



Certified Teacher's Pedagogic Competence in 21st Century Skills

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ABSTRAK

Kompetensi pedagogik merupakan kompetensi khusus, yang akan membedakan guru dengan profesi lain dan akan menentukan tingkat keberhasilan proses dan hasil belajar siswa. Penelitian ini bertujuan untuk menganalisis gambaran kompetensi pedagogik pendidik bersertifikat dalam pembelajaran abad 21, khususnya mengenai kompetensi pedagogik pendidik bersertifikat, dan keterampilan guru abad 21. Metode penelitian yang digunakan adalah deskriptif kualitatif. Subyek penelitian adalah salah satu SMA Negeri. Pengumpulan data menggunakan observasi, wawancara, menggambar, dan lain-lain. Sementara proses analisis data, peneliti harus memperhatikan reduksi data, penyajian data dan penarikan kesimpulan serta verifikasi. Peneliti juga melakukan wawancara mendalam dan wawancara terstruktur, wawancara terstruktur adalah wawancara dimana masalah dan pertanyaan untuk wawancara telah ditetapkan oleh peneliti untuk disampaikan kepada informan. Hasil yang dicapai adalah pentingnya sertifikasi guru untuk dilaksanakan, urgensi pentingnya sertifikasi guru yaitu sebagai persyaratan dalam mengajar, standarisasi profesionalisme, sebagai ketentuan hukum, pengembangan profesi, dan sebagai bentuk pengakuan formal dari guru. Implikasi tercapainya prestasi belajar siswa karena proses pembelajaran yang dilakukan guru dapat berjalan dengan baik dan transfer ilmu kepada siswa dapat tepat sasaran.

ABSTRACT

Pedagogic competence is a special competence, which will distinguish teachers from other professions and will determine the level of success of the learning process and outcomes for students. The aim of this study is to analyse description of the pedagogic competencies of certified educators in 21st century learning, in particular regarding the pedagogic competencies of certified educators, and 21st century teacher skills. The research method used is descriptive qualitative. The research subjects is one State High School. Data collection using observation, interviews, drawing, and others. While data analysis process, researchers must pay attention to data reduction, data presentation and conclusion drawing and verification. The researcher also conducted in-depth interviews and structured interviews, structured interviews were interviews in which the problems and questions for the interview had been set by the researcher to be submitted to the informants. The results achieved are the importance of teacher certification to be carried out, the urgency of the importance of teacher certification, namely, as a requirement in teaching, standardization of professionalism, as a legal provision, professional development, and as a form of formal recognition of the teaching profession. The implications of achieving student achievement are because the learning process carried out by the teacher can run well and the transfer of knowledge to students can be right on target.

1. INTRODUCTION

Progress in a country can be realized one of them through education, because through education the quality of society of a nation can be improved. The main purpose of education is to humanize humans, therefore, through education it is hoped that an individual can be independent and responsible for his own life, especially in the current industrial 4.0 era (Astuti et al., 2019; Heriyanto et al., 2019; Lee, 2016). Teachers have a major role in improving the quality of education, a teacher must be able to manage learning so that it can run effectively, as well as liven up an interactive and communicative learning atmosphere (Dewi & Alam, 2020; Hermino & Arifin, 2020; Sumyadi et al., 2020). To become a professional and competent teacher it is stated that teacher competencies include pedagogic competence, personality competence, social competence, and professional competence obtained through education profession. The quality of education in Indonesia is currently still low, previous research state that entering the 21st century the state of Indonesia's human resources is not competitive (Daryanto, 2017). To form competitive Human Resources in the 21st Century, it is very necessary to have an education and teaching process that is in accordance with the current situation (Chai & Kong, 2017; Georgieva, 2019; Ivanova et al., 2021).

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In the development of the 21st century, the relevance of education and work needs to be adjusted to the development of the era and science and technology while still paying attention to the humanities aspect (Ayyakkannu, 2018; Munna & Shaikh, 2020; Novitasari, 2019). Where the emphasis is on the skills of teachers in the learning process in the 21st century, they must be more innovative by prioritizing the 4Cs on competencies that must be possessed by students in the 21st century: Critical Thinking and Problem Solving, Creativity, Communication Skills, and Ability to Work Collaboratively (Cahyani et al., 2021; Septikasari & Frasandy, 2018; van Laar et al., 2019). The problems that arise in the 21st century, teaching staff are required to have the competence to put forward the 4Cs in the teaching and learning process in the classroom. The characteristics and demands of the 21st century above produce four characteristics of 21st century learning (Hidayah et al., 2021; Kajanová, 2011; Pratama & Retnawati, 2018). Teachers do not feel skilled enough to use ICT effectively, it is best to use digital technology to complement existing teaching practice. As highly educated professionals, teachers have relatively good ICT skills, but these skills decline sharply with age, especially among the large cohort of older teachers (Astuti et al., 2019; Mohammad et al., 2016).

