Original Research Article

ANALYSIS OF SUSTAINABLE TEACHER PROFESSIONALITY DEVELOPMENT THROUGH SCIENTIFIC PUBLICATIONS IN HIGH SCHOOL

ABSTRACT

Aims: Describe how to implement sustainable professional development through scientific publications in high school.
Study design: Qualitative and descriptive approach.
Place and Duration of Study: Sample: High school teachers in the city of Padang, between Mei 2022.
Methodology: This study uses a qualitative and descriptive approach. The subjects in this study were high school teachers in the city of Padang, totaling 23 people. Research data in the form of qualitative data were collected through questionnaires. The data were analyzed using descriptive statistics to describe the state of the data by presenting responses to a Likert scale questionnaire. The data presented provides an understanding of the phenomena that occur, then the researcher plans further actions based on the significance of the phenomenon.

Results: This research focuses on five indicators designed to determine how the implementation of sustainable professional development for teachers in senior high schools is carried out. The five indicators are activeness in professional activities, professional development planning, making scientific works, product development to support the learning process and activeness in scientific activities.
Conclusion: The five indicators are activeness in professional activities, professional development planning, making scientific works, product development to support the learning process and activeness in scientific activities.

Keywords: Sustainable Professionality, Teacher, Scientific Publications

1. INTRODUCTION

The teaching profession is very important in the life of a nation. Teachers are the dominant factor in the entire educational process, so the quality of education is largely determined by the quality of educators in carrying out their roles and duties in society. Therefore, efforts to further develop the teaching profession are an absolute requirement for the progress of a nation. Improving the quality of teachers will encourage an increase in the quality of education both in terms of process and results. In the current era of digital technology, teachers must understand and have technological capabilities in their professional development in education (Marienko et al 2020). Teachers need to understand the importance of continuous professional improvement which can be seen from the teacher's

view of the continuing profession in professional development.(Cross, 1998; Cebrián et al, 2015; Hasslof et al, 2014; Salite et al, 2006).

Teacher professional development is a process in which a teacher extends their knowledge and skills and applies them to support student learning (Avalos, 2011; Summers, 2003). Postholm (2012); Morales-Martinez et al (2018); Efgivia et al (2021) define the concept of "learning" based on the cognitive-constructive model, namely learning that takes place actively through mental stimulation and the search for meaning in social interactions. As a result, learning carried out by teachers can take place in various ways, both formal and informal. It is said that if the quality of teachers increases, human resources will increase, so the country will progress and society will be more prosperous. As the results of Ucan (2016); Prihidayanti et al (2019); Revina et al (2020) emphasized that the continuous professional development of teachers is very important. This can directly determine the success of any educational reform and indirectly affect the future of society.

Teacher competence can be understood as the ability of a teacher to carry out his professional duties as a teacher. Endang (2007:1); Rieckmann, M. (2018) state that competence is defined as basic knowledge, skills, and values that are reflected in the habits of thinking and acting. In this case, basic knowledge, skills, and values that are nurtured and developed in everyday life shape a person's ability to carry out daily tasks. In the context of a teacher, the ability of a teacher in carrying out his duties must be done professionally because his job is a profession. Thus, a person is said to be a teacher if he has pedagogical knowledge and skills (König et al, 2020). (Mukhamadovna, 2020).

The demands of teachers today are getting heavier and more complex. It is not enough to just have a degree or only have a bachelor's degree in education, be proficient in several disciplines or fields, and teach or transfer knowledge to students only. Previously, the work of a teacher could be done by anyone who could understand the contents of the textbook, explain the contents of the textbook to students, ask students to take notes based on the explanation of the textbook, the teacher and give side assignments. done by students at home. Currently, teachers must not only have a bachelor's degree in education but also have teacher qualifications and certificates that meet the requirements of each type and level of education (Alfath & Huliatunisa, 2021; Hoesny & Darmayanti, 2021). This requirement requires a teacher to carry out his duties and work as a teacher professionally and responsibly.

