

THE IMPLEMENTATION OF TEACHER COMPETENCE ON 21ST CENTURY IN INDONESIA ELEMENTARY SCHOOL

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Abstract: The purpose of this research to explain how to improve teacher's skill that must have in the 21st century, which includes critical thinking skill, collaboration, communication and creativity. The subject of this research were several principals and teachers of Elementary Schools in the East Jakarta with 15 principals and 15 teachers as participants. This research uses a qualitative approach with case study method, and data collection from interviews, questionnaire, and observation. This research shows that principals and teachers have made efforts to develop teacher competencies in the 21st century, in the aspects of critical thinking, creativity, communication, and collaboration skills.

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INTRODUCTION

It is facing global competence, necessary to have an effective means to improve the quality of Human Resources. One of the ways to improve human quality is through education. Facing changes in the reform era and the process of globalization will also affect life, including technology and information which will continue to develop over time. At the current rate of digitalization, are playing an increasing role in every aspect of life. That raises a need to understand how the digital world works, as well as what opportunities and risks it brings, just as we learn about the physical world.

In the journal Development of Computational Thinking Digital Competence and 21st Century Skills when Learning Programming in K-9, it is clear that currently, technology plays an important role in every aspect of life. That

raises the need to understand how the digital world works and the opportunities and risks it brings. No exception in education, current technology can be used as an effort to increase the competitiveness of Human education Resources. Therefore we need a vision and directed education. In order to formulate a vision and strategic plan for national education development, an understanding of the current problem map is needed. The essence of national education development is the effort to develop superior human resources in order to prepare society and the nation to face the knowledge age as a competitive era.

The 21st century is also known as the knowledge age, in this era, all alternative efforts to meet the needs of life in various contexts are more knowledge-based. Efforts to meet the needs of knowledge-based education, knowledge-based economic development, knowledge-based social empowering, and knowledge-based

industrial development. 21st-century skills are as follows, (1) Life and career skills, (2) Learning and innovation skills, and (3) Information media and technology skills. These three skills are summarized in a scheme called the 21st-century knowledge-skills rainbow.

Recent reports on competencies have mentioned the need for cross-disciplinary skills, such as critical thinking, initiative, problem-solving, cooperative work, and in particular entrepreneurship. 21st-century skills are also described in several recent reports on teacher competence that mention the need for skills in more than one field of studies, such as critical thinking, initiative, problem-solving, cooperative work and the field of entrepreneurship. United States Partnerships 21 expresses similar views on how to catalyze education for the 21st century.

They endorse merging traditional academic disciplines with (critical thinking, communication, creativity and collaboration) integrated by life/career skills, technology and media skills. The same thing was stated by US Partnerships 21 that the teacher skills needed by education in the 21st century are critical thinking, communication, creativity and collaboration that have been integrated with skills for career life, technology and media.

The 21st-century teacher competency development trend is to use a bottom-up approach where there is an emphasis on collaboration that is oriented towards the ability of teachers to overcome any problems faced, are interactive and

interrelated programs that are carried out continuously, systematically and comprehensively. According to research conducted by Danielson, the 21st-century teacher development model should be based on the concept of teacher leadership and use a cooperative learning process that is authentic and inherent in the daily work of teachers.

This strategy also helps strengthen collective learning with the competencies of 21st-century teachers, which are critical to making professional learning the norm in schools. With the creativity of teachers in the 21st century which is very necessary to create an atmosphere of active and fun learning. Teachers are called on to be activators of meaningful learning, not just facilitators, being creative in choosing from a broad palette of strategies to be mixed and adjusted to context and learner.

As quoted in the journal *Aligning Teacher Competency Frameworks to 21st-century Challenges*, it is explained that the teacher is called a driver of meaningful learning, not only being a facilitator but being creative in choosing from a variety of strategies to be integrated and adapted to the context and students. In connection with the demands of 21st-century teacher competence, improving the quality of teachers at each track, level and type of education has become the commitment of all parties. Therefore, this study will focus on the application of the four competencies of 21st-century teachers in public and private elementary school in East Jakarta Region.

RESEARCH METHOD

This research was conducted in East Jakarta using a qualitative approach while the method used was a case study method. This research was conducted for six months in collaboration with eight public and seven private elementary schools. The data in this study are the results of interviews conducted by researchers during the data collection process in the field and documentation in the form of photos about the school starting from the school establishment permit documents, facilities and infrastructure in the school to evidence of activities carried out. In the data collection process, it was carried out through observation, interview and documentation study techniques. Interviews were conducted with 15 school principals and 15 elementary school teachers.