The problem that will be solved is increasing teacher competence in carrying out the teaching and learning process in the 21st century classroom, which requires 4C pedagogic abilities (Hidayat et al., 2019; Marshel & Ratnawulan, 2020; Tri Pudji Astuti, 2019). It is important to discuss the needs of learning in the 21st century, where students are already able to use technology in everyday life. So that teachers must have more pedagogic competence in applying the 4Cs in the teaching and learning process in the classroom (Kembara et al., 2019; Kim et al., 2019; Supena et al., 2021). Because technological developments everywhere have advanced the pace of learning processes and 21st literacy skills by subverting traditional ways of teaching and learning activities and paper-based sources of knowledge and information (Hidayatullah et al., 2021; Selman & Jaedun, 2020). How to overcome problems by increasing the competence of teachers in the learning process to apply technology-based learning, applying 4C competencies, applying literacy and strengthening character education that supports 21st century learning (Astuti et al., 2019; Septikasari & Frasandy, 2018). Learning is designed with digital teaching materials (e-modules) designed for the learning process (Darmayasa et al., 2018; Hite et al., 2019; Johansson, 2020). The teaching and learning process in life in the 21st century has become more widespread and open; 21st century humans live in a world without boundaries.

The gap that occurs in the application of science lies in the competence and ability of teachers in dealing with 21st century learning, currently teachers must be able to arouse students' attention to the subject matter provided and be able to use various media and varied learning resources (Ningsih et al., 2019; Wangi et al., 2018). This is very different from the previous learning pattern which was one-way in nature. The researcher discusses efforts to bridge the gap between the competence of lecturers' technology application and student learning outcomes in the 21st century, an era full of challenges and competition in the global job market (Good, 2008; Kajanová, 2011).

Research can contribute to filling the existing gaps by increasing the pedagogical competence of teachers and starting to implement the 4Cs and complete all supporting infrastructure needs in schools. It is in line with previous research that state the indicator of success in education in the 21st century is no longer only measured by the achievement index and the amount of value obtained by students in exams, but is seen from the readiness and success of students in facing real life (Lase, 2019; Sallu & Qammaddin, 2020). Moreover other researcher state that schools as educational institutions are expected to be able to carry out the learning process appropriately to help foster potential and competent students (Selman & Jaedun, 2020; Sulaiman & Ismail, 2020).

Pedagogic Competence of Certified Educator Teachers in 21st Century Skills is a necessity that needs to be implemented in educational institutions. The reason the research was conducted is because at this time, education is in the knowledge age with an extraordinary acceleration of increasing knowledge. This accelerated increase in knowledge is supported by the application of digital media and technology known as the information super highway. Which is where access to knowledge can be reached very easily by students. Education is becoming increasingly important to ensure students have learning skills, innovation, creativity, entrepreneurship and information technology and media skills and can work, and survive using life skills. The purpose of this research is to look back at how to build the character of today's young generation who still have a lot of behavior or attitudes of the younger generation that are far from expectations, this is associated with a 21st century skill-based learning model.

2. METHODS

This study using a qualitative research approach, which is a research procedure that produces descriptive data, through qualitative research researchers can identify subjects to find theories from the

field that can reveal certain social situations by describing reality correctly based on relevant data collection and analysis techniques (Creswell, 2014; Lobe et al., 2020). Observation is an effort made by qualitative research implementers to record all events and activities that occur. Research Subjects State High School at SMAN 68 Jakarta. Scientifically, this research has received approval through inter-institutional letter approval and also the publication of the results obtained. Data Collection Techniques Interview, document study and observation. How to process the data after the data is collected from the field, then it is recorded, processed and analyzed the data so that it gets maximum and meaningful results. The method of data analysis uses purposeful sampling in selecting data sources, namely the sources selected depending on the research objectives without regard to their generalization abilities, so that the sources are representative and have information and knowledge about the Pedagogic Competence of Certified Educators in Schools in 21st Century Teacher Skills. With constant attention to Factors: Interview transcripts, field notes from observations, researcher diaries, notes of important field events, memos and researcher reflections and audio recordings. Research procedure results of data and information collection using various data collection methods, such as observation, interviews, drawing, and others. After that, all data and information obtained by researchers were analyzed. In carrying out the data analysis process, researchers must pay attention to data reduction, data presentation and conclusion drawing and verification. The researcher also conducted in-depth interviews and structured interviews, structured interviews were interviews in which the problems and questions for the interview had been set by the researcher to be submitted to the informants. To obtain data and information on the Pedagogic Competence of Certified Educators in Schools in 21st Century Teacher Skills, these include the pedagogic competence of certified educators and 21st century teacher skills (Curwin, 2022; Obilor, 2019; Renol Aprico Siregar, 2020).

