmalarını teşvik etmektedirler. Bu nedenle, bilimsel makalelerin yazılması için bir öğrenme modeline ihtiyaç duyulmaktadır. Genel olarak, bu öğrenme etkinlikleri dijital veya Z kuşağından gelen öğrencilerden oluşmaktadır. Öğrencilerin özelliklerine atıfta bulunarak, bilimsel makalelerin yazılması için öğrenme etkinlikleri, karma öğrenmeye dayalı olarak yapılabilir. Bu araştırma, karma öğrenmeye dayalı bilimsel makalelerin yazılması için bir öğrenme modelinin geliştirilmesinde ihtiyaç duyulan teorik çalışmaları tartışmayı amaçlamaktadır. Yazma amacına uygun olarak, bu araştırma, öğrenme modelleri, ikinci dil yazma, bilimsel makaleler, harmanlanmış öğrenme ve karma öğrenmenin gelişimi ile ilgili teorik çalışmaları anlatmaktadır.

**Anahtar Sözcükler:** Öğrenme modeli, Endonezya, yazı, bilimsel makaleler, karma öğrenme.

### INTRODUCTION

Indonesian is tremendously in demand by the international community. A number of experts contend that Indonesian has the potential to be spoken as international language. Based on the researcher's first hand observation, in Indonesia, many foreign students study in Indonesian through various programs, such as the Developing Country Partnership Program (DCPP), Critical Language Scholarship (CLS), student exchange, International Overseas Program (IOP), in-Country, and student internships. Generally, foreign students studying in Indonesia conduct their study through Partnership for Developing Country program to study at undergraduate, graduate, and postgraduate program, such as in Islamic studies program and Indonesian education.

Each program aims at different purposes. For example, DCPP prepares the scholars for study in Indonesia. Thus, the material for the study is also made specific to that objective. Along

with the government's policy, various Indonesia universities encourage their scholars to write scientific articles for publication. Similarly, at the university level, the State University of Malang requires graduate students to publish their scientific articles at least in national journals. Thus, the competence of writing scientific articles becomes crucial to these students of many DCPD programs who come from Thailand, Vietnam, Cambodia, and some other countries .

A number of endeavours have been carried out to meet these needs, one of which is designing an learning model to write scientific articles for foreign speakers. As the first step in developing the learning model, the need for gaining in depth understanding pertinent to the conception of the learning model through comprehensive literature review is unquestionable.

Learning model is a prescriptive strategy devoted to providing guidance and achieving instructional goals (Eggen, 1979). Generally, learning models demand the presence of syntax. However, this syntax is coupled with various components, depending on the paradigm to which the model is bound. As a result, an learning model may also include theoretical foundation. Learning model component consists of learning structure, social system, role of learners and educator, and support system (Joyce, Weil, and Calhoun, 2004). With proper implementation of BIPA learning model on writing scientific article, that learning objective is more likely to be achieved. Foreign students will therefore master the competence of writing expected scientific articles.

Scientific articles have to be well and correctly written. There are several indicators germane to the ethics of writing, i.e. no plagiarism, no exploitation of other people's competence, and no imposition on inappropriate methods. The indicators refer to the guidelines in writing and grammar.

Competence of writing scientific articles consists of various domains. The concept of learning domain can refer to Bloom's taxonomy, involving cognitive, psychomotoric, and affective aspects (Anderson & Krathwohl, 2010). Gagne & Driscoll (1988) also propose another framework, which involves verbal information, intellectual skills, cognitive strategies, attitudes, and motor skills. In the same wavelength, Clark (2013) mentions cognitive, emotional, social, and physical. In addition, Lickona (1991) also highlights the importance of moral knowledge, moral feelings, moral attitudes, and moral actions (habits) associated with character education.

Referring to Bloom's taxonomy, the cognitive domain in writing scientific articles relates to the understanding of the concepts concerning systematic writing, techniques of writing citation and reference lists, printing formats, and written language in terms of spelling, words, sentences, and paragraphs. Psychomotoric domain is related to the implementation of understanding cognitive aspect through the writing of scientific articles. Affective domain deals with respect, responsibility, hard work, discipline, and obedience.

The idea of BIPA learning model on writing scientific article with blended learning approach is backgrounded by three reasons. First, the expected learning model has yet to exist although it holds crucial roles. Based on the researcher's personal observation, the learning model of writing scientific articles is intended for native speakers, not for foreign speakers, especially for students of the NDE program. Meanwhile, DCPD program students also need to be competent in writing scientific articles.

Secondly, according to the characteristics of students in DCPD program, especially those from Thailand, BIPA's learning activities on writing scientific articles for Thailand students have to keep up with digital age (Rosenberg, 2001), Z generation (Tapscott, 2008), or digital natives (Palfrey & Graser, 2008). These people are accustomed to processing information through a variety of electronic devices with internet access, such as browsing, email, and social media. In fact, Mayer (2009) avers the shift from teacher centered learning to but technology-students centered. Referring to the characteristics of learners, the model of scientific article writing with blended learning approach can be feasible option for successful BIPA instruction.

