Scientific Publication as a Sustainable Professional Development Effort from the Perspective of ES Teachers

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ABSTRACT

Scientific publication is one of the activities in Elementary School (ES) teachers' sustainable professional development efforts. In addition, this scientific publication activity is also useful as material for teacher promotion professional improvement, and teacher performance. This study aims to collect information, describe, and analyze scientific publication activities to develop sustainable professionalism as well as inhibiting factors and solutions that can be provided in overcoming the problems of teachers' scientific publication skills. The research data collection used Google Forms distributed to several teachers who are civil servants about writing scientific papers for teacher promotion and was also supported by direct interviews with several teachers. The research data were analyzed descriptively in the form of activities to analyze, describe, and summarize the phenomena discussed. Some of the problems found in the scientific publication of teachers are limited time due to too many activities, lack of ideas and motivation to write, lack of understanding of teachers in writing and publishing scientific papers, and lack of references or related reading materials.

Keywords: Scientific Publication, Sustainable Professional Development, Elementary Teacher, Perspective.

INTRODUCTION

Efforts made to educate the nation's life are through education, this process must be conducted properly and professionally (Sumar et al., 2019). Education plays an important role in various fields of life, shaping the personality of citizens so that it will be an effort to improve the quality of human resources (Apiyani et al., 2022). The quality of human resources is an important goal that the government wants to achieve, the government seeks to improve this through various programs that are expected to be able and well implemented (Lyesmaya et al., 2017). Teachers as one of the educational actors have an important task in developing educational tasks (Yunus, 2016). Teachers have the task of implementing educational goals with their professionalism. Professional work differs from one teacher to another. Each teacher has his or her way of doing teaching work with his or her professional style (Supriadi, 2019).

The government focuses on improving the professionalism of teachers as educators. Law No. 14/2005 contains efforts made by the government to improve teacher competence and provide facilities for the implementation of education (Wahyudin & BK, 2022). Teacher competence itself means the knowledge, skills, and attitudes possessed by teachers in performing their educational duties (Yanti et al., 2022). A teacher who is professional
and has a noble character will be able to contribute to the effort to improve the quality of Human Resources, especially in the field of education, as the efforts that are the focus of the current government (Hartiningtyas et al., 2016).

Improving teacher professionalism is a serious concern because this effort is not an easy action (Lubis, 2018). The government seeks a sustainable professional development activity so that teachers can improve their competencies (Maiza & Nurhafizah, 2019). The competencies to be achieved by teachers as educators are pedagogical, professional, social, and personality competencies (Sari et al., 2020). This competency is very necessary for ES teachers to have because education in ES is the initial stage for children in education (Yohamintin et al., 2021). According to the Organization for Economic Co-operation and Development (OECD)-Teaching and Learning International Survey (TALIS, 2009), Sustaining Professional Development can be defined as activities that involve developing the skills, knowledge, expertise, and other characteristics of a teacher (Srinivasacharlu, 2019). Sustainable professional development is a process designed to improve teachers' cognitive, affective, and psychomotor abilities (Rusdarti et al., 2019; Wijitami et al., 2020). Continuous professional development is carried out according to the needs and stages (Darmiatun & Nurhafizah, 2019; Utari & Rianto, 2022). The government as the organizer of this sustainable professional development activity will motivate and provide adequate facilities for the implementation of this activity properly. This activity is inseparable from the assistance, support, and cooperation of the various parties involved (Ardiansyah et al., 2022). In addition, the success of sustainable professional development activities also requires support in the form of finance, policies, and infrastructure (Rahyasih et al., 2020). Sustainable professional development is conducted based on the needs of teachers to achieve or improve their competence above the competency standards of the teaching profession, this will also have implications for the acquisition of credit numbers which are useful for teachers to obtain credit numbers as one of the requirements for promotion or functional teacher positions (Daryanto, 2015). Sustainable professional development includes three things as mentioned in PERMENPAN-RB, namely increased self-development, scientific publications, and innovative work (Haryati et al., 2021; Basri et al., 2021; Santoso et al., 2023). A teacher is qualified as a professional if he has obtained an increase in functional position and rank through the preparation of scientific work according to his expertise (Muhaimi et al., 2021). The task of teachers is not only to educate and provide knowledge to students but also to participate in the development of science and technology. This effort requires scientific publication training activities for teachers to improve the ability, existence, quality, and professionalism of teachers (Marwa & Dinata, 2020).

