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'Publish or Perish': a Transformation of Professional Value in Creating Literate Academics in the 21st Century

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Abstract. The academics of higher education are required to write scientific papers in reputable international journals, which they find challenging in terms of English language skills and the lack of research skills, low literacy skills, and skills in accessing references. Thus, this study aims at exploring the framework for improving academics' literacy competence for scientific publication activities. Action Research was employed as a design by involving 24 doctoral program students at one campus in West Java Province, Indonesia, who were lecturers at four universities in Indonesia. This research resulted in 7 stages as a critical reflection step in improving literacy competence. The seven stages are summarized in the acronym LITERAT as an extension of Literacy, Investigation, Writing Techniques, Exploration, Reflection, Actualization and Translating. This study concludes that these seven steps proved that 87% of academics' literacy competences have increased. This study contributes by providing guidance for academics in improving literacy competence and boosting the number of scientific publications of each university as a manifestation of a country's pride in the form of diplomacy portrayed in the quality of education and science.

Keywords: literacy; scientific publication; value education; professionalism, action research

1. Introduction

One of the industries attached to research and publication activities is higher education as a manifestation of the *tridharma* of education (teaching, research and community service) in Indonesia. With this inherent obligation, lecturers are

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required to conduct research and have it published (Arizal et al., 2019). In Indonesia, strategic efforts to increase the number of publications in higher education as a form of diplomacy in the quality of education and science are stated in a circular from the Director General of Higher Education no. 152/E/T/2012 concerning the obligation of scientific publications for undergraduate, postgraduate, and doctoral students. In addition, the doctoral students were commanded to publish in reputable international journals indexed by Scopus. However, doctoral program students who are lecturers and are familiar with the world of research often experience difficulties. Publishing research results in reputable journals at the international level is challenging, as experienced by many Indonesian students. Besides the language-ability factor, the weak ability to write and search for reference sources for doctoral students is an obstacle in accessing international publications in Scopus-indexed reputable journals. This phenomenon has an impact on the length of study undertaken; because the conditions for completing the final study are not fulfilled, thus such conditions cause a domino effect on the image of the institution, with many students who did not graduate in time. This fact indicates the weak literary competence of the students.

The low reading literacy level causes it to be uncompetitive, due to the lack of mastery of science and technology, because of the weak interest and ability to read and write (Teguh, 2013). Therefore, strategic steps are needed to improve the literacy competence. This is important considering that the World Economic Forum states some of the skills that must be mastered, in order to face the 21st Century. These skills include literacy, competence, and character (Antoro, 2017).

Researches have been conducted related to competence in scientific publications. For example, research in the UK shows that students' perspectives stated that lecturers who already have scientific publications and have been published are considered more credible and would be able to more effectively link their research activities with their learning experiences (Camacho et al., 2017; Schofield & Burton, 2015).

Furthermore, Intan et al. (2019) explored the effect of publication requirements on work stress on academic lecturers in Indonesia, using the Job Demand-Control-Support (JDC-S) model. The research employed 100 random lecturers in Indonesia. The research revealed that the distribution of stress levels, according to the data, tend to follow a normal distribution, and for most lecturers, stress levels are at an acceptable level. According to the JDC-S theory, lecturer stress is mainly influenced by the demand and control related to work, rather than job support. The number of respondents' ratings regarding research support in Indonesia is relatively low. However, the lack of support did not cause or significantly affect their stress levels.

Yulianti et al. (2020) analyzed the influence of organizational climate, punishment and reward, and competence on increasing lecturers' capacity in writing scientific papers. By processing the data using SEM-Amos, it was found that the organizational climate had an effect on capacity building, with $CR\ 3.494 > 1.96$ in a significance of $0.00 < 0.05$ and a termination of 0.219. While punishment and

reward affect the capacity development; and CR 2,740 <1.96, significance 0.006> 0.05 discontinued 0.240; competence affects capacity building with CR 1.992> 1.96, significance 0.046 <0.05 and 0.175 terminations; Simultaneously, organizational climate, punishment, and reward, and competence affects the capacity of building with a regression coefficient of 0.518, and so on.

Those studies only describe the implications of lecturers who already have publications and the factors that affect lecturers' activities in carrying out further scientific publication activities. In contrast to previous studies, this research is aimed at finding the strategic steps in increasing lecturers' literacy skills needed for publishing scientific publications in reputable international journals. Therefore, in limiting this problem, this research is formulated in one research question: what are the critical steps needed for improving literacy skills through publication activities in reputable international journals?

2. The Theoretical Framework

In developing countries, the expression "publish or perish" has been cultured; and it has become a living guide for scientists and researchers (Wibawa & Wirawan, 2017). The publication is self-actualization for academics and researchers in the development of science. Publications, especially at the international level, play a role in increasing a country's self-esteem in diplomacy, as regards the quality of education and science (Subekti, 2015). Research and publication are closely related. Without publication, a research finding would be meaningless and not impactful; since fellow scientists cannot value or even recognize it.