Scientific publications are scientific papers that have been published to the public as a form of teacher contribution to improving the quality of the learning process in schools and the development of the world of education in general. To develop the ability of teachers creatively and innovatively (Borodina et al, 2019). Scientific publications include 3 groups of activities, namely: (1) presentations in scientific forums; as a marketing/resource person at seminars, scientific workshops, colloquiums, or scientific discussions; (2) scientific publications of research results such as Classroom Action Research (CAR) covering problems faced by teachers (in learning interactions, related to learning achievement, learning discipline), innovative ideas in the field of formal education, such as popular scientific writings in the field of formal education and learning in educational units published in mass media/journals; (3) publication of textbooks, enrichment books and/or teacher guidelines. (Dasuki et al, 2012).

Table 1. Professional Development Sustainable

No	Continuous Teacher Professional Development	Scope

1	Presentation in scientific forums	Resource person at the seminar Scientific workshop Colloquium or scientific discussion
2	Scientific publication of research results	Classroom Action Research (CAR) Innovative ideas Article
3	Book publication	Lesson textbook Enrichment book Teacher Manual / Module

Sennen (2011:134) confirms that there is a positive and significant relationship between competence and teacher performance, the contribution of the competence variable to teacher performance is 39.69%. Teacher capacity is a factor that also affects teacher performance. Teacher competencies, both positive and negative, tend to affect teacher performance. If the teacher's competence is positive or adequate, the teacher's performance will tend to be positive otherwise, if the teacher's capacity is negative or inadequate, the performance results will also be negative. This article will discuss the continuous professional development of teachers through scientific publications in senior high schools.

2. MATERIAL AND METHODS

This study uses a qualitative and descriptive approach with a focus on the implementation of continuous teacher professional development through scientific publications in high school. The use of this research method is based on Mack's (2005) idea that qualitative research is very effective in gathering culture-specific information about values, opinions, behaviors, and social contexts, associations of certain populations, as well as for identifying intangible factors. such as social norms, socioeconomic status, gender roles, ethnicity, and religion, including roles in research.

The subjects in this study were high school teachers in the city of Padang, totaling 23 people. Research data in the form of qualitative data were collected through questionnaires. The data were analyzed using descriptive statistics to describe the state of the data by presenting responses to a Likert scale questionnaire. The data presented provides an understanding of the phenomena that occur, then the researcher plans further actions based on the significance of the phenomenon.

3. RESULTS AND DISCUSSION

Coaching and professional development of teachers are related to increasingly complex learning challenges due to the development of information technology so teachers must always carry out scientific development either through research, observation, or reading of new sciences related to learning and so on. Continuous professional development for high school teachers in the city of Padang is important in developing a teacher's career as a professional educator in schools. Self-development is an effort to improve self-professionalism to have competencies that are following laws and regulations or national education policies as well as the development of science, technology, and the arts. Professional development activities can be in the form of scientific papers, teaching aids,

This study analyzes the Continuous Professional Development of Padang High School teachers through scientific publications. Scientific publications are scientific writings in the form of research results or books that have been published to the public, including through presentations in scientific forums, publication of research results in scientific journals,

learning modules/dictations, and textbooks. According to Krismanto (2016), one of the indicators of present and future teacher professionalism is being able to make innovations that are realized in the form of scientific publications. To obtain data on the continuous professional development of high school teachers, a questionnaire was distributed to 23 teachers. The questionnaire is divided into several indicators, including :

1. Activeness in professional activities (1-4)
2. Professional development planning (5-8)
3. Making scientific papers (9-11)
4. Product development to support the learning process (12-15)
5. Activeness in scientific activities (16-19)

The results of the questionnaire on scientific publications that have been carried out by Padang High School teachers are presented in the following figure:

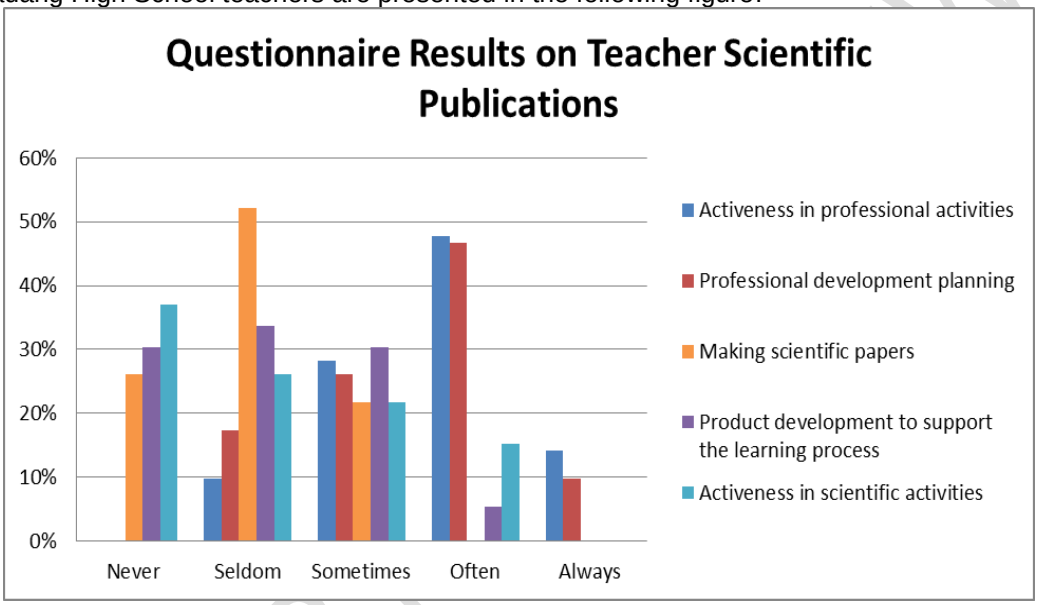

Figure 1 Questionnaire Results on Teacher Scientific Publications

The following is the description of each questionnaire indicator regarding teacher scientific publications:

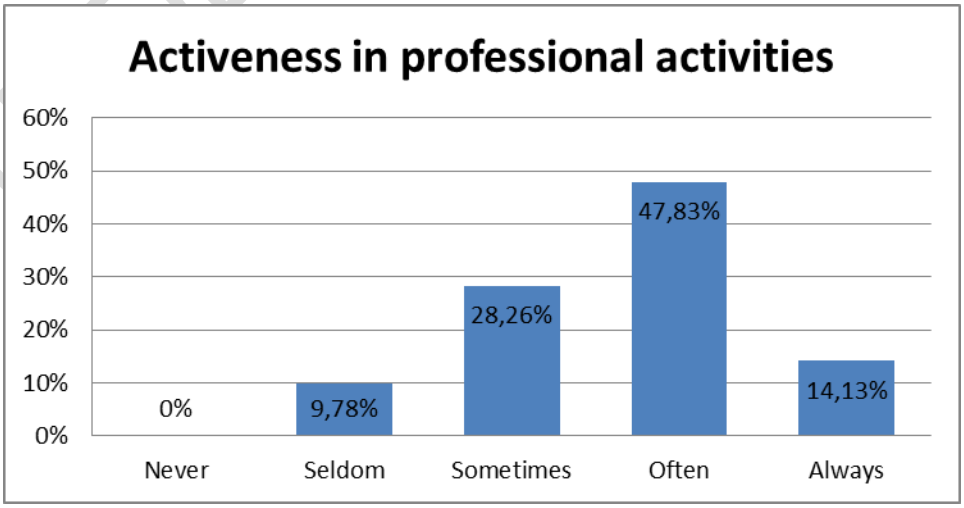

Figure 2 Activeness in professional activities

Based on Figure 2 above, it can be seen that in the implementation of professional activities, the teachers at Padang Senior High School are quite active. This can be seen in the percentage of teachers who have never been active in professional activities by 0%, those who are rarely active in professional activities are 9.78%, teachers who are not very active in professional activities are 28.26%, and the percentage of teachers who are often active is 47,83%, while teachers who are always active in professional activities are 14.13%.
The professional activities that are followed by teachers in high school are the activities of the Subject Teachers' Consultative Professional Organization (MGMP) both as members and as administrators, and teachers also actively participate in seminars and workshops. There are various types of seminars and workshops attended by teachers, there are activities carried out by the Subject Teacher Conference (MGMP), and there are also seminars and training activities held by the relevant agencies.

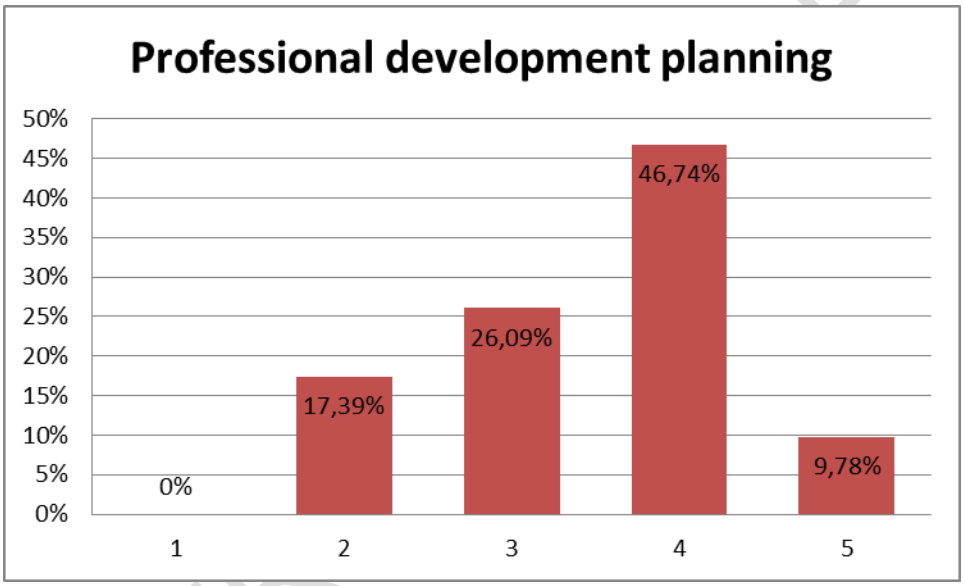

Figure 3 Indicators of professional development planning

In Figure 3 with indicators of professional development planning, it can be seen that there are no teachers who do not make plans for their professional development as evidenced by the percentage results are 0%, while the percentage of teachers who rarely make plans for professional development is 17.39%. The percentage of teachers who sometimes make plans is 26.09%, and teachers who often make professional development plans are 46.74%, while teachers who always make professional development plans are 9.78%.
Professional development planning carried out by Padang High School teachers is in the form of independent planning and discussion with colleagues. Through consideration of the results of the self-evaluation and also the results of discussions with the school, the Padang Senior High School teachers were also carried out as considerations in making plans for professional development. Not only with the school and colleagues, but teachers also make plans based on an analysis of student learning outcomes needs, and also based on the need for credit scores and promotions.

