

TEACHER COMPETENCE IN INDUSTRIAL REVOLUTION ERA 4.0

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Abstract: *Teachers are the main component of education. In addition, there are other essential components, such as curriculum, syllabus, annual programs, semester programs, and others. These components become a unity that is interconnected and needs each other. As the main component of the teacher, actual performance is needed following the main tasks and functions. Being a professional teacher is a necessity. Teachers are also required to adapt to the era of the Industrial Revolution 4.0 by referring to various authoritative literature. This paper is presented analytically by discussing professional teachers in the Industrial Revolution 4.0 era. This article aims to motivate and strengthen teachers to be more professional in their performance, to be active in shaping students' character through their personality competencies, and to place professionalism in the era of the Industrial Revolution 4.0.*

Keywords: *Teacher, Professional, Industrial Revolution 4.0*

Introduction

Learning is a process toward substantial changes for human civilization, where the knowledge possessed will bring an ideal society. One of the determinants of change is the teacher. A teacher must have competencies that support, including pedagogic competence, personality competence, social competence, and professional competence. Pedagogic competence consists of 18 components: understanding insight or educational foundations, understanding students, developing curriculum or syllabus, planning lessons, implementing learning, evaluating learning outcomes, and developing students. At the same time, personality competence consists of 13 components: faith and piety, noble character, wise and wise, democratic, steady, authoritative, stable, mature, honest, sportsmanship, a role model for students and the community, and developing themselves independently and sustainably. Social competence includes 13 abilities, namely: communicating orally, in writing and gestures in a polite manner, using communication and information technology functionally, interacting effectively with students, fellow students, education staff, educator unit leaders, parents or guardians of students, associating politely with the surrounding community by heeding the prevailing norms and value systems and applying the principles of true brotherhood and the spirit of togetherness. At the same time, professional competence includes mastery of subject matter broadly and

deeply, concepts and methods of relevant scientific disciplines, technology, or Mondays.

When the teaching profession is in demand by many academic circles today, there are many teacher synergies pioneered by scientists. This condition happens because teachers are the basic foundation for the economic stability of a nation that wants to move forward by showing the output of an institution. A profession is a job requiring special skills that must be obtained through specific education with a relatively long and continuous-time level. The implementation of professional work functions to handle problems for the community and is beneficial for the public interest (Ta'alum, 2011: 29).

Results and Discussion

A. Teacher

The teacher is an educator with the main task of educating, guiding, directing, training, assessing, and evaluating students on the formal education path. The task will be practical if the teacher has a specific professional degree which is reflected in competence, proficiency, skills, or skills that meet quality standards or certain ethical norms (Sudarwan Danim, 2010)

Oemar Hamalik said that a teacher's job is professional because it requires competence and authority, which can be seen in the ability to carry out their role as a teacher, instructor, supervisor, administrator, and coach (Oemar Hamalik, 1994).

According to Ngalim Purwanto, a job as a teacher is not just about earning a living. Teaching and educating are professions that require particular skill and talent, and great interest and will continue to strive to improve and develop their profession as a teacher. (Ngalim Purwanto, 2003)

Meanwhile, according to Rugaiyah, teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating students. (Rugaiyah, 2011)

B. Professional

According to Syaiful Sagala, Professionalism is a professional attitude that means doing the main job as a profession, being an expert with the knowledge possessed in serving his work, being responsible for decisions both intellectually and attitudinal, and upholding professional ethics in a dynamic organization and professionally providing job services. (Syaiful Sagala, 2009)

Wina Sanjaya said that a professional job supported by precise science in depth could only be obtained from appropriate educational institutions so that its performance is based on its knowledge, which can be scientifically justified. (Wina Wijaya, 2011)

Suradika and Maskun (2005: 23) state several characteristics of a job called a profession, namely (a) special knowledge, (b) high moral rules and standards, (c)

serving the public interest, (d) special permission to carry out the profession, and (e) have a professional organization.

Based on the opinion above, it can be concluded that teacher professionalism is the ability to do something as a profession supported by a specific knowledge depth obtained from educational institutions and can carry out the role of a teacher, instructor, mentor, train, assess, evaluate, administrator and as a coach. To become a professional teacher must meet the following competencies:

1. Basic competence of teachers

According to Cooper, quoted by Nana Sudjana, four essential competencies must be possessed by someone who wants to become a teacher, namely: a) Having knowledge of learning and human behavior; b) Having knowledge and the field of study that is fostered; c) Have the right attitude about oneself, school, peers and the field of study that is fostered; d) Have technical skills in teaching. (Nana Sudjana, 1987)

