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Competency Analysis of Basic Education Teacher Candidates

Analisis Kompetensi Calon Guru Pendidikan Dasar

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Abstract

This study aims to analyze the competence of prospective teacher students after the covid 19 pandemic. The method used is *review* systematic in accordance with *Preferred reporting Items for Systematic Reviews and Meta-Analyses* (PRISM). Search process focused on article journal about " *Post-Pandemic Post-Pandemic Student Teacher Candidate Analysis Abilities* " and " *Post-Pandemic Student Teacher Competency* which will be published in 2021 - 2022. The results of the research show that the quality and competence of student teacher candidates has decreased, this is especially in terms of pedagogy and ability appropriate technology integration. Therefore, there is a need for support in the form of policies that can be implemented by tertiary institutions through faculties in the field of education related to changes in the education system based on blended learning or hybrid learning.

Keywords: Analysis, Competence, Student Teacher Candidates, Pandemic

Abstrak

Penelitian ini bertujuan untuk menganalisis kompetensi mahasiswa calon guru pasca pandemic covid 19. Adapun metode yang digunakan yaitu *review* sistematis sesuai dengan *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA). Proses pencarian berfokus pada artikel jurnal tentang " *Post-Pandemic Post-Pandemic Student Teacher Candidate Analysis Abilities* " dan " *Post-Pandemic Student Teacher Competency* yang dipublikasi pada tahun 2021 - 2022. Hasil penelitian menunjukkan bahwa menurunnya kualitas dan kompetensi mahasiswa calon guru, hal ini terutama dalam hal pedagogi dan kemampuan integrasi teknologi yang tepat. Oleh karena itu perlu adanya dukungan berupa kebijakan yang dapat diimplementasikan oleh perguruan tinggi melalui fakultas bidang kependidikan terkait dengan perubahan sistem pendidikan yang berbasis blended learning atau hybrid learning

Kata kunci: Analisis, Kompetensi, Mahasiswa Calon Guru, Pandemi

INTRODUCTION

The education system in all countries including Indonesia has experienced changes due to the Covid-19 pandemic, almost all countries including Indonesia have temporarily closed their schools in 2020. Currently, after the first stage of the pandemic, governments in various countries have begun to focus on thoroughly

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revamping the education system from primary, secondary and even tertiary education. In dealing with the post-pandemic education crisis, of course, efforts and support are needed from various parties, especially policies from the government. The digital revolution is a real step that has a lot of impact on changes in the entire education sector. The sudden shift from conventional teaching to technology-based teaching, due to the impact of Covid-19 has created problems related to the skills and competency factors of education faculties in various countries, continuous upgrading of teacher skills is required by the spirit of change faced by the education sector (Diab-Bahman & Al-Enzi, 2020). Another fact is that there is a huge equity gap in education which has been exacerbated by the scarcity and disorganized allocation of professionally trained teachers, the lack of skilled and qualified teachers is a major crisis weighing on the educational structure, various factors have added to this shortage, along with the absence of economic and digital resources, and lack of access to appropriate training programmes, there are still teachers who are not trained enough to conduct online classes effectively (Eko Atmojo, 2022; Ersin & Mede, 2020)

Teachers and student teacher candidates face many challenges in online learning systems, including low student participation due to parents' lack of supervision, limited internet access, resources, and teacher expertise. The move from an offline to an online teaching system undoubtedly calls for a faster and more diverse transformation of innovation and digitization of technology (Ismiyati et al., 2022). It is clear that the key components of the online learning process are also teacher preparedness and competency. Building digital technology-related competencies is one method to address these needs. The development of digital skills will help people succeed at work and be more creative, every teacher is expected to be able to integrate ICT into learning activities, create learning environments that challenge student creativity and activity, motivate students, and use multimedia, multi-methods, and various learning resources to achieve the expected learning objectives (Tafazoli et al., 2019). The role of the teacher in the 21st century is not just teaching (transfer of knowledge), but also managing learning

Covid -19 pandemic has presented an opportunity to rethink assumptions about education in general and higher education, despite the lack of preparation and the difficulties faced by teachers, education providers and institutions, the overall picture now reveals an openness to innovation and new learning opportunities that were not visible earlier, given the general crisis caused by the pandemic, especially related to online learning (Ashour et al., 2021; Hodges & Fowler, 2021).

