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## MINIMUM REQUIREMENTS OF SCIENTIFIC WRITING LITERACY

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### ABSTRACT

This paper is a conceptual paper based on our framework of a team research called “Penelitian Dosen Pemula or PDP 2017”. The materials were taken from our research background and review of related literatures. Actually, our research is ongoing till the step of collecting data. We present the topic or tile of “minimum requirement of scientific writing literacy” in this paper. It means “the minimum concept, process, and competency to be required by students or writer to create scientific writing masterpiece”. It is called “minimum” because we realize it still could be widen with other references. It is presented in the discussion part to be 6 sub-chapter discussions. We arrange them into a stratified order from the concept, process, skills, evaluation, and rubric of scoring. In the part of scientific writing concept, we conclude that scientific writing practice and result must fulfill the criteria of logic, informative, empiric, stratified, replicable, problem-solving, following a text types or a genre (but this is also optional), open to be corrected and criticized, and considering the effect of writing content. In the part of scientific writing process, we propose a new concept that scientific writing process could follow the steps below: planning, drafting, finding and deciding qualified references and previous studies if needed, writing, editing, revising, final version, and publishing (if needed). In the discussion of scientific writing skills, we present the criteria of macro-skills and micro-skills. In the part of scientific writing evaluation and scoring, we hold on Brown (2007) which differentiates it to the criteria of content, organization, grammar, vocabularies, and mechanics.

**Key words:** Minimum, Scientific Writing, Literacy

### 1. Introduction

This paper is a conceptual paper of scientific writing based on our framework of research which is named Penelitian Dosen Pemula or PDP 2017. we try to develop the concept of “minimum requirement of scientific writing literacy” in this paper. Actually we are conducting the research till the step of data collection. The materials of this conceptual paper were taken from the research background and review of related theories.

Before entering the main topic of this article, we need to clarify the term of “literacy”. Based on my study background, we conclude that “literacy is the condition when a person conquers a certain study area and could practice it”. Literacy depends on the study or work area. One example, an English teacher is literate in English education and research, but he or she may be illiterate in engineer study, and vice versa. A famer who never gets formal education may be illiterate to write and read, but he or she could be literate in how to plan rice, and cultivate land. The most traditional literacy understanding of “the ability to read, write and calculate” must be left. We need to see the modern and wider term of literacy.

Scientific writing literacy in this paper means the ability to understand, develop, and practice the concept of scientific writing. There are many types of writing, and scientific writing

### 3. Conclusions

Naturally, writing is a complex and integrated process. Actually, it could be argued that other language skills which are listening, speaking, and reading are also complex process. Based on this article and my study experience, writing has more complicated materials rather than those 3 other language skills. Writing needs several previous knowledge and skills such as grammar, vocabulary, graphology, phonology, semantic, pragmatic, discourse competence, cultural and background knowledge, etc. It seems to be a cross-section place. Scientific writing is the highest level of writing. Scientific writing is not only arranging sentences in correct order and expressing ideas, but also it is about responsibility. The responsibility is reflected by the scientific requirements for scientific writing. Scientific writing is also similar with other writing skill that it is the result of learning process. The different is that scientific writing follows scientific rules and purposes. Scientific writing skills can be got through training, experiencing, widening background knowledge, following the recent issue in academic and non-academic area, guidance from superior persons for the novice writers. This article contains the minimum requirements to get scientific writing knowledge.

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