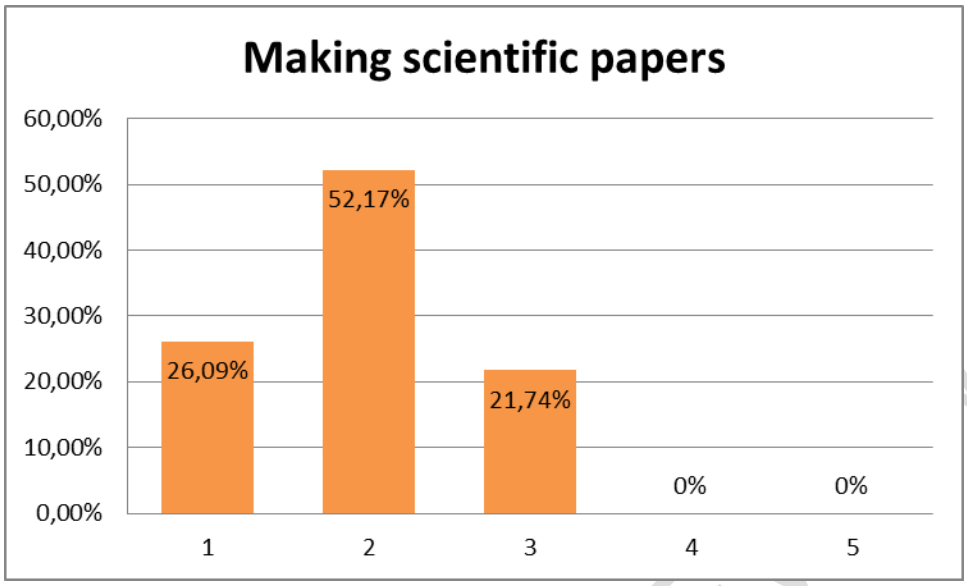

Figure 4 Indicators of Making Scientific paper

In indicator 3 of making scientific papers, it can be seen that as many as 26.09% of teachers never do scientific work, 52.17% rarely do scientific work, and 21.74% sometimes do scientific work. This is evidenced by the low percentage of teachers who conduct research to produce scientific works for seminars and publications. Because most teachers rarely do research, there are no teacher research reports stored in the school library. However, several teachers have published scientific papers and presented them at the MGMP forum. Scientific papers written by teachers are in the form of problems in learning and education.

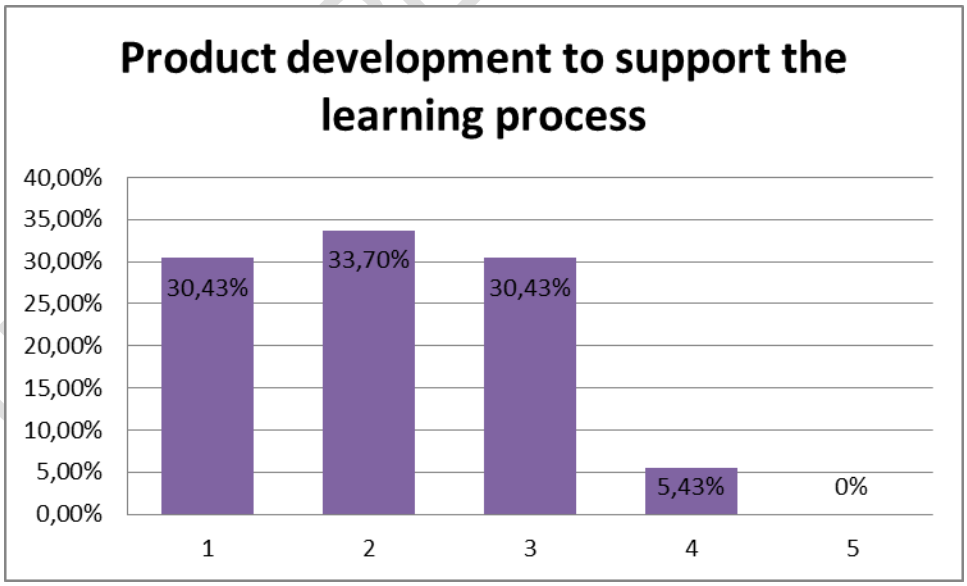

Figure 5 Product Development Indicators to Support the Learning Process

Teachers must carry out various kinds of innovations to support the learning process, for example by using learning media and modules or teaching materials. From the results of the questionnaire, it was found that teachers who never did product development, either

teaching materials or learning media were 30.43%, teachers who rarely made media or teaching materials were 33.7%, and teachers who sometimes made media or teaching materials. by 30.43%, while teachers who often make media or teaching materials are 5.43%, and there are no teachers who always make media or teaching materials for every meeting.