3. RESULT AND DISCUSSION

Results

These results prove that the skills and knowledge of teachers as well as innovation in the learning process are very much needed for learning in the 21st century. Teachers as key holders for the implementation of quality education must have various skills such as mastering technology, understanding the knowledge they have, skills in explaining subject matter and transfer of knowledge to students. The validity of the data in the study, then there are several criteria that must be considered: Credibility, Transferability, Dependability, Conformability (Campbell et al., 2020; Hayashi et al., 2019).

The school is one of the leading high schools in the DKI Jakarta area, based on information obtained by researchers from the Deputy Principal for the Curriculum sector who said that the data on the teacher competency test (UKG) results in schools that were broadcast by the service looked good and the competence of teachers in schools has been met. Based on the results of research conducted by researchers at schools, it was found that schools have realized the importance of teacher certification to be carried out, the urgency of the importance of teacher certification that researchers found was in accordance with what was expressed by key informants namely, as a requirement in teaching, standardization of professionalism, as a legal provision, professional development, and as a form of formal recognition of the teaching profession.

The benefits of teacher certification felt by the school itself are that it can improve teacher competence (especially professional and pedagogic), achieve student achievement, improve teacher performance, improve teacher living standards, improve teacher experience and skills in teaching. Because teacher pedagogical competence in 21st-century teacher skills can facilitate the actualization of each student's potential; involve students in exploring real-world issues; designing or adapting appropriate learning experiences and integrating digital tools and resources in educational learning activities. The result is presented in the Figure 1.

Based on Figure 1 show that the researchers got regarding 21st century learning in schools, namely, the application of 21st century learning includes 4C competencies, literacy, strengthening character education, and ICT Based Learning. For the implementation of 4C competencies, it is applied through classroom learning, for school literacy, it is implemented by reading together in the field on Tuesdays, Wednesdays and Thursdays, and reading the Qur'an on Fridays. students to read books/articles every day, strengthening student character education is applied through learning processes such as praying before starting learning, not cheating on each other to practice honesty, and for ICT Based Learning schools apply by holding PTS (Middle Semester Assessment) and PAT (Assessment). End of Year) using the AIOCBT Moodle system, teachers have also implemented an ICT Based Learning system in the classroom through the use of power points in class to teach as well as several online learning platforms such as SiPintar, google classroom and create discussion groups/classes on Whatsapp. There are 7 aspects of pedagogic competence that teachers must have in carrying out the learning process, here are 7 aspects of teacher pedagogy in 21st

century teacher skills that researchers can summarize from the results of research conducted: Mastering the Character of Learners, Mastering Learning Theories and Teaching Principles of Learning , Have the ability to develop curriculum, implement educational learning activities, facilitate the actualization of the potential of each student, conduct educational communication with students and conduct assessment and evaluation.

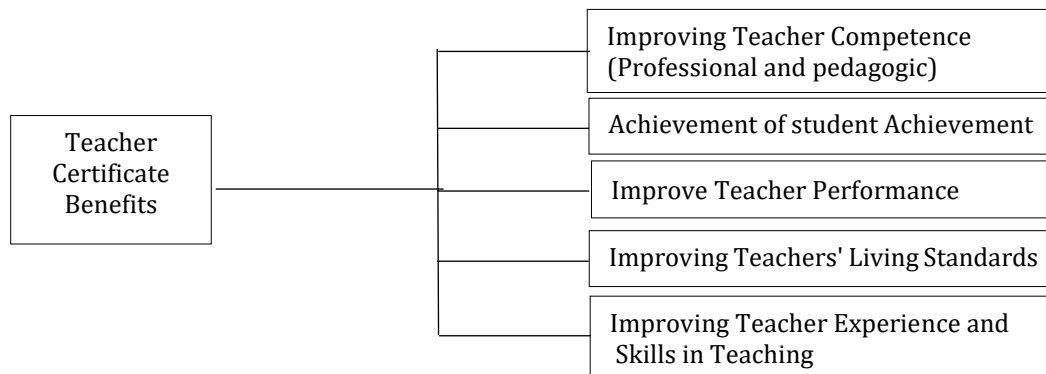


Figure 1. Benefits of Teacher Certification for Schools (Data processed by researchers)