Scientific work is a work that examines problems using scientific principles (Mahmudati et al., 2022). Several factors become obstacles for teachers in scientific writing, namely lack of interest and motivation to write, not understanding writing techniques, insufficient data collected, lack of reference sources, and lack of socialization from school principals and educational institutions (Anugraheni, 2021). These factors are an obstacle for teachers to be promoted because one of the requirements for promotion is the credit score obtained from scientific writing and publication (Kasiyan et al., 2019). Considering these problems, an analysis of scientific publications as an effort to develop sustainable professional development from the perspective of ES teachers is needed, including the obstacles faced by teachers and then finding solutions to these obstacles.
METHODS

This research is qualitative research using descriptive methods. Qualitative research is an effort that is carried out objectively to find science, theory, and principles that cannot be done using statistics or quantitative, then the process of preparation and development is conducted (Sidiq et al., 2019). The population in this study was 50 teachers in Agam Regency, which is the district where the author teaches. Given the small population, almost all of the population was used as a research sample (Wijaya & Sumarno, 2017). The research data was collected through a questionnaire that had been distributed in the form of a Google Form about writing scientific papers for teacher promotion and was complemented by an interview instrument. In-depth interviews were conducted with teachers to see their views on scientific publications for teachers. The research data were analyzed using descriptive analysis in the form of activities to analyze, describe, and summarize the phenomena discussed.

RESULTS

Data collection was conducted using a questionnaire filled out through Google Forms by ES teachers in Agam Regency. This activity was attended by 50 teachers consisting of 16 teachers aged 45 years and over, 28 teachers aged 35 to 45 years, and 6 teachers aged 35 years and under. These teachers are civil servant teachers who have become civil servants from 1986 to 2019, consisting of teachers with ranks from 3B to 4 B. Because the respondents are mostly at the age of 35 - 45 with a length of time as civil servants of around 10-15 years, most respondents are currently at the rank and class 3C, which is around 46% or approximately 23 people out of 50 respondents, the rest are at the rank and class 3B, 3D, 4A, and 4B. From the survey results, it was found that 50% of respondents were in the rank of the last group for less than two years, while the remaining 50% had been in the rank of the last group for more than 2 years and many had been more than 6 years. Ideally, if teachers can reach the cumulative credit score, they can be promoted within 2 years (Peraturan Presiden, 2000).

Joint Minister of National Education and Head of the Civil Service Agency Number 03/V/PB/2015 in 2010 can be analyzed on the completeness of the materials for determining teacher credit scores, namely as follows: 1) The main element which includes education and learning/guidance on certain tasks; the credit score for this point can generally be fulfilled by ES teachers because ES teachers serve as class teachers with a minimum number of hours of 24 hours per week; 2) The element of sustainable professional development at the point of self-development, this can usually also be fulfilled by ES teachers because all ES teachers are members of the Teacher Working Group (KKG) community whose activity program for one year can produce self-development certificates that can be used to fulfill the credit points at the point of self-development. If training activities are only limited to certain teachers, then this KKG can be attended by all teachers in each cluster. So there is no reason why teachers cannot fulfill the credit score for this point. 3) The scientific publication element, which includes presenting at scientific
forums, conducting scientific publications of research results or scientific ideas in the field of education, and conducting publications of textbooks, enrichment books, and teacher guidelines; this is mostly an obstacle for teachers because teachers still have difficulty in conducting scientific publications, as a result, the credit score for this point is often not achieved, which has an impact on the delay in teacher promotion. ES teachers' perspectives on writing scientific papers were collected through a questionnaire distributed in the form of a Google form. The form of the form given is in the form of questions that require answers in the form of checklists to the available answer choices. In addition, some questions require a "Yes" or "No" answer.

3.1 Scientific publication as a need for sustainable professional development

Teachers as educators in ES need pedagogical, professional, social, and personality skills to meet the demands of the times and educational science (Yantoro et al., 2019). This sustainable professional development activity is one of the needs in the performance assessment used in the promotion of teachers who are civil servants (PNS). This is stated in Permenpan R&B No. 16/2019 concerning activities conducted for performance appraisal for promotion (Sujana et al., 2022). One of the efforts to develop teachers' sustainable professional development is teacher scientific publication activities. Scientific publication activities include reports on the results of a scientific review, published scientific articles, textbooks, teaching modules, translated works, and teacher manuals (Subadi, 2016). A scientific work produced and published is a major indicator in teacher performance assessment which is then useful in promotion. For civil servant teachers, promotion is an award and right that they must receive throughout service. Promotion is an attempt by teachers to improve their performance and ensure their welfare in old age. However, it is unfortunate that there are still many teachers who are constrained in processing promotion because they do not meet the requirements for completeness of materials, one of which is the writing of scientific papers.