Third, the learning activities of writing articles takes a lot of time. Blended learning approach offers the opportunity for accelerating the progress in learning of writing articles. Writing scientific articles can be done by combining face-to-face learning and online learning. Beyond, face-to-face meetings, students can learn through online media. Thus, with sufficient time, students have enough time to delve into their learning materials, try to practice writing

scientific articles in sufficient time, and always keep in touch with their lecturers whenever and wherever they need to overcome learning difficulties.

Hereunder are the results of literature studies the learning model with blended learning approach for writing scientific articles for foreign speakers.

## LEARNING MODEL

Mayer (1985:2) points out the concept of the model by emphasizing the representation of a real thing being converted as a comprehensive form. An example is a plane model of wood, plastic. Similarly, learning model is an abstract concept of a syntax pattern, portraying the learning environment as well as the behaviour of educators-learners designed in such a way to achieve instructional objectives. The learning model is a prescriptive strategy meant for providing guidance and achieving instructional goals (Eggen, 1979).

The concept of learning model proposed by Joyce, Weil, & Calhoun (2009) highlights specific reference to developing curriculum, designing instructional materials, and guiding learning process. This term can also be called teaching model because when lecturer teaches, students are actually learning.

The concept of learning model requires the presence of syntax (Arends, 1997; Joyce, Weil, Calhoun, 2004; Eggen & Kauchak, 2008). Arends (1997) explains the model as the edifice of purpose, syntax, environment, and management system. Eggen & Kauchak (2008) give the concept of a teaching model characterized by goals, phases, and foundations. The concepts of Joyce & Weil (1980) and Joyce, Weil, Calhoun (2004) are more detailed than other concepts.

The third model is specifically designed by Harpaz (2014). This model arises from the disappointment to the first model cantered on the curriculum, while the second model centres on learner. Harpaz's third model leads to a model of teaching and learning, which emphasizes on thinking community.

The components of the learning model depend on the point of view of the structure in learning model. According to several learning model groups, Joyce, Weil, and Calhoun (2004), contend that each learning model has specific components related to teaching structure, social system, role/task of teacher and learners, support system, and impact of learning-escort (influence). Arends (1997) explains that learning approach includes goals, syntax, environment, and management systems. Eggen and Kauchak (2012) deem important the presence of goals, phases, and foundations in an learning model.

## WRITING SCIENTIFIC ARTICLES FOR FOREIGN SPEAKERS

The following is the conception of writing a scientific article for foreign speakers who learn Indonesian as a second language. The section also puts forward the genre-process approach in writing scientific articles.

### Writing in A Second Language

Learning Indonesian as a first language is different from learning it as a second language. Weigle (2002) states that learning writing in the first and second language contexts is clearly different. It relies on learners, needs, and purpose of learning to write as a second language.

Selected language teaching materials are language features that have high frequency in usage and acceptability, comprehensive usage, simple structure, and clear gradation from simple to rare, narrow, and complex forms (Valdan, in Magnan & Walz, 2002).

With the abovementioned characteristics, learning materials for BIPA certainly has a pedagogical norm that directs teacher in choosing instructional material. Without a question, the material as well as learning model this is tailored to the condition of learners who have various capabilities.

The competence in BIPA can be measured through tests. The test results are graded from A1, A1, B1, B2, C1, to C2 levels in general. BIPA rating level often refers to the guidelines of the

American Council in The Teaching of Foreign Language (ACTFL) (2012) and Common European Framework of Reference (University of Cambridge, 2011).

Hyland (2003) suggests that writing learning activities as a second language should be emphasized on content knowledge, system knowledge, process knowledge, genre knowledge, and context knowledge. In other words, Hyland deems important that learning activities emphasize on language structure, text function, writing expression, writing process, content, and genre.

Based on the abovementioned description, foreign students who master proficiency at level C2 can study the material of writing scientific papers. As the needs of scientific publications in Indonesia, students have to be able to write articles. The present study puts more emphasis on writing instruction, which applies the notion of Hyland.

### **Writing Scientific Article in Genre Process Approach**

Writing scientific articles has to take into account correctness and proper criteria. A good article should have original content with a logical, straightforward, formal, objective, systematic, and original presentation. Logical means that the disclosure of ideas that are reasonable. Straightforward means expressing the idea clearly and precisely. Formal means that written articles are presented in accordance with agreed conventions and existing discursive style. Systematic means that the articles are written with consistent reference to writing convention. Clear means that articles are easy to understand, not ambiguous. Objective means that articles are presented without being influenced by personal views. Original means that articles have never been written before.

Correct article has to comply with the established guidelines for writing scientific papers, which call for compliance with writing system, technique, format, and written language. The system for writing articles should start from title, abstract and keyword, introduction, up to reference list. Writing techniques include articles the technique in citing text, presenting tables and pictures, and writing reference. The format of article writing includes paper size, print area, type and font size, text spacing, text level, and paragraph writing style. The written language consists of correct use of spelling, words, sentences, and paragraphs.