The tendency for scientific recognition of a research parameter's findings is its publication in reputable international journals. Therefore, the 'publish or perish' culture can be understood; since an academic must conduct research and publish his research findings (Amelia et al., 2018; Dewi, 2013). Writing scientific papers for students is a necessary activity; since it is an academic culture (Husin & Nurbayani, 2017; Nasution, 2018; Persadha, 2016). To find something, to come up with new ideas, to develop the ability to organize and clarify various concepts or ideas, to practise an objective attitude that exists in a person, writing is the essential tool for academics to do research; and they therefore need to publish (Amelia et al., 2018; Dewi, 2013).

Reading scientific works is necessary, in order to find the ideas outlined in an article; because producing scientific work requires scientific reading. That is why literacy's primary meaning is closely related to reading and writing activities (Barton & Hamilton, 2012).

Today, the barometer of scientific work is considered acceptable if the paper is published by credible and representative publishers, and in this case, reputable journals. A reputable international journal's criteria are journals indexed by indexing institutions, such as ScienceDirect, ProQuest, EBSCO, Web of Science, Scopus, and others (Falagas et al., 2008; Meho & Yang, 2007; Mongeon & Paul-Hus, 2016).

Therefore, besides having writing skills, getting scientific references and publishing requires information, literacy skills and the mastery of information technology related to such scientific work (Julia & Isrokatun, 2019).

Budimansyah et al. (2019) stated that every component of society should master new literacy: data literacy, technology literacy, and humanitarian literacy. Data literacy is related to reading, analyzing, and thinking conclusions, based on the data and the information obtained. Technological literacy is related to understanding how machines work, applying technology, and working on technological products, in order to get maximum results.

Humanity literacy is the goal of data and technological literacy; because, essentially, a 21st-century learner is a human resource; and to be able to use it for a more dignified life is important (Budimansyah et al., 2019).

Although literacy is closely related to reading and writing (Barton & Hamilton, 2012), it is not limited to these issues only, in order to understand information critically and analytically (UNESCO, 2003). Also, literacy skills are a person's socially functional skills, in order to contribute to their community (Keefe & Copeland, 2011). A community-based effort is essential for the improvement of someone's literacy. It implies that literary skills also involve cognitive capacities and information processing (Webber & Johnston, 2000).

In the context of character education, literate humans are humans with character (Naibaho, 2007; Permatasari, 2015); because literacy is also an essential part of character education: the character of the learner, the character of curiosity, and the character of sharing knowledge (Hasfera, 2017; Lizawati, 2018). Literate people have creative, innovative, competitive power; and they develop collaborative attitudes (Afandi, 2017). For Indonesians, building a literate society is a necessity, especially for academics. This is because the level of literacy of the Indonesians is shallow, in line with the UNESCO Survey in 2012, as quoted by Fitriyah et al. (2019). This indicates that the reading index of Indonesian society is 0.001. This means that for every 1000 persons, only one person has an interest in reading. While the 2009 Program for International Student Assessment (PISA) reported that the Indonesian reading literacy test results are ranked 57, with an average score of 402 out of 500.

In 2012, Indonesia was ranked 64th., with an average score of 396 out of 500. Even in 2015, Indonesia was ranked 69 out of 76 countries, with an average score of 397, out of an international average score of 500 (GLN, 2017).

Policies related to the obligation to publish an article in international-indexed journals actually require academics to improve their literacy skills and tool mastery in carrying out publication activities, in addition to mastering an established research methodology. However, the efforts to improve these skills have not come to the attention of academics; thus, this has resulted in a low level of literacy and a minimum number of publications. Therefore, this study seeks to answer the question: What are the practical steps required in improving students' literacy skills, and for increasing the number of publications? This is believed to

be important, considering: (1) the increasing numbers of publications is an important agenda for academics; and (2) the demands and challenges of policies related to publication obligations for students in pursuing final studies in their doctoral program; and (3) the opportunities in academic diplomacy activities for academics.

The contribution of this research is expected to be a practical guide in improving the literacy skills of academics in the higher educational environment.

3. The Method

3.1. Design

To achieve this research objective, action research (AR) was chosen to conduct this research. Given its theoretical and principle roots, AR is often used to explore critical pedagogical issues (Gibbs et al., 2017). This is in line with this study's problems related to the lack of literacy competence for scientific publications. With this AR design, it can explore such problems, in order to find solutions (Creswell, 2002). Furthermore, this research design can help understand self-practice, in order to improve every action (Kemmis et al., 2013; Kemmis & McTaggart, 2005; McTaggart, 1994).

3.2. The Collaborative Aspect

One of the characteristics of action research design is the collaborative aspect that is applied as a process between researchers and practitioners (Bruce et al., 2011; Creswell, 2002; Ferguson-Patrick, 2007; Jaipal & Figg, 2011; Leeman et al., 2018; Somekh, 2010). In initiating collaboration, researchers refer to the methods used by Heil (2005), what is needed, and who is interested in this project. When this project was announced, one professor with characteristic educational qualifications and head of the study program was interested in becoming involved. One lecturer of civic education and the director of innovation at a state university and one English lecturer were already involved.

This collaborative team designed various needs for research, such as a solution for learning plans, developing indicators for formulating literacy competences, and determining what students should produce at the end of the project. We decided that students must have 21st-century literacy competence, as initiated by Budimansyah et al. (2019), including data literacy, technology literacy, and humanitarian literacy. Each student can produce articles submitted to reputable international journals. By referring to these three domains, in order to support the expected results from this study, we developed a rubric of information-technological literacy, with mastery as a guide to the extent of the success achieved in this action research. This rubric was formulated and discussed in a focus-group discussion with the collaborative team, as presented in the following Table 1.