2. Duties and Functions of Professional Teachers

The teacher is a professional job because it requires ability and authority (Omar Hamalik, 1994). In carrying out their duties as a teacher, the teacher knows and applies the principles of professionalism, namely: a) Having talents, interests, vocations, and ideals; b) Having a commitment to improving the quality of education, faith, piety, and noble character; c) Have academic qualifications and educational background following the field of work; d) Have the necessary competence following the field of duty e) Have responsibility for the implementation of professional duties; f) Obtaining income determined following work performance; g) Have the opportunity to develop professionally on an ongoing basis with lifelong learning; h) Have a guarantee of legal protection in carrying out their professional duties; i) Having a professional organization that has the authority to regulate matters relating to the professional duties of teachers. (Rugaiyah, 2011)

In improving professionalism as a teacher, the teacher must have ten essential competencies, namely: a) Mastering subject matter and basic scientific concepts; b) Management of teaching and learning programs; c) Classroom management; d) Use of media and teaching resources; e) Mastery of educational foundations; f) Management of teaching and learning interactions; g) Assessment of learning achievement; h) Introduction of the functions and programs of guidance and counseling; i) Introduction and administration of school administration; j) Understanding of principles and utilization of research results for the benefit of teaching quality. (Nana Syaodhisukma Dinata, 2002).

Furthermore, according to Moh User Usman in the book is a professional teacher, there are several things that teachers need to pay attention to in learning, namely: a) Setting learning objectives; b) Selecting and developing learning materials; c) Selecting and developing teaching and learning strategies; d) Selecting and

developing appropriate teaching media; e) Choose and utilize learning. (Moh. User Usman, 1995).

C. Characteristics of Professional Teachers

Teacher in the Big Indonesian Dictionary (KBBI) has the meaning of a person whose job/livelihood is teaching. Teachers are authorized and responsible for their student's education individually and classically, both at and outside school. Considering that the teacher's duties and work are so heavy, he must meet the main requirements that may be balanced with the position to become a teacher. (Sagala, 2013:21)

Professional teachers should continually hone themselves and learn continuously and actively because they face students with different characters from one another by meeting basic teacher competency standards. The definition of teacher competence is a set of mastery of abilities that must exist within the teacher in order to realize his performance appropriately and effectively. (Kunandar, 2011:55)

The fundamental competencies teachers must possess based on RI Law No. 14 of 2005 Article 10 paragraph 1 include pedagogic competence, personality competence, professional competence, and social competence.

1. Pedagogic Competence

Pedagogic competence is the ability of teachers to understand their students in classroom management. A teacher masters this competency to determine the success or failure of teaching and learning activities. Besides, the teacher must understand each student's characteristics, learn the learning principles, develop a curriculum and provide educational activities.

2. Personal Competence

The teacher's role gets the community's attention and is therefore required to have high dedication. Teachers must have a good personality because they will be role models for students and the surrounding community. The personality competencies include attitudes, values, and personality as elements of behavior concerning ideal performance following work based on educational background, capacity building and training, and the legality of teaching authority (Satori, 2013:2-4). In detail, these personality competencies are: 1) have faith and fear of God Almighty; 2) believe in self; 3) tolerance and tolerance; 4) Be open and democratic; 5) be patient in living the teaching profession; 6) develop themselves for the advancement of their profession; 7) understand the purpose of education; 8) able to establish human relations; 9) understand the strengths and weaknesses of oneself; 10) creative and innovative at work. (Satori,2013.11)

3. Professional Competence

Professional competence is the teacher's ability to plan and implement the learning process, where the teacher has the task of directing students to achieve learning goals and succeed as expected. Teachers carry out their duties based on predetermined conditions, including having the proper knowledge in presenting material to students and mastering the material to be delivered.

The professional competencies include; 1) mastery of teaching materials and concepts; 2) management of teaching and learning programs; 3) class management; 4) management of media and learning resources; 5) mastery of educational foundations; 6) the ability to assess teaching and learning achievement; 7) understand the principles of managing educational institutions and programs in schools; 8) mastering the method of thinking; 9) improve capabilities and carry out professional missions; 10) provide assistance and guidance to students; 11) have insight into educational research; 12) able to conduct simple research for teaching purposes; 13) able to understand the characteristics of students; 14) able to carry out school administration; 15) have insight into educational innovation; 16) dare to make decisions; 17) able to work planned and programmed; 18) able to use time appropriately (Satori, 2013:2)

4. Social Competence

Teachers are part of a society with a humanitarian mission because education is tasked with humanizing humans and is a role model and example for their students. This social competence is closely related to the teacher's ability to communicate with the community where he lives.