Table 1. Results of survey questionnaire on writing scientific papers for ranking of civil servant teachers

<table>
<thead>
<tr>
<th>No</th>
<th>Questions</th>
<th>Answer Options</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is the writing of scientific papers as one of the complete materials an obstacle for you in processing promotion?</td>
<td>Yes</td>
<td>74%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>26%</td>
</tr>
<tr>
<td>2</td>
<td>What scientific papers have you written in the last 2 years? (Answers can be more than one)</td>
<td>Nothing</td>
<td>28%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Research Report (PTK, etc.)</td>
<td>62%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Papers</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Popular Scientific Writing (Newspaper, etc.)</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scientific Articles in Education</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No time/too busy</td>
<td>69%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lack of ideas</td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lack of motivation</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lack of technology</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lack of understanding of how to write scientific</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lack of literature/lack of references</td>
<td>20%</td>
</tr>
<tr>
<td>3</td>
<td>What are your obstacles in writing scientific papers? (Answers can be more than one)</td>
<td>Lack of motivation</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lack of technology</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lack of understanding of how to write scientific</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lack of literature/lack of references</td>
<td>20%</td>
</tr>
<tr>
<td>4</td>
<td>Do you think there is still a need for training on writing scientific papers for teachers?</td>
<td>Yes</td>
<td>98%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>2%</td>
</tr>
</tbody>
</table>
From the survey results, it can be seen that the majority of respondents stated that the writing of scientific papers as one of the complete materials is an obstacle for ES teachers in processing promotions. The papers written by primary school teachers are generally in the form of Classroom Action Research that is disseminated at the Teacher Working Group (KKG) forum or even not disseminated at all. Some of the respondents wrote articles, but from the interviews, it was known that the articles they wrote were college assignments because the respondents were currently continuing their education. So they did not deliberately write articles in the context of their role as teachers in schools.

3.2 Factors inhibiting teachers' scientific publications

In scientific publication activities as an effort to develop sustainable professional development conducted by ES teachers, several difficulties become obstacles. First, there is no time or too much busyness, most teachers in ES have busy teaching hours. The average ES teacher who is a class teacher conducts the learning process in the classroom for about 7-8 lesson hours every day, after the lesson ends the teacher's duties continue with activities such as assessing students' assignments, preparing lesson materials, or completing class administration. In addition to busy teaching hours, many ES teachers also have additional duties outside of their main duties such as being the BOS treasurer, helping with operator duties, supervising extracurricular activities, and so on. Teachers' busy schedule is one of the reasons cited by teachers as an obstacle to producing scientific publications. Teachers do not have enough time to write scientific papers due to the tight learning schedule and other tasks that must be followed (Firdaus et al., 2022).

The second obstacle is lack of ideas and lack of motivation. This second obstacle is mostly experienced by teachers who are IES accustomed to writing or producing scientific papers. This is also experienced by teachers who lack experience in related fields. In addition, most teachers also lack motivation in writing so they do not come up with ideas related to the scientific work to be produced. This lack of ideas is one of the obstacles in producing and publishing a teacher's scientific work. Writing as a way to communicate indirectly requires language skills which include listening, speaking, reading, and writing skills which are unity (Tarigan, 2008). Despite finding many problems in daily learning activities, most teachers have difficulty expressing ideas in the form of writing to produce a paper. From the results of interviews with several fellow teachers, the reason they write scientific papers is because of the demands to fulfill credit numbers, not because they like to write. This lack of motivation and ideas is exacerbated by the existence of scientific writing services, in today's digital age the development of technology and knowledge is increasingly rapid. All needs in education can be met quickly and easily, including the existence of scientific writing services. Some teachers claim to prefer using this service in producing scientific papers that are useful for promotion.

The third obstacle is teachers' difficulties related to technological skills. Writing scientific papers is inseparable from technology as support. Most teachers who have had a longer teaching period have difficulty with technological skills such as computers and laptops as a means of supporting the completion of scientific papers. This lack of IT skills is a significant obstacle for teachers in writing and publishing scientific papers. The lack of skills in using laptops or computers is not only a problem for older teachers such as those over 50 years old, but also many teachers under the age of 50 who rarely use laptops or computers in their daily lives.
The fourth obstacle is the lack of teacher skills in writing scientific papers. From the interviews, it was found that teachers who did not write scientific papers were due to their lack of understanding of the paper itself. This is also due to the lack of training provided to teachers, with most teachers admitting that they have never attended training on writing scientific papers, and some who have attended admitted that they had attended the activity for so long that they had forgotten the material they learned. Teachers are in dire need of scientific publication training organized by schools and related institutions to support sustainable professional development. This was also found among teachers in other areas outside the Agam district, where teachers had difficulty understanding how to write scientific papers (Estriyanto et al., 2022).

Fifth, the lack of literature or lack of references, in this problem most teachers stated that they lack reading materials that are useful as related references. The lack of complete reading material facilities in the school library is an obstacle to finding literature. In addition, digital references are also not entirely helpful, because most teachers prefer reading material in the form of printed books. After all, it is easier to read and understand. This lack of reading material is an obstacle to writing scientific papers.