In the 21st century, where everything is heading toward the digitalization era, educational institutions, especially tertiary institutions, must play a critical role in educating future teachers to possess the pedagogical, social, and professional skills that are necessary. Pedagogic skills include student comprehension, learning design and implementation, learning evaluation, student

outcomes, and growth to maximize each student's unique potential. They also include personal competence related to self-readiness and ethics of prospective teacher students, social competence, which is the ability of teachers and lecturers to interact with students, and professional competence related to thorough and extensive mastery of learning content(Batmang et al., 2021).

The existence of a pandemic has had a major impact on the global education system which has switched from face-to-face to online during the pandemic and to blended learning or hybrid learning after the pandemic was declared to have declined. Many countries face many challenges in integrating technology into their education systems, the integration of information and communication technology (ICT) into the educational environment involves many administrative, organizational, professional, and socio-economic factors, this shift certainly has an impact on the ability of schools and educators especially the ability to integrate technology (Alhouti, 2020) . In several studies it was stated that the existence of a pandemic had an impact on the low competence of prospective teacher students in various aspects, especially in terms of pedagogy, namely mastery of teaching materials and the ability to integrate technology appropriately (Ashour et al., 2021; Jandrić et al., 2020) . With the problems that exist in education, especially in the education system in tertiary institutions, the author wants to examine more deeply the impact of the Covid 19 pandemic on the abilities and competencies of prospective teacher students in various countries.

METHOD

Method which used in this research is *reviews* systematic in accordance with *Preferred reporting Items for Systematic Reviews and Meta-Analyses* (PRISM). Search process focused on article journal about "Competencies of post-pandemic prospective teacher students and post-pandemic student prospective teacher abilities" in several countries which were published in 2020 - 2022. A literature search was conducted on November 16, 2022 via the *Google Scholar electronic database* . The keywords used in the search article journal is “ *Post-Pandemic Post-Pandemic Student Teacher Candidate Analysis Abilities* ” and “ *Post-Pandemic Student Teacher Competency* ”. Article journal filtered based on title and abstract, then chosen based on predetermined criteria. Journals that irrelevant will be excluded, then the journal is evaluated based on inclusion criteria with criteria as shown in table 1.

Table 1. Inclusion Criteria for Article Selection

CRITERIA	DESCRIPTION
Inclusion	In English language According to keywords Quantitative and Qualitative Research Methods
Exclusion	Competency of Student Prospective teachers

during a pandemic
 Capability of Student Prospective teachers
 after the pandemic

The results of an initial search of the literature obtained 17,380 journal articles based on the variable " *Post-Pandemic Student Teacher Candidate Analysis Abilities* (4980 Journals) and *Post-Pandemic Student Teacher Competency* (12,400 Journals). After through inclusion obtained journal which in accordance with criteria studyfor *reviewed* _ systematically as shown in Figure 1.

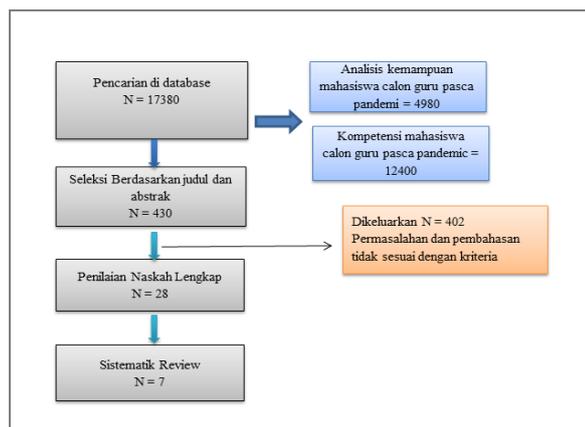


Figure 1. Research Search Flowchart

RESULTS AND DISCUSSION

Based on results search study, found 7 journals with method study that is study quantitative nor qualitative with design study which used part big use descriptive design . Findings article to the research criteria are presented in table form below this with include title, writer, year publication, location study, destination research, research methods, and research results. The results of a *systematic review* of journals can be seen in table 2