Table 1. Literacy Development Indicator

No	Aspects	Descriptions	Indicator
1	Data Literacy	Reading skill, comprehension skills and Concluding skill	1. Analyzing issues

		from the given information and data.	2. Finding and collecting relevant references from reputable publishers.
2	Technology Literacy	The capability to comprehend how the program is functioned and working with it.	1. Utilizing technology in tracing reference sources in reputable journals 2. Utilizing the reference manager application
3	Humanities Literacy	Related abilities to research publication and writing: communication, teamwork, critical thinking and creativity and innovation	1. Achieving similarity index fairness level for the paper. 2. Submitting articles to reputable international journals.

3.3. The Research Procedure

This research employed three stages. Firstly, there was the pre-action analytical stage. At this stage, we try to map the initial literacy skills in students' scientific publications, and to design the necessary steps. The second is the implementation of actions. The implementation of the action steps designed in the previous stage was applied, and the third is post-action analysis. This stage is a series of activities, in order to evaluate the success of an action.

3.4. Participants and Sites

This research was carried out at one of the universities in West Java-Indonesia. As for the participants, 24 people consisting of 12 women and 12 men, were involved. They are lecturers, who are currently pursuing a doctoral program in one study program in a state university in Bandung, Indonesia. These participants are the lecturers from two state universities, as well as private universities in Indonesia, with several professional backgrounds. They belong to the digital native group, the generation born in the digital technological environment; because they were born after 1980 (Prensky, 2001).

These participants benefitted this research activity; since they had obtained their training and materials on how to find references, cite, and add them to the research papers. They also experienced the real experiences in submitting and publishing a research paper to international-indexed journals.

3.5. The Data Collection

Surveys collected the data, observations, and semi-structured interviews. The survey was carried out by using the Google-Documentary facility, and by using the Likert and Guttman scales (Allen & Seaman, 2007; Widhiarso, 2011). Google Documents have grown into a superb and simple survey-software system that everyone can use (Chiu et al., 2016; Lin et al., 2016; Travis, 2010). This research utilizes interviews, and questionnaire instruments. Before the survey was administered, the students from one study program were asked to participate in this study; but there were only 24 students that were willing to take part in this

study. They were asked to write a consent letter before the research activities began. The instruments were validated by judgement experts in the field of pedagogics, educational technology, and character education.

3.6. The Data Analysis

The data generated were in the form of numbers, which were obtained from survey result bys using the Likert and Gutman scales. These were analyzed by using the quantitative approach, especially when analyzing the comparison in the pre-action and post-action sections. The data that were not in numerical form, which were obtained from the results of semi-structured interviews, were analyzed by using a qualitative approach. The qualitative analysis was carried out by using an inductive-thematic method, with a content analytical approach. This is content analysis that allows researchers to carry out subjective interpretations of the content of text data through a systematic classification process, coding and identifying themes or patterns (Elo & Kyngäs, 2008; Erlingsson & Brysiewicz, 2017). What are the students' difficulties, obstacles; and what do they think and feel when doing publication activities?

4. The Results

4.1. Pre-Action Analysis

This stage is that of mapping the subject's literacy abilities. A total of 24 participants were instructed to submit a draft of the article by way of an assignment. Observation and semi-structured interviews were carried out at this stage. From this stage, a mapping of the subject-literacy skills was generated, as in Figure 1:

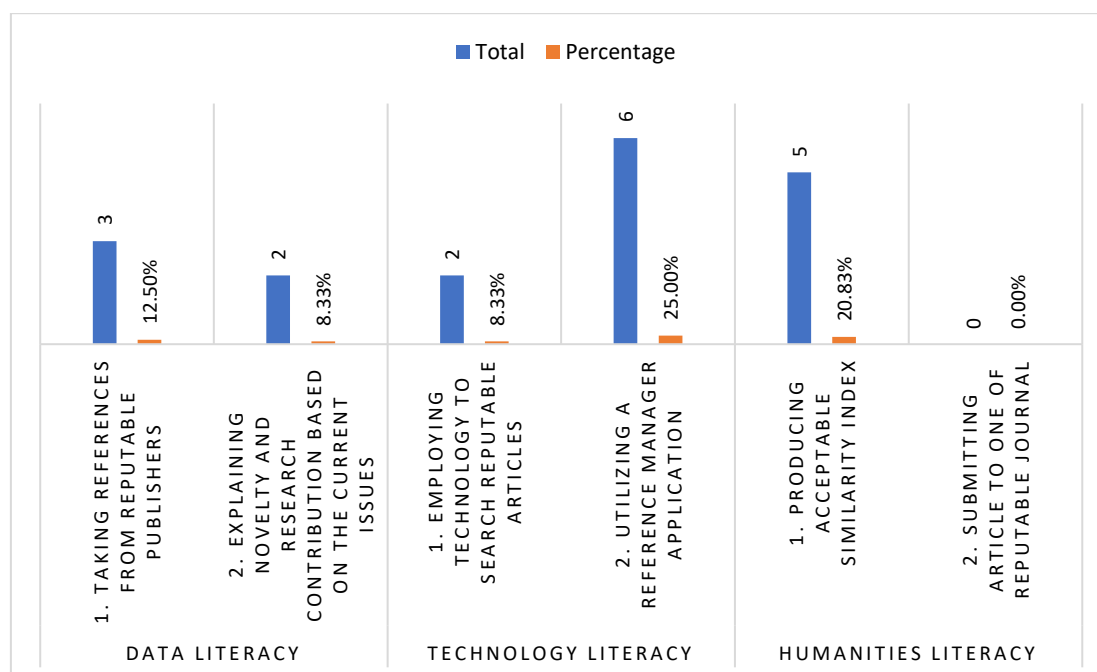


Figure 1. Lecturers' Literacy Ability

Figure 1 provides information indicating that the participants' literacy skills are deficient. Only 3 (12.50%) of the participants used references from reputable publishers, for example, Taylor and Francis, Springer, Sage, Wiley, or Elsevier.

These five publishers are a popular reference for academics in writing journals (Gadd et al., 2018; Larivière et al., 2015).

In the second indicator in the data-literacy component, only 2 (8.33%) participants explicitly explained novelty and the article's scientific contribution. This is important because previous studies' novelty and differentiation indicated that one's article is worth being published (Julia & Isrokatun, 2019; Wekke, 2015).

In the aspect of technological literacy, based on the results of semi-structured interviews, it can be concluded that the majority of the participants did not know how to browse reputable journals. This digital-era trend is that the criteria for a reputable international journal are journals indexed by indexing institutions, such as ScienceDirect, ProQuest, EBSCO, Web of Science, Scopus, and others. (Falagas et al., 2008; Meho & Yang, 2007; Mongeon & Paul-Hus, 2016).

Based on the interview results, only 2 (8.33%) of the participants knew the criteria for reputable journals and could trace them by using internet information technology. As for the citation technique, only 6 (25%) of the participants used one of the reference-manager applications: Mendeley, Zotero, or Endnote; and all six of the participants used Mendeley.

In the humanities-literary aspect, we checked the similarity of articles that had been compiled by using the Turnitin application. The similarity check results on the articles they compiled were only 5 (20.83%), which met the fairness threshold below 20%. The search results were based on semi-structured interviews with all the subjects related to the publication experiences in reputable international journals. The majority answered that they had never published or submitted articles in reputable international journals.

Based on the mapping results, at this stage, it may be concluded that the average literacy level of doctoral students is 10.14%. This figure is obtained from the percentage of each indicator, divided by the number of indicators. Therefore, the proper steps are needed for increasing the literacy skills of the subjects.

4.2. Action Implementation

This action-implementation stage is an effort to improve the participants' literacy. Based on the results of the pre-action analysis, this resulted in 7 stages. The seven stages can be described as follows:

4.2.1. Stage 1. Information-Technology Literacy

At this stage, we introduced several tools needed in preparing a manuscript for publication. It took three steps to complete the stage. The first was preparing a working paper through Microsoft Office, and explaining the features frequently used by the participants. The leading feature for arranging maps in writing systematics was the caption featured on the references menu to provide captions on tables or figures, including the numbering references in tables or figures. It is essential in writing to minimize any mistakes in numbering the lists of tables and figures.

The second was to explain one of the reference-manager applications: Mendeley. This application was chosen; since one of the participants was already familiar

with it. This Mendeley application also has relatively good accuracy in citation; and it is easy to use (Kratochvíl, 2017; Kusumaningsih, 2018; MacMillan, 2012). We guided the participants through installing the program, explaining the features, and using them in this step. We have created a manual and video tutorial for using Mendeley, in order to make it easier and more efficient. In this step, we also emphasize that each participant continuously checks the metadata that had been inputted in the Mendeley application; for example, the type, the author's name, year, edition, volume, and DOI. If not completed, each participant was instructed to complete it.

In the third step, the participants are given skills in accessing reputable journals, by using one of the applications released by the Indonesian national library. The Participants were instructed to register by visiting the page <http://keanggotaan.perpusnas.go.id>. After the participants were registered, and had received a membership number, they were instructed to access the site <http://e-resources.perpusnas.go.id> and log into the site.

After that, the participants could search for the required references by entering keywords into the search engines, based on reputable publishers. This application is shown in Figure 2. In addition to using the application, the participants are also given the knowledge to access the links related to 5 reputable publishers, such as Taylor and Francis, Springer, Wiley, SAGE, and Elsevier.

Figure 2. E-Resource Indonesian National Library

In the fourth step, the participants were given insights to browse reputable journals. For this, we set the criteria for Scopus-indexed journals, as targets for publishing the manuscripts. The selection of the Scopus-indexed journal target and the Scopus-indexed journal is a policy for almost all universities in Indonesia, as a requirement for completing their doctoral studies, including a requirement for lecturers' promotion. Scopus-indexed journals are equipped with several features, such as Citation, Networking, Research, and Score (Muriyatmoko, 2018;

Siti, 2018); therefore, many researchers in Indonesia use Scopus-indexed journals as targets and references in publishing their research.