Data analysis in this study was carried out at the time the data collection took place and after completing data collection. The data analysis technique uses a model developed by Miles and Huberman, which is in the form of stages: data reduction where the researcher summarizes, chooses main things, focuses on important things, looks for themes and patterns, removes unnecessary ones to make it easier the researcher collected the next data. The second stage is to display data (data display) in the form of brief descriptions, charts, and relationships between categories to facilitate further work planning. The next stage of data verification includes testing provisional conclusions, re-checking, and making general conclusions.

The data validity checks include data credibility in the form of extended

observations, triangulation, peer discussion, and member checks. Transferability by looking at the extent to which research findings can be used in different places but have the same typology. Dependability by conducting an audit of the entire research process.

RESULT AND DISCUSSION

Analysis of the data obtained shows that the application and improvement of 21st-century teacher skills which include critical thinking, creative, collaborative and communication skills, almost all have implemented it, although some applications have not been optimally implemented. That is because some teachers do not understand the importance of improving their competence or skills in the 21st century; this makes the teacher feel that they have enough competence. Based on the results of interviews with several school principals and teachers at public and private elementary school in Jakarta, it was stated that the efforts and applications that have been made by the principal to improve critical thinking skills in teachers include the following:

Joining teachers in training and seminars. That is done by the school to increase the teacher's insight or knowledge. So that it is hoped that teachers will be able to improve their competencies. Also, it requires teachers to take part in upgrades, especially those organized by the related Dinas. (Private Teacher 3, 2020). Usually in the form of a seminar or training. The materials presented in training are related to pedagogy and mastery of teaching materials in learning. Then some schools hold training called "Scientific Update",

this training will be carried out regularly every six months. Of course, this can be a support to improve the knowledge of teachers in order to think critically. (Private Teacher 1, 2020).

Provide opportunities for teachers to continue higher education. By continuing education to a higher level, it will increase the experience and insight of the teacher, and be able to broaden the teacher's view of something that is found or faced. So that it can improve teacher's critical thinking skills. (Public Teacher 2, 2020). Involving teachers in the preparation of the school's Strategic Plan. By involving the teacher in the formal preparation meeting can increase the teacher's critical thinking, because at the meeting, the teacher is free to convey their arguments or opinions, suggestions and ideas. So, apart from being able to develop and improve teachers' critical thinking skills, it can also enrich strategic plans to be implemented by schools (Public Teacher 5, 2020)

Meanwhile, the efforts that have been made by the teacher in improving critical thinking skills are getting used to discussing with students a linear problem with the subject. That is done to improve the critical thinking skills of teachers as well as students; then they are also able to train teachers to develop the insights they have because in practice it will raise questions or ideas that make teachers and students analyze to conclude and generate solutions(Wang & Seepho, 2017). So that the teaching and learning process becomes more effective and efficient. Explore or develop the insights they have.

That is usually done with the teacher by reading books, searching for information on the internet and so on. According to

Rivers and Kinchin with broad insight, teachers can think critically and rationally. Based on the results of interviews with principals at Public and private elementary school in Jakarta, efforts have been made to increase teacher creativity, namely:

They involve teachers in workshops or training activities. It is hoped that teachers will be able to develop their potential and insights so that they can be applied to create creative and innovative learning in schools. (Public Headmaster 3, 2020)

The principal makes a teacher quality development program to train teachers to better master the classroom with creative and interesting methods as well as technical training in children's learning approaches according to the times. (Private Headmaster 2, 2020).

Schools make plans in terms of human resource development, namely teachers. One of them is by providing facilities and infrastructure. The facilities and infrastructure are one of the supports for the application of teacher creativity. With these facilities and infrastructure, teachers can explore their ability to teach by using a variety of facilities and infrastructure, to create creative and innovative teaching and learning processes. (Private Headmaster 1, 2020).

Based on the results of the interview above, the principal made a strategy developed by the school, namely by giving the teacher the freedom to develop his abilities like allowing the teacher to continue studying again. The school principal supervises and provides performance appraisals for teachers as a form of teacher evaluation so that teachers can find out obstacles and opportunities

during the teaching process. Of course, this can improve the creativity skills of teachers to make it better for the future.