Table 2. Results Overview *Systematic Reviews*

NO	Title (Writer, Year, Journal)	Location Study	Destination Study	Design Study	Results Study
1	Continuous Up Skilling Of Teaching Faculty For Competency Building: During And Post Pandemic (NR Alamelu, R. Mary Metilda, Grace	India	To see the real impact of Covid'19 on the continuous improvement of teaching skills regardless of	Survey method with 182 prospective teacher student respondents	Results of data analysis using PLS- SEM: 1). There is a significant relationship between Competency Development and Technology (t- statistics=4.46). There is a strong relationship between Competency

Antony, 2022)	<p>discipline, namely:</p> <ol style="list-style-type: none"> 1. The role of lecturers in teaching prospective teacher students during a pandemic 2. The role of the Faculty in preparing technology-based learning tools 3. The role of universities in improving teaching competence during a pandemic 	<p>Building and Tech nologist. 2). The relationship between Competency Building and Designer has a t-statistics of 2.82 and a <i>P</i> value of 0.005. It can also be seen that there is a strong relationship between Competency and Designer development, 3). The relationship between Competency Building and Assessment has a standard error of 0.03 , t-statistics of 15.26 and a <i>P</i> value of 0.00. It is also seen that there is a strong relationship between Competency Building and Assessors, 4). The relationship between Competency Building and Research Creator has a standard error of 0.03 , t-statistics of 0.529 and a <i>P</i> value of 0.017. It can be seen that there is a strong relationship between Competency Building and Research Creator, 5). The relationship between Competency Building and Advisor has a standard error of 0.06 , t-statistics of 8.25 and a <i>P</i> value of 0.00. It can be seen that there is a strong relationship between Competency Building and Advisor, 6). It is observed from the results that the two relationships are not supported by statistical values ie. Process Facilitator and learner. So there is no significant relationship between competency improvement and process facilitators.</p>
2 Balancing Technology, Pedagogy and the New Normal: Post-pandemic Challenges for Higher Education (Chrysi Rapanta, Luca Botturi, Peter Goodyear, Lourdes Guàrdia, Marguerite Koole, 2021)	Switzerland To see the role of teachers in tertiary institutions in increasing student competence through blended learning in the new normal era	Qualitative method by conducting interviews with 4 experts in the field of education The ERT program cannot be considered to have the same processes and procedures as online education, due to the lack of administrative support and technological infrastructure, ERT paved the way for early digital teaching experiences. With so many possibilities in what can be broadly called 'teaching and learning with technology' there is a need for innovative and effective learning. Faculty are not always the ones making decisions regarding curriculum and assessment design. Careful strategic planning on the part of HE institutions is now more necessary than ever before which

