Teacher Professional Development Through Writing Scientific Papers

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Abstract. Professional teacher has four competencies, namely (a) pedagogical competence, (b) cognitive competence, (c) personality competence, and (d) social competence. Among the four competencies of the professional teacher, our most emphasis is competence in learning management. That is, a professional teacher is required to be able to compile learning program, choose and use media and appropriate learning strategies. Professional teacher is required to be able to communicate that can motivate their learner. On the other hand, the teacher must also have extensive knowledge in his field, be wise, and be able to socialize well. The teacher profession is a special field of work that requires professional principles. Professional teacher is teacher who has the competencies required to carry out education and learning assignment. In relation with that, making scientific paper is one form of activity that can be used to develop teacher professionalism. It should be emphasized that the activity of developing the greatest professionalism of teacher is compiling scientific paper. Compiling scientific paper for teacher is a basic requirement to develop his profession. The reason is that teacher is considered as (a) educated people, (b) implementer of renewal in the world of education, (c) motivating student and partner, and (d) model for student in writing scientific paper, (e) researcher in learning, and (f) author of scientific paper.

Keywords: teacher · professionalism · scientific paper · four professional teacher competencies

1 Introduction

Scientific work plays an important role in the development of teacher professionalism. Skillfully compiling scientific works related to his profession, the teacher has the necessary knowledge and skills to carry out his main task to the best of his ability so that the quality of the learning process and results can improve. That is the purpose of professional development, which is to realize a high-quality learning process. There is no doubt that scientific work can be used to develop the professionalism of teachers. The teacher referred to here is also a lecturer, because both have similar duties as teachers and educators. Professional teachers have four competencies, namely (1) pedagogical

competence, (2) cognitive competence, (3) personality competence, and (4) social competence. The profession of teachers and lecturers is a special field of work that requires professional principles [1].

Teacher professionalism, according to Richards and Lockhart, (2000) is the condition, direction, value, goal, and quality of an expertise and authority in the field of education and learning related to the work of a person who is a subject. Professional teachers are teachers who have the competencies required to perform educational and learning tasks [2]. A professional teacher is a well-educated and well-trained person, as well as having rich experience in his field [3].

A professional job according to [4] requires special requirements, namely (1) it demands skills based on deep scientific concepts and theories, (2) emphasizes expertise in a certain field according to its professional field, (3) demands an adequate level of education, (4) there is sensitivity to the social impact of the work it carries out, (5) in line with the dynamics of life. Also stated that professional work requires (1) adherence to the code of ethics as a reference in carrying out its duties and functions, (2) the existence of a definite client, such as a doctor with his patients, teachers with his students, (3) recognition by the community because his services are needed in the community [4].

Professional teachers will be reflected in the implementation of the service of tasks characterized by the presence of expertise, both in materials and methods. In addition, it is also shown through his responsibility in carrying out all his devotion. Professional teachers should be able to bear and carry out their responsibilities as teachers to their learners, parents, society, nation, state, and religion [5]. Professional teachers have personal, social, academic, moral, and spiritual responsibilities. It should be understood that professional teachers who deserve high appreciation are teachers who become active actors in a process of forming science [6, 7]. Research, writing scientific papers, and scientific meetings are a triad of activities that cannot be separated from their knowledge-building efforts.

Research, writing scientific papers, and scientific meetings are things that should not be separated from the activities of a teacher in order to carry out his educational profession at school [3]. The active participation of a teacher in the world of research, for example by conducting Classroom Action Research (PTK) [8]. Conducting Classroom Action Research is believed to be one of the determinants of increasing their insight and ability to teach and educate them. The research process, will inevitably encourage a teacher to constantly read.

Likewise, the activities of writing scientific papers and scientific meetings are believed to be a means of broadening the horizons of teachers related to the field of profession they are engaged in. The world of science, science, technology, and art (IPTEKS) continues to develop in rhythm with the times that require teachers to continue to follow [9]. Teachers as figures who become role models for students must follow the development of science, knowledge, technology, and art (IPTEKS).

2 Research and Method

The method used is the study of literature including laws, and government regulations to find out the location of writing scientific papers as a development of teacher professionalism.