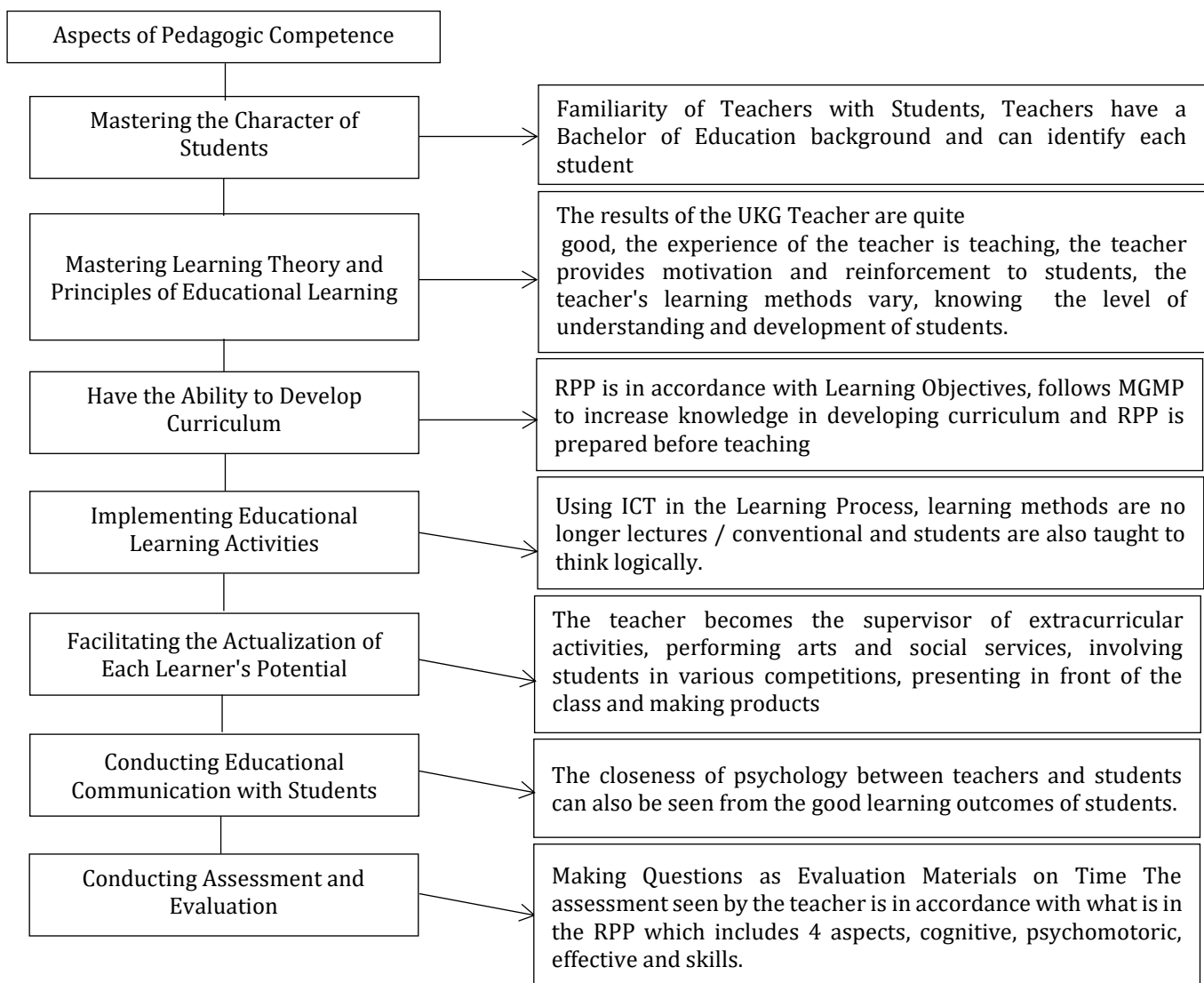


Figure 2. Aspects of Teacher Pedagogic Competence in Schools (Data Processed by Researchers)

The influence of the principal also has a role Principal leadership in improving teacher pedagogic competence is carried out by strengthening educator certification, training organized by the department and school, strengthening collaboration, communication, critical and creative thinking, implemented through literacy skills, strengthening character education, information, and communication technology-based learning. Aspects of teacher pedagogic competence in schools can be seen in [Figure 2](#).