					includes linking decision making at at least three levels macro, meso and micro.
3	Required Competencies For E-Learning Among Science And Mathematics Supervisors: Post-Pandemic Features Of Education (Fatimah Alhashem, Nasser Agha, and Anwar Mohammad, 2022).	Kuwait	To measure the readiness of science mathematics supervisors to leveraging technology and online learning platforms for professional planning and development teachers, during and after the COVID-19 pandemic period	Survey Method (questionnaire and interview)	When completing the survey, supervisors are approaching proficiency with technology; however, focus group discussions revealed misconceptions about e-learning and their limited ability to use technology in schools, as well as constraints created by the structure and management of the education system. Supervisors need support in acquiring the competencies needed to integrate technology in education. Research shows that educational change only occurs when teachers are allowed to own and encourage that change. Teachers embody the school's culture and goals, and when properly supported and inspired, they are better able to transform education systems with their energies and ideas focused on global e-learning.
4	Digitalization And Beyond: The Effects Of Covid-19 On Post-Pandemic Educational Policy And Delivery In Europe Adri ´ an Zancajo, Antoni Verger, Pedro Bolea, 2022)	European Union	To identify long-term education policy responses to the Covid-19 pandemic in European Union countries from	Survey Method (questionnaire and interview)	Research findings confirm that education systems are complex, overlapping and resilient institutions that are more conducive to incremental change than innovative transformation. The pandemic has accelerated transformations that have started before (such as digitization) and proved the importance of tackling issues that have long been on the education agenda, such as: closing the educational gap and professionalizing the work of teachers.
5	Construction of Language Teachers' Professional Competence in Education for Sustainable Development in Higher Education for Post-pandemic Era (Yan Liu, Wenjin Qi, 2021)	China	To find out and build post-pandemic teacher competencies through the ESD program	Study of literature	ESD has been integrated into teacher training in all types of institutions. Educators are expected to enhance their competencies to teach sustainability issues, conduct praxis-oriented interdisciplinary research, and inform policies on ESD and sustainable development. Policy is taken as one of the most important levers in facilitating continuous learning and driving education reform. Educational institutions and policy makers should recognize and reward language teachers who advocate for

				sustainability with a focus on multidisciplinary education, critical thinking and community engagement.
6	Level of Digital Teaching Competence on the Verge of the Postpandemic (Yersi-Luis Huamán-Romaní, Freddy Carrasco-Choque,Edwing-Alcides Maquera-Flores, Juan-Carlos Lázaro-Guillermo, Federico Kuaquirá-Huallpa, 2021)	Lungs	To analyze and describe the digital level of teacher competency after experiencing two years in a virtual environment and this will be evaluated by the students themselves	This research is descriptive, cross-sectional and correlational with a quantitative approach survey method with 1045 student respondents conducted online
7	Portrait of the Teacher Educator as a Weary Pedagogue: Narrating our Way to a Post-Pandemic Vision of Educator Preparation (Kristien Zenkov, Mark Helmsing, Audra K. Parker Holly Glaser, Mandy Bean, 2021).	United States of America	To see the impact of the pandemic on the competence of prospective teacher students in the future	From the interview results, it was found that there is a need for effective teaching modeling by taking into account the pedagogical abilities of post-pandemic student teacher candidates. In addition, online learning has changed the learning paradigm from face-to-face to online so that it is considered not optimal in developing the competence of prospective teacher students with various limitations such as the availability of appropriate technology, besides that the enthusiasm of students is also not very good in receiving

teaching material. Another finding is that there needs to be improvement in the availability of infrastructure and learning systems in faculties, especially universities that produce prospective teachers. So today's post-pandemic education is linked to new metacognitive exercises, conveying our theories, plans and pedagogical procedures through virtual mode.

Furthermore, the results of the review are grouped into several categories which describe the competencies of post-pandemic prospective teacher students as shown in table 3.

Table 3 . Description of the Competence of Post-Pandemic Prospective Teacher Students