The low percentage of teachers in developing products that support the learning process can be seen from the infrequent number of teachers who make modules or teaching materials used at the school level, let alone making very few printed and published textbooks with ISBNs. Likewise, in terms of making learning media, it is rare for teachers to make their media used in the learning process. In general, the media used by teachers are only media that already exist in schools, or media that have been created by other people, so teachers only need to use them in the learning process. To improve the quality of learning, changes and improvements are needed. This can be done by teachers through CAR (Classroom Action Research), but very few teachers do it.

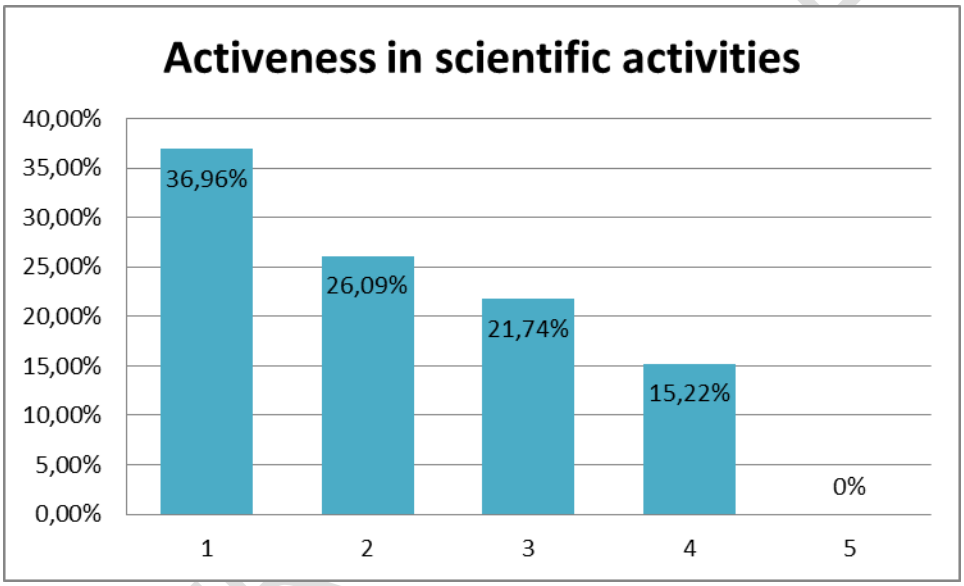

Figure 6 Activities in Scientific Activities

The indicator of teacher activity in scientific activities shows high results in the never category, namely 36.96% of teachers are never active in scientific activities, 26.09% are rarely active in scientific activities, and 15.22% sometimes participate in scientific activities. Meanwhile, for teachers who are often active in scientific activities, 15.22% is obtained and there are no teachers who always participate in scientific activities. Scientific activities that are participated by teachers are in the form of presentations in various scientific forums, participating in scientific activities, participating in workshops. There are even teachers who become resource persons at scientific seminars, although only a few people.

4. CONCLUSION

Based on the results of the research above, we can conclude that the indicators are related to activeness in professional activities, Teachers at Padang High School are quite active in carrying out professional activities. in the second indicator related to professional development planning, it was found that all teachers made plans for their professional development. In the indicators related to making scientific papers, it was found that several

teachers had published scientific papers and presented them at the MGMP forum, but there were still a few teachers who conducted research to produce scientific papers for seminars and publication. Furthermore, on product development indicators to support the learning process, the results show that there are still few teachers who make their learning media, modules, books, or other teaching materials themselves. In addition, it was also found that there were still few teachers who conducted classroom action research. The next indicator is related to activeness in scientific activities, the results show that several teachers in high school are active in scientific activities but some teachers have never been active in scientific activities such as presentations in various scientific forums or becoming participants in scientific activities. scientific activities, and attend workshops.

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