Furthermore, the participants are directed to access the site <https://www.scopus.com> and to describe the features on the site, such as searching for authors on the author feature, or browsing journals by journal name, ISSN number, subject area on the source feature, and journal filtering, based on quartile 1-4, as well as selecting open-access journals, or not. By accessing the site, participants get information on whether the Scopus indexing agency still covers the journal that is the target of publication, or not. In addition to setting targets in Scopus-indexed manuscripts, this also makes it easy for the participants to visit the address of the intended journal and to read the research results published in the journal; so that it can be used as a reference source, as well.

In this step, we also directed the participants to select targeted journals, and to avoid potential predatory journals. For that, we directed the participants to access the site <https://beallist.net/standalone-journals/>. This site provides information or recommendations, in order to avoid a list of journals listed on the site.

After completing these four steps, the 24 participants were surveyed, in order to evaluate their effectiveness. The survey results are shown in Table 2:

Table 2. The Survey Result for participants' knowledge of the information and technology

No	Description	Yes	No
1	I know and understand how to prepare working papers to publish manuscripts in Microsoft Word, and I know some MS Word features required for preparing the publication.	24	
2	I know how to operate Mendeley, as a reference manager.	22	2
3	I know how to use E-Resources from the National Library, as a reference-search application for reputable publishers articles.	24	
4	I know how to get information related to Scopus-indexed journals.	24	
Total Average		23,5	0,5
In Percentage (%)		97,92	2,08

Based on the survey results, it can be concluded that 97.92% of the participants already know and understand the information-technology literacy needed to support the publication. However, this requires further verification; since it is only gained from the participant's perspective. Furthermore, 2 participants stated that they did not know how to use Mendeley, as a reference manager. Based on further research, the two participants did not follow the material. Therefore, we provided an opportunity for the two participants to view the presented material's video footage.

4.2.2. Stage 2. The Investigation

At this stage, we directed the participants to find five references related to the latest research from 5 reputable publishers. These references are related to the participants' topic of interest. We set the five reference criteria, based on the publication year from 2018 to 2020. We aimed to do this, in order to investigate the empty research gaps, based on the previous studies. To make it easier for the participants to investigate some of the results of previous studies, we provided several rubrics, as in the following table:

Table 3. Abstract-Analysis Rubric for the previous research

No	Study (Write the references)	Participants	Context	Design /Method	Finding
1					
2					

Table 3 has guided the participants to analyze the previous research on abstracts, including several components: who and how many participants are involved, what the research context is, how the design or research is used, as well as the findings.

Table 4. Conclusion and Recommendations: Analysis in The Previous Research

No	References	Conclusion and Recommendations	Further research
1			
2			

After the participants had analyzed the abstract, the next step was to analyze the research's conclusions and recommendations. Then, the participants concluded the necessary follow-up. These conclusions were then made an issue by the participants and analyzed by using the rubric in Table 5.

Table 5. Issues' Analysis for The Following Study

No	Issue	Issues' Criteria	Issues' Analysis (Scale 1-5)				Priority (1-5)
			Urgency	Seriousness	Issue Growth	Total Priority	
1		Actual : Eligibility : Problematic: Feasibility:					

Based on Table 5, each issue was analyzed on four review criteria: actuality, eligibility, problem, and feasibility. The participants assessed the issue on a scale of 1-5, based on three components: urgency, seriousness, and issue growth. The assessments were then added up, and the biggest score became the main priority to be appointed. Based on this stage, each participant had issues based on the analyses. This means that there are 24 issues as topics that would be used as material for the publication.

4.2.3. Stage 3. The Writing Technique

At this stage, we provided guidance related to the writing techniques in international journals. A systematic IMRAD CAR was used: Introduction, Methodology, Results and Discussion, Conclusion, Acknowledgments, and References. Each participant was explained in every section's components. For example, the title must not reach more than 16 words. The abstract consists of 200-250 words, explaining the problems, objectives, methods, findings, and conclusions. The introduction must include the problems, previous research, objectives, emphasizing any novelties, and the research contributions. IMRAD CAR is the general writing style for a journal article. However, it is necessary to follow the guidelines of each targeted journal strictly. The participants may create a section in their working paper (e.g., Microsoft word), based on the IMRAD CAR systematics, by using the headings feature to make it easier to fill in each component, as they are arranged in Figure 3.

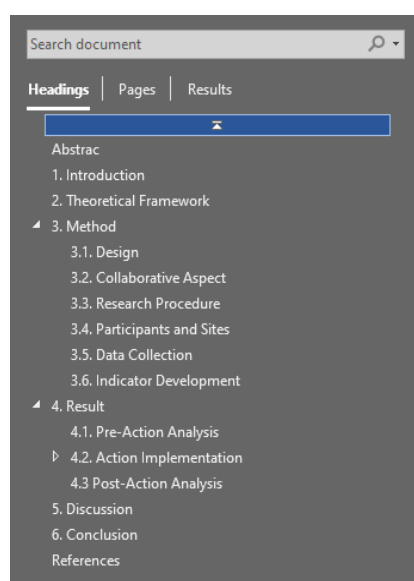


Figure 3. Heading Sections in Microsoft Word based on IMRAD CAR

4.2.4. Stage 4. Supporting Theories Exploration

At this stage, the participants were directed to explore the theories used by previous researchers and to find the supporting theories related to the issues raised. They were given another rubric, as in Table 6, as a guide in inventoring the theories that support the issues. Further, they paraphrased the sentence, based on their understanding, while still adhering to the Authors, as a manifestation of academic honesty.