The requirements for becoming a professional teacher, according to Yufiarti and Chandrawati, are: a) it requires skills based on fundamental scientific concepts and theories; b) emphasizes expertise in a particular field; c) demands an adequate level of education; d) requires sensitivity to the social impacts of the work carried out; e) have a code of ethics; f) have clients; g) recognized by the community. (Yufiarti and Chandrawati, 2013)

From the description above, it can be concluded that the characteristics of professional teachers can be seen from the teacher's abilities, including a) making learning plans based on the established curriculum. As professional teachers, they must be able to adapt based on the actual situation and conditions encountered. This condition will work well if a teacher: has mastered the existing and applicable curriculum, mastered learning materials well, can use multiple learning methods, has a high dedication to the profession; b) can convince related parties about the planning and innovation to be implemented; c) creative and innovative both in planning and in learning development; d) trying to place students as learning subjects and make students as learning partners; e) always up to date on problems that occur in their environment; f) have a high spirit in devoting their knowledge; g) mastering science and technology; h) active in educational organizations.

D. Industrial Revolution 4.0

What is called the Industrial Revolution 4.0 era is that we are in an era where human civilization is developing so fast. Especially those that are so visible regarding changes in technology and industry. We are in a time when everything is so sophisticated that everything related to technology has become human dishes in everyday life. We have seen much new sophistication, and the technological revolution has touched almost all aspects of life. Computer technology, both hardware and software, communication networks, and multimedia technology has become the backbone of 21st-century society. It was found that the 5G network could even be 1000 times faster; it would make information technology move much more advanced. In the past, sophistication was measured by weight. Now sophistication is measured by speed. (Asep Suhendar, 2021).

E. Education 4.0 in the Industrial Revolution 4.0

In facing the Industrial Revolution 4.0, education requires its ways, one of which is a way of teaching that must be revolutionized and rearranged. We also need media and applications that can support us in the face of an all-technological era, when billions of people access the internet, access to explore knowledge is unlimited. Teachers and books are no longer the only sources of learning, but various other learning resources can be used as references.

Education 4.0 is a general term used by educational theorists to describe various ways to physically and indirectly integrate cyber technology into learning. This improvement is a leap from Education 3.0, which includes the confluence of neuroscience, cognitive psychology, and educational technology, using web-based digital and mobile technologies, including hardware and software applications, and anything else with an “e” in front of it. Education 4.0 is far above that, the emergence of the fourth industrial revolution where humans and machines are aligned to find solutions, solve problems, and innovate possibilities. (Asep Suhendar, 2021)

In terms of education 4.0, teachers who live in the era of the Industrial Revolution 4.0 must be prepared with all reforms in the world of education, including a) teaching methods will be revolutionized from contextual to technology; b) the creativity of the teacher is further improved, for example, the teacher presents material using PowerPoint and focus (presentation applications using engaging animations), the more creative the teacher in packaging PowerPoint and focus, the more engaging learning, can also provoke the creativity of students in learning; c) using other learning media such as The hat, wheel of names and random list, is learning with a problem-based learning model or abbreviated as PBL can train students to have higher-order thinking skills. Through this method, students learn the material presented by the teacher using problem-solving strategies. (Asep Suhendar, 2021).

Conclusion

Based on the results of a literature review on teacher competence in the 4.0 era, the authors can conclude several things, namely: Teachers are educators with the

main task of educating, guiding, directing, training, assessing, and evaluating students on the formal education path, the task will be practical if the teacher has certain professional degrees which are reflected in competence, proficiency, skills or skills that meet specific quality standards or ethical norms.

Professional teachers should constantly hone themselves and learn continuously actively because they face students who have different characters from one another by meeting the basic competency standards of teacher training, including pedagogic competence, personality competence, professional competence, and social competence.

Being a professional teacher in the era of the Industrial Revolution 4.0, teachers must be prepared for all reforms in the world of education, including a) teaching methods will be revolutionized from contextual to technological; b) the creativity of the teacher is improved, for example, the teacher presents material using PowerPoint and Focus (presentation applications using engaging animations), the more creative the teacher in packaging PowerPoint and Focus, the more exciting learning will be, can also provoke the creativity of students in learning; c) using other learning media such as The hat, wheel of names and random list, is learning with a problem-based learning model or abbreviated as PBL can train students to have higher-order thinking skills. Through this method, students learn the material presented by the teacher using problem-solving strategies

A. Suggestion

To succeed in national education, the roles of government, schools, teachers, and stakeholders must be in synergy. Teacher performance will be maximized if it is balanced with the competencies possessed because these competencies determine the professionalism of teachers.

Responding to the Industrial Revolution 4.0 era, teachers are also more competent, so they are not left behind in technology, so the learning process is more exciting and efficient and produces maximum learning.

Character planting is also included in every learning process so that there is a balance between intellectual and moral education because Google can answer what we ask but cannot fix and revolutionize the mental and character of students

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