The school principal created a program called Digitalization Literacy. Currently, the school has planned that teachers should be able to or even oblige in using all things related to digitization; there is a program called Digital Literacy. In addition to broadening teachers' insights and knowledge in the technology field, this is also done to increase teacher creativity in using technology as a learning tool. Also, other programs designed to increase teacher creativity are the development program for question preparation, the development program for media use and the digitalization learning program. Furthermore, related to the application that has been carried out by elementary school teachers in the East Jakarta region in terms of creativity, they are as follows:

Teachers do not only rely on the internet as a learning resource, but teachers are also required to be able to make their explanations, as well as take questions from various applications. (Private Teacher 5, 2020)

Teachers participate in teacher quality development programs held by schools, especially in the field of mastery of materials and teaching methods. (Public Teacher 4, 2020)

Based on the results of the interview, the teacher was able to make various innovations in delivering lessons, such as making advertising posters and other educational pictures to support the learning process. The teacher explains the material with concrete or tangible explanations, one

of which is by using visual learning methods, such as pictures or videos.

In the 2013 curriculum, students are required to be active in the teaching and learning process, so that teachers must facilitate with practices related to the material being taught, such as observing the surrounding environment, planting trees, drawing, and so on.

That is done so that students quickly understand the lessons being taught so that the learning process becomes effective and efficient. Besides, the teacher makes lesson plans with various learning methods and tools; it is hoped that the learning process will be enjoyable so that it makes students active and creative. In line with Friesem teachers can operate various technologies that support the learning process, such as laptops and projectors as learning media.

So, teachers in schools must know about literacy, mostly digital, where everything is online—starting from providing material in class with students using a Slide Show to giving online report cards. In addition, the principal of the elementary school in the East Jakarta area has implemented and sought to improve teacher collaboration skills. That can be proven from several efforts made by the principal, including:

They are providing opportunities for teachers to participate in the KKG (Teacher Working Group). With this KKG, teachers can share opinions or insights on matters related to learning, such as making questions. which can bring up new ideas or solutions to existing problems. (Public School 3, 2020)

Provide relationships related to subjects in school. Collaborating with other parties, for example, is what was done by one of the schools in collaboration with KPM (MIPA Education Clinic). If there are problems encountered by teachers related to Mathematics and Natural Sciences learning, they will discuss with the KPM so that teacher competence can increase. (Private School 3, 2020)

Based on the results of the interview above, it shows that the head of the school provides the opportunity to create teacher groups. In this cluster of associations, teachers can update new things about learning content; for example, there is a 2013 curriculum training for several teachers.

Then later, it will be conveyed by the teachers who follow it to be able to update the changes in how the curriculum should be applied today. The school also collaborates with LPMP (Educational Quality Assurance Agency). When schools experience difficulties/problems related to how to prepare lesson plans, syllabus, or others, the school can invite sources from the LPMP to be able to direct teachers and school authorities regarding the problems they are facing.

Collaborate with colleagues by exchanging insights (peer tutors between teachers). The peer tutorial method referred to is that if there are teachers who are proficient in a particular field, coaching will be carried out between one teacher and another. Teachers always have to establish good relationships with parents of their students, so that they can mingle and exchange information about their students, how learning at school, etc.—collaborating with students.

Not only collaborating with other parties, but teachers also collaborate with students in a class. This collaboration is done by making the class atmosphere happy when teaching students, such as through ice-breaking or games. Primary school principals in the East Jakarta area have implemented and sought to improve teacher communication skills. That can be proven from several efforts made by the principal, including:

Regularly communicate with the School Committee. The communication that exists between the school and the school committee is important to improve school progress and support every activity or event held at the school. (Public Headmaster 7, 2020)

Communicate regularly with other school members. In conducting supervision and regulation of schools, the principal also regularly communicates with teachers to continue to create synergic relationships between school members so that school goals can be achieved effectively and efficiently. (Private Headmaster 8, 2020)

Furthermore, regarding the application that has been carried out by elementary school teachers in the East Jakarta region in enhancing collaboration skills, teachers routinely discuss with other teachers. Teachers routinely hold discussions and communicate with other teachers about all matters relating to learning to mastery of technology. Routinely communicate with the parents of students.

The communication made by the teacher with the parents is usually to convey things related to the development of their child at school, starting from their

values to their attitudes. Take courses in improving communication skills. In establishing communication, sometimes communication skills using foreign languages are also needed. Therefore, several teachers always improve their communication by taking language courses such as LPIA, as well as with other language institutions.

This study describes the application of 21st-century teacher competencies which include critical thinking skills, collaboration skills, communication and creativity, elementary school teachers in East Jakarta. The world of education today must survive amid technological advances and changes worldwide. That raises a need to understand how the digital world works, as well as what opportunities and risks it brings, just as we learn about the physical world. Yang explained that current technology has an important role in every aspect of life, including education, which can be endeavoured as one of the supports to improve the quality of human resources in education.