3.3 Solutions and recommendations to overcome teachers' difficulties in writing and publishing scientific papers

Various problems that arise in teachers' scientific publication activities require solutions to overcome them. The solution to the first problem, namely no time or too much busyness, can be overcome with assistance or attention from the government, for example by reducing the workload of ES teachers who are too many, such as simplifying learning tools or providing educational staff needed by schools such as operators and library staff, because there are still many ES, especially public schools that do not have this staff so that various jobs are performed by teachers who should be assigned as class teachers. From the teachers themselves, it is recommended that teachers be more able to divide their time and utilize their time well so that on the sidelines they can still take the time to write, because after all, writing scientific papers is a must for teachers to improve professionalism. Teachers as educators should have good time management skills. Teachers who have good time management will have enough time for teaching activities, evaluation, and writing scientific papers that are useful for promotion (Hasan & Rahmani, 2021).

The solution to the problem of lack of ideas is to increase reading and experience. Ideas about scientific work will emerge through reading activities, sharing knowledge, and field experiences experienced directly by teachers. Knowledge-sharing activities, especially by experienced teachers, will support inexperienced teachers in coming up with ideas related to scientific work to be written (Krisman, 2016). In addition, collaboration between fellow teachers can also be done to add ideas and insights about writing scientific papers. This can be done through Teacher Working Group (TWG) activities conducted both in schools and clusters. Discussion activities with fellow teachers in sustainable professional development provide great benefits for teachers, this is to research conducted by Jane Basnet on teachers in Scotland who conduct sustainable professional development activities through an activity called TeachMeet (TM) which is a meeting activity for teachers to share ideas about things that are useful for sustainable professional development. The study concluded that the value of a teachers' conference is not in the workshops or presentations but in the casual conversations and exchange of ideas between
teachers (Basnett, 2021). Furthermore, the lack of ability to use technology can be overcome by providing training and understanding to teachers related to IT skills. Today's digital era is inseparable from the increasingly rapid information and communication technology. For this reason, the principal as the holder of leadership in the school should organize a training activity on IT and procedures for writing scientific papers. In this case, it is also very necessary for the principal to motivate teachers to always improve the competencies needed in the world of education. Especially now that in the era of society 4.0 technology cannot be separated from the implementation of education. Therefore, it is very important for teachers as educators to master technology so that it can be utilized in the learning process (Wernely, 2018).

The problem of the lack of literature or reading material teachers can increase activities related to extracting information. Teachers are strongly advised to increase reading both in the form of books and articles about scientific work that will be produced. The school library as one of the learning facilities at school should have complete references to support teachers' scientific publication activities. The solution to the problem of lack of training is to organize training activities that can be conducted at the sub-district, district, and beyond levels. This requires the cooperation and support of authorized officials such as the Education Office. A planned, systematic, effective, and efficient training is needed. This will help teachers continuously produce and publish scientific work that is useful in sustainable professional development (Susanto, 2016) because if teachers have the wrong perception about writing scientific papers, they will think that writing is a very difficult thing to do, which results in reluctance and laziness to write (Marijan, 2011). With the training, it is hoped that teachers will be enlightened so that writing no longer feels difficult but can turn into a necessity for teachers. From the results of a survey of primary school civil servant teachers in Agam Regency, training in writing scientific papers is still considered necessary by most primary school teachers. From the percentage of answers, it can be seen that 64% of respondents felt that they still needed training, while the remaining 36% felt that it was no longer needed (some respondents answered that they did not need it because they were old and could no longer write, and some were currently continuing their education so they felt that they had already gained knowledge of writing scientific papers at university). The following is a classification of civil servant teachers' responses regarding the need for training in writing scientific papers based on their age. More clearly can be seen in Fig 1 below.

![Number of Teachers by Age](image)

Figure 1. Survey results the need for training in writing scientific papers
From Fig 1 above, it can be seen that civil servant teachers who state that scientific work training is needed for sustainable professional development are in the age range of 35 - 45 years as many as 17 out of 32 people with a percentage of 53%, the age range of more than 45 years as many as 11 out of 32 people with a percentage of 34%, and the age range of less than 35 years as many as 4 out of 32 people with a percentage of 13%.

CONCLUSIONS

Sustainable professional development is an activity conducted to improve the cognitive, affective, and psychomotor abilities of teachers. One of the efforts in this sustainable professional development is the existence of scientific publications. In writing scientific papers, ES teachers have several obstacles such as lack of time to write because they are too busy, lack of ideas and lack of motivation, lack of technological capabilities, lack of teacher skills, and lack of references. The low ability of teachers in scientific publications requires scientific publication training organized by related institutions to support the use of technology and produce scientific work. In addition, scientific publications are also useful for teacher promotion which will indirectly improve teacher performance and professionalism.

REFERENCES