Table 6. Supporting Theories Inventory Rubric

	References	The key sentences related to the used theories (write with the references)	Paraphrasing (Re-write the sentences using own words)
1		1.	
		2.	
		3.	
		4.	
		5.	
2			

Based on the observations, 24 participants could do it; and they did not encounter any significant obstacles. It also shows that the participants could easily access and render their understanding information. The results of this stage were used to prepare the theoretical framework for the manuscript.

4.2.5. Stage 5. Reflection

Reflection is widely regarded as a professional practice and process that supports learning through experience (Coulson & Harvey, 2013). Reflections can be approached from a different perspective (Brookfield, 2017); and they can be involved at varying degrees of depth, complexity, and criticality (Kreber & Castleden, 2009; Mezirow, 1992). This depends on experience, the desired learning outcomes, and the learner's capacity for self-analysis towards open-mindedness (Paris & Winograd, 2003). As a reflection, we directed the participants to analyze the draft of their manuscript and made some improvements, based on the experiences they had gone through from stages 1 to 4. Through this stage, they could identify the weaknesses and strengths of the manuscripts. Some of the most dominant issues include: inconsistency between the styles in the body text and the reference list, even inconsistency with the bibliographical writing style. For example, some used a mix of Vancouver and APA 6th styles, or APA 6th and 7th APA styles.

Based on the interviews it was difficult for them to change the reference style, when one journal rejected the paper; and the participants then wanted to publish the paper in another journal, with a different referencing style. In addition, there were found to be many reference sources, some from unrepresentative references and inappropriate writing systematics.

4.2.6. Stage 6. Actualizing

This stage is an effort to produce productive and creative actions from the participants, in order to continue the reflection stage. It aimed to improve the draft text that had been prepared, based on the notes during the reflection stage. The process was carried out in the form of mentoring. After the improvement process was carried out and the criteria had been met by each targeted journal, we examined a form of peer review for possible improvement.

4.2.7. Stage 7. Translating

This stage is a follow-up to the previous stage. After the improvement and peer review process had been carried out, the next step was to collaborate with the translator. For Indonesians, whose English was not their mother tongue, collaboration with a translator was needed, in order to transfer the ideas to an international language.

Furthermore, it was necessary to check the similarity, in order to ensure that the value was below 20%. The similarity check of the translated manuscripts is, on average, below 15%. The next step is to make adjustments, based on the targeted journal's style, starting from the type of letter, the distance between the paragraphs, and others. After being fulfilled, the participants submitted the manuscript to the Scopus-indexed international journal. The details can be seen in Figure 4.

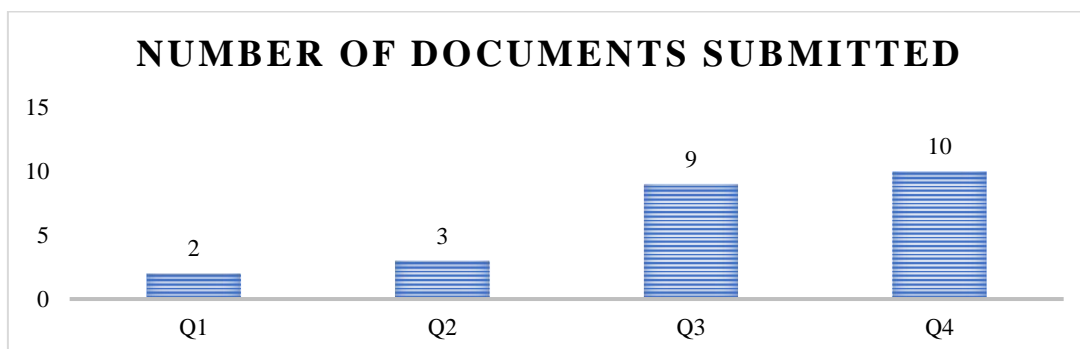


Figure 4. The Total Submitted Manuscripts to an Indexed International Journal

Most participants are interested in journals in quartiles 3 and 4. We tried to explore the participants' reasons by conducting semi-structured interviews with two of them. This relates to their decision to submit the manuscript to Q3 and Q4 Scopus-indexed journals. The question is, "Why did you submit your journal to Q3 or Q4?". The participants' answers were almost the same: initial experiences only. As for some of the participants who submitted to the quartiles 1 and 2 Scopus-indexed journal, the reason was: participant 1 stated that the initial target was Q4 journals, but after checking through the site <https://beallist.net/standalone-journals/journal>, it was listed on the site. According to participant 1, although the manuscript was rejected, the editor's input could improve the Paper's quality.

The second participant mentioned the demand from one of the campuses in completing the final study by submitting it to the Q2 international indexed journal.