Based on the results of the study, it is stated that almost all school principals have made policies and programs in order to improve teachers' critical thinking skills, starting from coaching programs such as training or workshops, involving teachers in meetings such as school strategic planning meetings, and freeing teachers to learn or continue. education to a higher level, this is done to improve and train teachers' critical thinking skills, even though the running program is not yet fully implemented.

This is in line with the theory that teachers who stop learning must also stop teaching because currently, the

development of science and technology continues to move with new ideas and findings that are entirely different from previous science and technology.

Therefore, to improve the quality of teachers, especially in critical thinking skills, teachers need to have broad insights and views of increasingly developing knowledge. In addition, in the learning process, teachers in the East Jakarta area have applied critical thinking skills. The efforts made by the teacher are like often having discussions about something to students to train students in giving their opinions and views. So, the learning process becomes more active and influential.

The principal and teachers of Public and Private Elementary Schools in the East Jakarta area have also worked together to improve and apply teacher creativity skills. As for the efforts made by school principals and teachers, including teachers in training and coaching programs to broaden teacher insights, such as digital literacy programs to improve teachers' abilities to operate existing technology. In addition, the principal has also facilitated various facilities and infrastructure to support the learning process.

In its application, teachers are trained to choose exciting and varied learning methods, are also trained to make questions using an online learning platform, and are accustomed to explaining lessons in a concrete manner. Therefore teachers must facilitate practices related to the material being taught so that the learning process becomes interesting, creative and innovative. This is following the theory cited in the journal *Aligning*

Teacher Competency Frameworks to 21st-century Challenges which states that

“Teachers are called on to be activators of meaningful learning, not just facilitators, being creative in choosing from a wide palette of strategies to be mixed and adjusted to context and learner”. This opinion explains that teachers are the driving force of learning, not only as facilitators but being creative in choosing from a variety of strategies to be integrated and adapted to the context and students.

Primary school principals in the East Jakarta area have also played a role in supporting the creation of collaboration skills for schools and teachers. The school principal makes various efforts to increase collaboration between schools and other parties through establishing relationships and cooperation with other institutions such as LPMP (Educational Quality Assurance Institute), Erlangga, KPM (MIPA Education Clinic). Then not only that, the school principal also made various efforts to improve collaboration skills for teachers through the KKG (Teacher Working Group), created a cluster of teacher associations, and established good relations with the School Committee.

Furthermore, apart from the efforts of the principal, teachers also make various efforts to improve their collaboration skills through peer tutors between teachers, regularly collaborating with parents of students and also collaborating with the students themselves.

In addition, school principals and elementary school teachers in the East Jakarta area have played a role in

supporting the creation of communication skills for schools as well as for teachers. The school principal makes various efforts to improve communication skills between schools and other parties through school committees and other school members.

Furthermore, in addition to the efforts of the school principal, teachers also make various efforts to improve their communication skills through discussions with other teachers, parents of students and participating in courses related to communication skills. What is done above is of course in order to improve teacher competence as stated by US Partnerships 21 that teacher competence is needed and improved in the 21st century, namely "... academic disciplines with the 'Four CS' (critical thinking, communication, creativity and collaboration).

CONCLUSION

From the results of the above research, it can be concluded that several applications are an effort to improve teacher competence in the 21st century carried out by principals and teachers in the aspect of developing critical thinking skills, among others, through coaching such as training or workshops, involving teachers in meetings. In the learning process, the teacher has also applied critical thinking skills, such as discussions with students regarding problem-solving.

Then in the aspect of developing teacher creativity, the efforts made include including teachers in training and coaching programs, such as the digital literacy program to improve the ability of teachers to operate technology. In addition, it also facilitates facilities and infrastructure that support the learning process. In its application, teachers are trained to choose

interesting and varied learning methods and are also trained to make questions using an online learning platform.

Furthermore, in the aspect of developing collaboration skills, there are efforts made by the principal, namely by establishing relationships and cooperation with other institutions such as LPMP (Educational Quality Assurance Institute), Erlangga, KPM (MIPA Education Clinic). Also, school principals improve collaboration skills for teachers through KKG (Teacher Working Groups), create teacher association clusters, and establish good relationships with the School Committee. In its application, the teacher trains collaboration skills through peer tutors between teachers, parents and also collaborates with the students themselves. Moreover, for the aspect of developing communication skills, some efforts have been made by school principals and teachers, namely through discussions with other teachers, parents of students, school committees and taking part in courses related to communication skills.

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