Description of the Competence of Post-Pandemic Prospective Teacher Students	Article Journal
The role of educational institutions in improving the competence of post-pandemic prospective teacher students	Continuous Up Skilling Of Teaching Faculty For Competency Building: During And Post Pandemic (NR Alamelu, R. Mary Metilda, Grace Antony, 2022) Portrait of the Teacher Educator as a Weary Pedagogue: Narrating Our Way to a Post-Pandemic Vision of Educator Preparation (Kristian Zenkov, Mark Helmsing, Audra K. Parker Holly Glaser, Mandy Bean, 2021).
Performing education at lingkup universities in terms of competencies mahasiswa calon guru pasca pandemic melalui blended learning	Balancing Technology, Pedagogy and the New Normal: Post-pandemic Challenges for Higher Education (Chrysi Rapanta, Luca Botturi, Peter Goodyear, Lourdes Guàrdia, Marguerite Koole, 2021) Level of Digital Teaching Competence on the Verge of the Post Pandemic (Yersi-Luis Huaman-Romaní, Freddy Carrasco-Choque, Edwing-Alcides Maquera-Flores, Juan-Carlos Lazaro-Guillermo, Federico Kuaquirá-Huallpa, 2021).
The readiness of educational institutions to improve the technology-based education system in an effort to increase the ability and professionalism of teachers in the post-pandemic period	Required Competencies For E-Learning Among Science And Mathematics Supervisors: Post-Pandemic Features Of Education (Fatimah Alhashem, Nasser Agha, and Anwar Mohammad, 2022).
Government policy in an effort to increase the competence of post-pandemic student teacher candidates	Digitalization And Beyond: The Effects Of Covid-19 On Post-Pandemic Educational Policy And Delivery In Europe Adri ´ an Zancajo, Antoni Verger, Pedro Bolea, 2022). Construction of Language Teachers' Professional

Based on results *reviews* in a manner systematically on the table 3, is known There are journals stating the role of higher education institutions in improving the competence of prospective teacher students after the Covid-19 pandemic. NR Alamelu et al (Alamelu et al., 2022) states that increasing the competency of prospective teacher students is related to the commitment of learning supervisors, monitors, and learning system developers. as well as technology used in the post-pandemic learning process, therefore faculties/universities are expected to be able to direct lecturers to provide more in-depth guidance to prospective teacher students, especially in teaching skills and other supporting competencies as provisions to become teachers in the future. This is relevant to the study of Kristien Zenkov et al (Zenkov, 2020) that there is a need for an effective teaching model taking into account the pedagogical abilities of post-pandemic student teacher candidates. appropriate technology, student enthusiasm is also not very good in receiving teaching materials, there is a need for improvements to infrastructure and learning systems in educational faculties/universities, namely the need for new metacognitive development in conveying theory, planning, and teaching procedures in virtual mode.

According to research done by Ersin Pinar(Ersin & Mede, 2020) in Turkey, the presence of a pandemic forced educational institutions to advance, particularly those that train future teachers. In the final year of study, students were expected to be able to carry out teaching practices effectively despite a variety of constraints during the Covid-19 pandemic. Several universities in the education sector make innovations by launching e-practicum programs that can be monitored by lecturers or other instructors. The study's findings revealed that e-practicums are helpful in assisting student teacher candidates in overcoming fears of teaching online. Student teacher candidates are also seen to be more able to improve their competence, especially in using information and communication technology appropriately. This program undoubtedly needs the support of good facilities and infrastructure.

The process of improving the quality of education, especially prospective teacher students, is inseparable from the role of lecturers who are expected to be able to improve post-pandemic student competencies through online or mixed mode learning patterns. In the results of the article review, there were 3 journals which stated the importance of lecturers in building interest in learning and increasing the competency of student teacher candidates. The researchers argued that there was a need for changes to the education system in tertiary institutions, lecturers must be able to redesign the learning process from face-to-face to online during the pandemic, other challenges are administrative support and the availability of appropriate technological infrastructure, through digitization can

provide space for innovative teaching and learning and effective by paying attention to the aspects of flexibility, empowerment, professionalization and strategic decision making, there is a need for strategic planning from authorized faculties/institutions (Huamán-Romaní et al., 2022; Rapanta et al., 2021) .

This is relevant to a study conducted by Anne M Phelan et al (Phelan, 2021) which stated that there was a conflict in the process of improving learning during the pandemic in Canada, one of the indicators that can be used to measure educational development through human capital, innovation, and transfer knowledge, other problems related to technology, it is necessary to improve technology-based learning systems so that later prospective teachers can improve their competence, especially in pedagogic abilities and attitudes.