3 Result and Discussion

3.1 Professional Teacher Profile

The teacher is one of the components of education in schools that has an important and strategic role. A number of important competencies of the teacher profession according to include (1) competence in the field of profession or field of study, (2) competence in the field of learning, (3) competence in the field of education, values, and guidance, and (4) competence in the field of relationships and community service [10]. Among a number of competencies of professional teachers, the most important thing we emphasize is competence in learning management. Along with the development of information technology, the competence of learning management in the future will change. Schools in the future will change from a class format to a shared school in one city, a joint school in one country, even a shared school in the world or a global school [11]. Teachers in the future are required to be proficient and able to take advantage of communication and information technology and change roles to become facilitators who teach students until they find something [12]. Therefore, professional teachers must be ready to be tested for their competencies regularly to ensure that their performance continues to meet the requirements of professionals who continue to develop [13].

In the future, it can be ascertained that the teacher's feasibility profile is emphasized on aspects of the ability and skills of teaching students, starting from analyzing, planning, developing, implementing, and assessing learning based on the application of educational technology [14, 15]. According to Rosenshine and Stevens (2002) there are nine basic skills that are important to be mastered by professional teachers in learning management, namely skills (1) opening learning by briefly reviewing previous learning related to the learning to be presented, (2) presenting learning objectives, (3) presenting material accompanied by exercises, and vice versa, presenting exercises then given reinforcement with theoretical material, (4) provide detailed explanations, (5) provide quality exercises, (6) provide opportunities to ask questions and give students many opportunities to show their understanding, (7) guide learners to master the knowledge and skills needed, (8) provide feedback and corrections or reflections, and 9) monitor students' learning progress. Of course, there are still skills that the teacher must master, for example, closing the lesson well by making summaries and affirmations, as well as providing instructions on the follow-up that the learners should do.

If we look at the principles of professionalism, the condition of the world of education in Indonesia still has some weak points in the following (a) thequality of the education and background has not really been in accordance with the field of teacher training duties, (b) youhave the necessary competencies according to the field of duty, (c) theincome is not determined according to work performance, (d) k there are opportunities to develop the profession on an ongoing basis, and (e) profesionalism in education needs to be interpreted *as he does his job well*. By realizing that there are still many teachers who do not meet professional criteria, teachers and persons in charge of education must take steps to organize training programs, foster work behavior, create free time to carry out research and write scientific papers, and improvethe welfare of [14].

Based on the exposure in front, it can be stated that a profession is a skill and authority in a certain position that requires certain competencies (attitudes, knowledge, and skills)

specifically obtained from intensive academic education. Profession is usually related to a person's livelihood in meeting the needs of life. The teacher profession is a special skill and authority in the field of education, learning, and training that is pursued to become a livelihood in meeting the needs of life concerned (Law of the Republic of Indonesia No. 14 of 2005). Teacher as a profession means teacher as a job that requires competence (attitudes, knowledge, and skills) in addition to competence (1) pedagogical, (2) scientific, (3) personality, (4) social in the field of education and learning in order to carry out the work effectively and efficiently and successfully.

If you look at the fact that the majority of our teachers seem to be far from the world of research, writing scientific papers, and scientific meetings. There are many teachers who are stagnant in the rank/class of IVa because to advance to the next rank level they are required to have scientific work. It shows how little our teachers are involved in scientific activities, such as conducting research, writing scientific papers, and participating in discussions and other scientific meetings.

There are a number of factors that cause why teachers have tended to be far from the scientific world. The inconduciveness of the school climate to make teachers "developers of knowledge" may be the main factor leading to such a reality. In contrast to the world of higher education which requires every lecturer to continue to actualize and *upgrade* their knowledge. Meanwhile, in school the atmosphere like in college is almost imperceptible. On the other hand, so far, quite a lot of our teachers have had enough of what they have because indeed the world around them also 'does not demand' much from these teachers.

The lack of facilities to conduct research in schools is one of the causes of the lack of conducive school atmosphere related to the development of such knowledge and skills. The limited resources and or references, the absence of research journals in schools, and the non-allocation of special funds for research are vivid examples of the inconduciveness of the world of knowledge and skills development in our schools during this time. Such an atmosphere will usually be more pronounced in schools located in remote areas. In line with that, Jalal (2006) explained the government's commitment to creating a conducive climate so that teachers are motivated to conduct research. The government is committed to allocating huge funds for the knowledge and skills development activities of our teachers.