The Action-Evaluation Result

When this research was written, the status of the participants' manuscripts in journals varied considerably. Some were under peer-review status; some had been accepted with minor and significant revision status; some were still in the initial screening. The details can be described as follows:

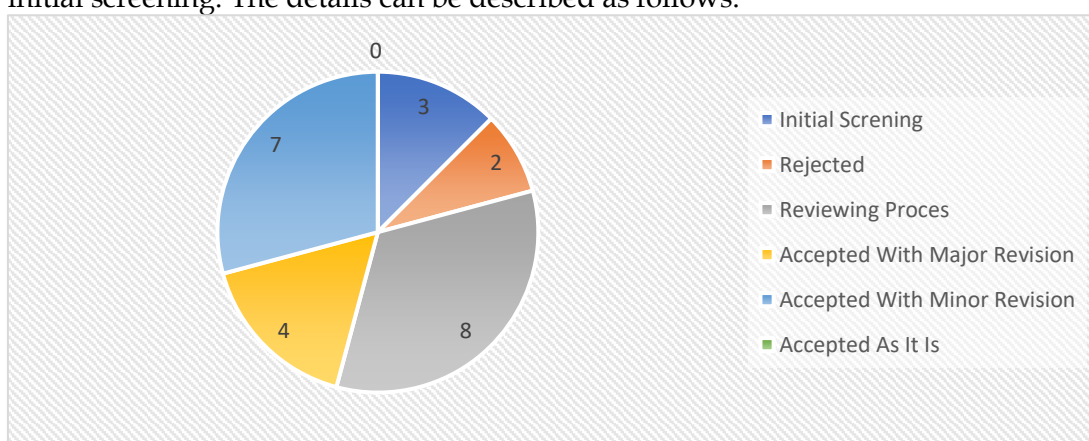


Figure 5. Status of the participants' manuscripts in journals

Figure 5 shows that the submitted manuscripts by the majority had met the journal's writing criteria; this was indicated by the existence of several

manuscripts received with a note of improvement. The manuscripts that required major revisions were 4 (16.67%), for minor revisions there were 7 (21.17%). Meanwhile, 8 (33.33%) of the manuscripts are still in the reviewing process: this means that the editorial board has approved these eight manuscripts. The editor is still investigating 3 (12.5%) manuscripts. 2 (8.33%); some of the manuscripts have been rejected because they are out of the Journal's scope. The participants need to be careful to ensure that the manuscript is following the targeted journal's scope.

4.3 Post-Action Analysis

This stage is the final stage of the research-series activities. Based on the action-evaluation results, there were several improvements needed in the participants' literacy skills. The increase is viewed from the comparison between the results of the pre-action and the post-action analysis. Some of these improvements can be seen in Figure 5.

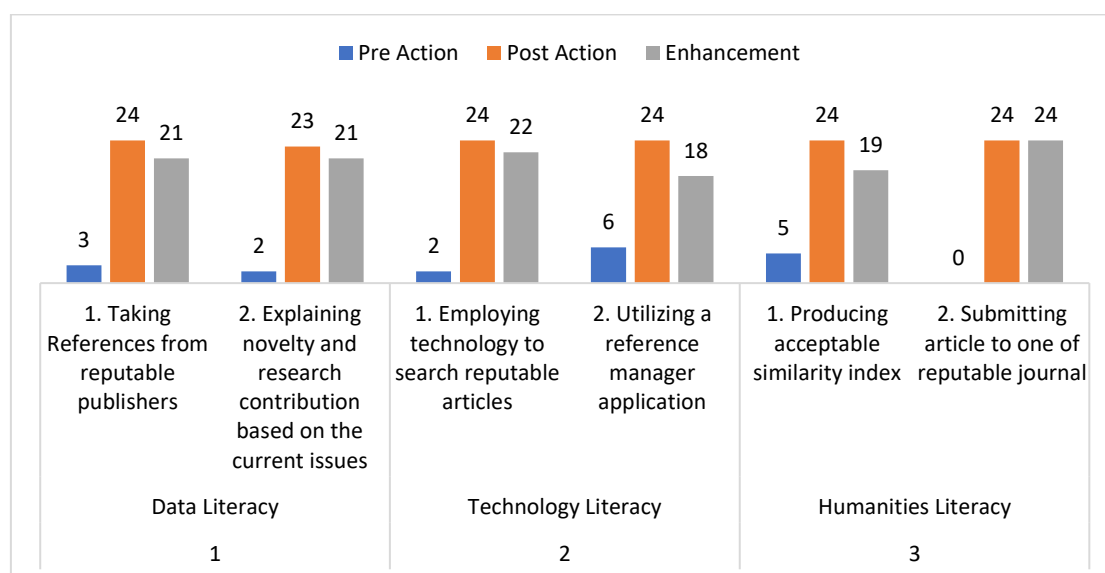


Figure 6. Increased Literacy Skills

Figure 5 shows the increase in all indicators for each literacy component. There was an increase in the first and second indicators for the Data Literacy: 21 (88%). It increased by 22 (92%) for the first indicator and by 18 (75%) for the second indicator in the technology-literacy component. The first indicator was changed to 19 (79%) for the humanities literacy component and 24 (100%) for the second indicator. Based on this increase, the average increase in the participants' literacy competence was 87%.