Discussion

In improving teacher competence, teacher certification is proof of legality in teaching and efforts to guarantee teacher competence because at the time of teacher certification, teachers have been given education and training in accordance with applicable standard operating procedures. Teacher certification is able to improve teacher competence, because through teacher certification, teacher competence will be tested and measured regarding the extent of the teacher's abilities, especially for professional and pedagogic competencies ([Ana et al., 2020](#); [Karuniawati et al., 2021](#)). The process of implementing teacher certification carried out by teachers in schools is based on information obtained from key informants and supporting informants, namely through PPG, PPG in Position and PLPG. For schools with teacher certification, teachers can produce teachers who are able to process the learning process in accordance with the demands of the times because teachers already have awareness of teacher certificate ownership and the acceptance of incentives requires teachers to compete and compete in terms of competence, because teachers have also followed the teacher certification process and have struggling to get the teacher certificate ([Handayani et al., 2021](#); [Okoye, 2014](#)).

Base on the information obtained by researchers the pedagogic competence of certified teachers in schools in carrying out the learning process is appears that the average teacher already uses ICT Based Learning and referring to 21st century learning ([Bagon et al., 2018](#); [Stuchlikova, 2016](#); [Thannimalai & Raman, 2018](#)). The application of 4C competencies, creativity, communication skills, and collaborative has also implemented strengthening character education in the learning process, implementation plans. The learning process (RPP) has been structured according to existing standards, the learning process is in accordance with what is in the supervision instrument, and teachers are still trying to improve their competence in teaching such as applying various learning models ([Hima et al., 2021](#); [Putri & Sulistyaningrum, 2021](#); [Sulaiman & Ismail, 2020](#)). Teachers' pedagogical competencies in 21st century teacher skills include skills in encouraging, supporting and modeling student inventions and creative and innovative thinking ([Ana et al., 2020](#); [Chong et al., 2019](#); [Ferreira et al., 2018](#)). ([Al-Ansi et al., 2021](#); [Ilona et al., 2011](#); [Vázquez-Cano et al., 2017](#)). The lesson plan (RPP) has been prepared in accordance with existing standards. The learning process in accordance with what is in the teacher supervision instrument is still trying to improve its competence in teaching such as: applying various teaching and learning models.

It is in line with previous study which is intended to scrutinize the EFL teachers' perspectives and preferences in the 21st century pedagogical competence ([R. A. Siregar et al., 2020](#)). The results demonstrated that the teachers perceived the rapid development of technology and information as the key feature of the 21st-century learning, which is beneficial to furnish more comprehensive learning. Moreover, they predominantly conceived that the term 21st-century pedagogical competence focused on how teachers assimilate technology in the classroom and how to facilitate the students creativity due to the widely opened sources of information which positively affect students proficiency. That also reinforce by other study which analysis of the learning approaches that are considered appropriate for acquiring 21st century competencies, and the specific role of technology in these learning processes ([Voogt et al., 2013](#)). The result of study found that a lack of integration of 21st century competencies in curriculum and assessment, insufficient preparation of teachers and the absence of any systematic attention for strategies to adopt at scale innovative teaching and learning practices. The article concludes with a range of specific recommendations for the implementation of 21st century competencies.

The implication of this research is additional information related to the description of the pedagogic competencies of certified educators in 21st century learning, in particular regarding the pedagogic competencies of certified educators, and 21st century teacher skills. This information will be very useful for teachers in mastering pedagogic competencies in the 21st century era. There are still many limitations of this research, one example of which is the subject of this research which only involves one State High School at SMAN 68 JAKARTA. It is hoped that the next research will be able to expand the scope of research and deepen the topic of discussion related to the pedagogic competencies of certified educators in 21st century learning by considering other factors.

4. CONCLUSION

The topic of this research is how to prepare 21st century teachers in terms of 4C characters, especially for pre-service teachers. Based on the information obtained by researchers the pedagogic competence of certified teachers in schools in carrying out the learning process appears that the average teacher already uses ICT Based Learning and referring to 21st century learning. The pedagogic competence of certified educators in 21st century skills is indispensable to support the application of the 4C competencies including critical thinking, creativity, communication skills, and collaborative work. The learning process in accordance with what is in the teacher supervision instrument is still trying to improve its competence in teaching such as: applying various teaching and learning models.

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