3.2   Position of Scientific Papers in Teacher Professional Development

It is worth emphasizing here that compiling scientific work is one of the forms of teacher professional development activities. Teacher professional development consists of five kinds of activities, namely (1) compiling scientific papers, (2) finding appropriate technology, (3) making teaching aids/guidance devices, (4) creating artworks, and (5) participating in curriculum development activities.

Scientific papers can be sorted into two groups (Turabian, 1970), namely (a) scientific works which are reports on the results of studies/research, and (b) scientific works in the form of reviews, reviews, and scientific ideas. Both can be presented in the form of books, diktats, modules, translation works, papers, research reports, writings in scientific journals, or in the form of articles published in mass media. The scientific work has a number of the following similarities [16]: (1) the things discussed are in the area of scientific knowledge, (2) the content refers to scientific truth, (3) the presentation

reflects the application of the scientific method, and (4) the physical appearance is in accordance with the systematics of writing scientific papers.cientific arya has a number of the following similarities [16]: (1) the matter discussed is in the area of scientific knowledge, (2) the content refers to scientific truth, (3) the presentation reflects the application of the scientific method, and (4) its physical appearance is in accordance with the systematics of writing scientific papers.

3.3 Development of the Ability to Write Scientific Papers for Teachers

Writing scientific papers for teachers is actually a basic necessity for developing their profession. There are a number of reasons behind the need to develop the ability to write scientific papers for teachers, namely (1) teachers as educated people, (2) teachers as implementers of reformers, (3) teachers as encouragers and partners of students, as well as models for students in writing scientific papers, (4) teachers as researchers in the field of learning, and (5) teachers as authors of scientific papers. The development of the ability to write scientific papers for teachers has the following objectives: (1) teachers are expected to be more skilled in writing scientific papers, (2) teachers can disseminate their ideas and findings through scientific papers, (3) teachers are more confident in their communities and in front of their students, (4) teachers are more productive in developing their ideas in writing, (5) teachers will avoid plagiarism behavior, and (6) teachers are faster in developing their careers.

Furthermore, the development of the ability to write scientific papers for teachers will have two main impacts, namely (1) teachers earn additional income from writing scientific papers if they are published in the mass media and win competitions and (2) teachers' insight and understanding of the world of education and learning more deeply and comprehensively.

The development of the ability to write scientific papers for teachers will be carried out properly if the following things are carried out: (1) continuously awareness is carried out to teachers about the importance of developing the ability to write scientific papers for themselves, (2) a community is realized that can encourage teachers to be willing to learn and challenged to write scientific papers, (3) independently or together with colleagues in their community teachers are constantly learning to write scientific papers, (4) teachers read a lot and think critically, (5) teachers are required to diary to record/record the results of observations, data, and thought results, or just topics that need to be written, (6) teachers start writing scientific papers with the topics that are most mastered and liked, (7) teachers learn to write works by making concept maps or mind maps, (8) teachers are constantly learning to make a complete writing framework based on the concept map that has been produced, (9) based on the writing framework, the teacher starts writing scientific papers, (10) the teacher gets used to writing at least one page per day, (11) the teacher needs to get used to critically reading the writing that has been produced and perfected, (12) the teacher needs to take time to read good scientific writing from other people's work, (13) the teacher needs to take part in various scientific paper writing competitions (local, regional, nationally), (14) teachers make it a habit to ask colleagues to read and provide input on the writings that have been produced, (15) teachers must have the courage to submit the resulting scientific papers to the editorial

board of scientific journals, and (16) teachers must make a habit of documenting and storing well the scientific papers that have been produced.

4   Conclusion

Professional teachers have four competencies, namely (1) pedagogical competence, (2) cognitive competence, (3) personality competence, and (4) social competence. Among a number of competencies of professional teachers that have been mentioned in front the most emphasized is competence in the management of learning. In this regard, compiling scientific papers is a form of activity that can be utilized to develop teacher professionalism. There are a number of reasons behind the need to develop the ability to compile scientific papers for teachers, namely (1) teachers as educated people, (2) teachers as implementers of reformers, (3) teachers as encouragers and partners of students, as well as models for students in writing scientific papers, (4) teachers as researchers in the field of learning, and (5) teachers as authors of scientific papers.

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