The afore-mentioned seven stages can be summarized in an acronym LITERAT: L = Literacy of Technology: This introduces the information technology needed for publication; I = Investigation: it explores and analyses the results of the latest research; T = Writing technique: it aims to understand how to compile a publication manuscript; E = Exploration: it explores to find and develop any supporting theories; R = Reflection: it aims to improve the quality of the text, based on the experience; A = Actualization: it is an attempt to produce productive

and creative actions in compiling the publication manuscripts; T = Translation: it is the act of collaboration to transfer the ideas to targeted languages. Through LITERAT, the literacy skills were able to increase by 87%.

5. Discussion

Maslow (1987), in *Hierarchy of Needs*, uses self-actualization as the highest human need and achievement. Moreover, for an academic, scientific papers' publication is no longer a requirement, but rather a necessity. It is a form of scientific actualization to disseminate knowledge, in order to increase a country's self-esteem in the diplomacy of the quality of education and science (Subekti, 2015). Therefore, 'Publish or perish' is a cultural value that needs to be cultivated for academics in general.

Along with the development of internet-based information technology, the media for publishing scientific works in the form of online digital-based scientific journals have been pervasive and easily accessible to all people around the world (Astuti & Isharijadi, 2019; Daive, 1997; Willinsky, 2005) for regional or international indexed journals. Journals are also the informational media for all academics, in order to trace and read their research results (Gould, 2010). It affects an intellectual dialectical process among scientists, developing people's research results or filling in the research gaps that others have not done. Ideally, internet-based publication media should be a meaningful lesson for academics, especially students, by expressing the ideas or thoughts to the public or society.

In other words, through publishing scientific papers, a positive and creative mindset grows in writing scientific papers (Cronin, 2005; Hartley, 2008). Consequently, writing scientific papers is a tradition that is studied by students in every learning activity in higher education (Persadha, 2016).

Research and publishing results play a vital role, especially in universities and research institutions, because they are the university's credibility or the research institute's leading indicators. The progress of universities and research institutions is measured by how much high-quality research is produced. The more research or scientific work produced, the better the campus image (Salam et al., 2017). Apart from the quantity, research is also assessed by how much the produced paper influences others: directly or indirectly.

This impact factor can be measured by looking at the number of citations, while the quality of the research results is also measured by the journal that publishes them (Istadi, 2015; Sellers et al., 2004). The current trend shows that quality journals are journals indexed by journal-indexing institutions, such as ScienceDirect, ProQuest, EBSCO, Web of Science, Scopus, and others (Falagas et al., 2008; Meho & Yang, 2007; Mongeon & Paul-Hus, 2016). In Indonesia, Scopus-indexed journals are used to measure the quality of the research results. Therefore, many researchers in Indonesia have used Scopus-indexed journals, as targets and references in publishing research results. However, there were case examples: undergraduate students who had received intensive guidance to publish their research results. They had gone through the publisher's review process and were declared accepted; but they were unable to publish their work

because they collided with a costly publication. This indicates an achievement for undergraduate students; because they have succeeded in submitting publications at reputable international levels that impact universities. However, because they did not get financial support, the research results could not be published. Factors like this need to be considered by the related institutions, in this case, the university.

In the learning context, increasing the number of student publications is described in this action research. It is closely related to developing and providing breakthroughs in learning and adapting and integrating technological developments in learning. Thus, educators need to progress even better. They need to stay on top of their knowledge, by constantly educating themselves. They must have basic literacy skills and are always be able to learn by reading various resources. For instance, research on and recommended discussion around professional learning paradigms (Castle, 2006; James & McCormick, 2009; Nisbet & Shucksmith, 1986; Novak & Gowin, 1984; Olson & Craig, 2001); how learning media are developing through time by technology-assisted aid using computer games (Rahman & Angraeni, 2020), or even utilizing LMS for practical courses (Rahman et al., 2020).

The result of this research are intended to inspire and assist educators for their literacy endeavors, allowing them to use the theories to adapt the changing environment (Korthagen, 2010; Penlington, 2008). As such, the research has shown that this can only be accomplished by improving academics' learning.

6. Conclusion

This study's aims have explored the framework for improving academics' literacy competence for scientific publication activities, by providing several stages through pre-action, action, and post-action planned stages. These stages are translated into an acronym of seven practical steps, namely: LITERAT: L = Literacy of Technology: It introduces information technology needed for publication; I = Investigation: It explores and analyses the results of the latest research; T = Writing technique: It aims to understand how to compile a publication manuscript; E = Exploration: It explores to find and develop supporting theories; R = Reflection: It aims to improve the quality of the text, based on the experience; A = Actualization: it is an attempt to produce productive and creative actions in compiling publication manuscripts; T = Translation: this is the act of collaboration to transfer ideas to targeted languages.

Through LITERAT, literacy skills were able to increase by 87%. It can be inferred that these practical steps are promising for the improvement in academics' literacy competence for scientific publication.

However, this study has limitations; as it only focuses on higher education in West Java, and in developing the literacy skills of doctoral program students. In addition, E-Resource Indonesia National Library was the only online application used to find references. The results of this study can be followed up by expanding the scope of its locus and targets, which are not only implemented for doctoral-program students, but at all levels in higher education. The reference searches can

be expanded to 'Publish or Perish' application from harzing.com or from major publishers, such as SAGE, ScienceDirect, Taylor & Francis and etc.

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