Writing can be done through process, product, and genre based approach. The process approach is proposed by Murray (1972), Montague (1995), Harmer (2007), Hyland (2005), Clark (2003). In addition to this approach, experts have been researching product approach (traditional) and genre approach. The controversial aspect of learning in writing lies in the product or process approach (Nunan, 1999). Tangkiengsirisin (2006:1) states that product approach emphasizes writing at the level of sentence structure, discourse structure, and linguistic approach, while process based approach emphasizes on writing as creative expression, cognitive process, and process involving lecturer-student feedback. The process-based approach brings the idea that writing is thinking process by emphasizing creative writers. By contrast, genre based approach carries writing as a social activity and emphasizes on target readers and the product (Hyland, 2007).

The presence of a genre-based approach to writing emerges because of the focus on social cognition in using language. This alludes to the linguistic approach, namely the functional systemic Linguistics. Thus, the genre and process based approach combines product, process, and genre approaches.

The approach to writing, including product-based, process-based, and genre-based approach, should bring about no dispute. Tangkiengsirisin (2006) suggests that good writing combines both approaches: products and processes. Badger & White (2000) suggests that the three approaches have to be integrated.

The steps in Genre-process based writing can adopt the procedure proposed by Badger & White (2000), Lee, Goh, Chan, and Yang (2007), and Pujiyanto, Emilia, Sudarsono (2014). Similarly, when reading the example of Reppen (Richards & Renandya, 2002) in the process of writing narrative, descriptive, persuasive, and expository genres, there seems to be no significant difference in the stages of writing. From a variety of genre-based process models, at least this approach starts from the step of processing references, reviewing the model of writing, analysing, writing, and editing.

## BLENDING LEARNING

In language learning, the concept of blended learning is not new. Marsh (2012) suggests that language learning which combines methods, approaches, and strategies has been there for quite some time. The integration of technology in classroom is a relatively old concept, but rarely studied. This is because in 1960 the notion of Computer-Assisted Language Learning (CALL) (Marsh, 2012) had come under the spotlight.

Blended learning is the attempt to achieve learning objectives by combining strategies, media, and learning meetings. Driscoll (2002) states that the instructional goals in blended learning are achieved through a combination of various learning approaches, a combination of various learning technologies, and a combination of learning technologies.

Blended learning conceptions can be dichotomized into (1) the combination of meetings and (2) the combination of meetings, media, and learning models. The first idea is put forward by William (2002), Thorne (2003), Bonk & Graham (2005), Graham & Dizuban (Spector, Merrill, van Merriënboer, & Driscoll (2008); Watson (2008), while the second one is proposed by Driscoll (2002), Krause (in Bath & Bourke, 2010), Marsh (2012), and Saliba, Rankine & Cortez (2013). (2016) who explain that blended learning-based learning combines the benefits of face-to-face, offline, and online learning.

The choice of blended learning can be based on six Eydelman's considerations (in Tomlinson & Whittaker, 2013) based on various references. First, blended learning can increase students' motivation in writing (Krebs, 2010) with a very wide range of audience (Lee, 2010, Richardson, 2010) to enhance self-confidence (Pinkman, 2005, Zhang, 2009). In the same vein, Rank, Warren, and Millum (2011) state that to improve the ability to write can be done using blogging. Second, it can create the space for sharing experiences (Davoli, Monari, & Eklundh 2009; Richardson, 2010, Solomon & Schrum, 2010). Third, providing space for sharing experiences through feedback to students during writing is also effective to teach writing (Davoli et al, 2009; Richardson, 2010; Solomon & Schrum, 2010). Fourth, it can reach informal communication (Richardson, 2010; Solomon & Schrum, 2010). Fifth, the learning model has to support classroom management (Bonk & Graham, 2006; Davoli et al., 2009; Solomon & Schrum, 2010). Sixth, providing additional channels for interaction and collaboration opportunities is also essential (Richardson, 2010; Solomon & Schrum, 2010).

Procedural steps are required to develop the steps in blended learning. Bath & Bourke (2010) state that blended learning process consists of planning, designing & developing, implementing, and reviewing (evaluating). Saliba, Rankine & Cortes (2013) mention that the stage consists of planning, designing, implementing, evaluating, and making improvement. Bailet, Ellis, Schneider & Ark (2013) suggests three stages of blended learning, i.e. planning, implementation, and improvement.

## CONCLUSION

The learning model of writing scientific articles for foreign speakers based on blended learning is worth exploring. The learning model demands syntax as the learning stages to be performed. This syntax is equipped with other necessary components, such as the objectives, environment, management system, and the theoretical foundations operative in learning process. The process of writing a scientific article as a second language requires language proficiency at C2 level, which can be achieved by applying a genre-process approach with the emphasis on writing process and social cognition in using language. This model can be presented based on blended learning which takes the advantage of online and offline classes. In addition, it can also combine different strategies and media. The attempts to develop learning model based on blended learning for writing scientific articles for foreign speakers are carried out by planning, designing, developing, implementing, and reviewing (evaluating and improving).

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