Furthermore, the results of the review also contain journals that show the readiness of educational institutions to improve the quality of technology-based education as an effort to increase the competency of post-pandemic student teacher candidates. Fatimah Alhashem et al (Alhashem et al., 2022) stated that there are misunderstandings regarding e-learning and their limited ability to use technology in schools as well as obstacles related to the management of the education system, therefore to increase the competence of prospective teacher students requires support in terms of technology integration in learning with a clear, systematic and hands-on approach, of course, support from various parties is also needed, such as the culture and goals of the school so that it is hoped that it can change the education system for the better.

Results *systematic reviews* In table 3, there are also 2 journals related to various government policies in other countries in increasing the competence of post-pandemic student teacher candidates. Adrian Zancajo et al (Zancajo et al., 2022) stated that the education system is a complex institution, and resilient to additional changes rather than innovative transformations, the pandemic has accelerated transformations such as digitalization and proved the importance of overcoming old problems in education such as: overcoming educational and professionalization gaps teacher's work. This is relevant to the study of Yan liu and wenjin Qi (Liu & Qi, 2021) , namely that there is an ESD program that has been integrated into teacher training at all institutions, through this program it is hoped that educators can improve their competence to teach sustainability issues, conduct research praxis-oriented interdisciplinary, and inform policies on ESD and sustainable development, besides that educational institutions and policy makers must recognize and reward teachers with a focus on multidisciplinary education, critical thinking, and community engagement. It is indicated that colleges and universities should embark on a holistic strategy to incorporate sustainability education into their core values (Pompeii et al., 2019) .

In spite of efforts to lower assessment standards and give students the freedom to practice teaching virtually while still being under the supervision of supervisors and teachers in the district they live in, a university in the United States that focuses on training prospective teachers still encounters difficulties

conducting teaching practice for final year students. The results are less effective than when students practice face-to-face. These findings provide information that institutions can use to build a virtual teaching practice program the following semester (Barnes et al., 2020). The findings of research on prospective foreign language teacher students showed that the lack of direct interaction with students and changes in arrangements during the pandemic affected the learning process, but prospective teachers stated that this unique experience will make a positive contribution at least to teachers' education and training. In another study, it was discovered that teaching placements were considered an important stage in teacher training where theory and practice were combined (Sepulveda-Escobar & Morrison, 2020).

In addition to the negative perceptions of prospective teacher students, such as the lack of an interactive or passive environment, a lack of technological equipment and internet connection issues, unpleasant compared to face-to-face educational environments, and a lack of pe, the existence of a pandemic has indirectly affected the decline in the quality of prospective teacher students, especially in communicating both conveying subject matter and responding to questions from students (Geçkin, 2022; Makawawa et al., 2021; Smith & Schlaack, 2021). The support of tertiary institutions, particularly lecturers, can help students increase their abilities by using a variety of programs or lecture materials. Examples of these abilities include the capacity to comprehend a variety of learning apps, actively participate in webinars, and others.

To be able to increase the competence of prospective teacher students, it is necessary to strengthen in various aspects, both pedagogic as an educator's support in teaching and for the sustainability of the education system. The existence of the pandemic has also had an impact on the competence of prospective teacher students in Indonesia, in several studies it was found that the competency of prospective teacher students was not very good, pedagogic competencies that need to be developed by teachers during Blended learning, namely by utilizing teaching materials that use technology such as ICT, this is This can be done with various trainings to facilitate the blended learning learning process to be easy and useful so that it can help the learning process carried out by educators and students (Aufa & Sari, 2021; Nugroho & Practice, 2020; Nurwahidah & Muthar, 2022) . In developing this competence, teachers can carry out activities, such as reading teaching technique sources, reviewing scientific papers, carrying out varied learning, participating in various trainings, viewing news about education or pedagogical studies, and practicing basic teaching skills in class.

In several studies, it was discovered that students' abilities to use technology were very good, especially in making interactive learning videos. In addition, there were students who could improve their abilities by integrating technology and local culture to teach science. The pandemic has positive effects on prospective teacher students, including increasing their ability to use

technology, especially in conveying difficult subject matter like mathematics and science(Celi, 2021; Yoon et al., 2021).

Based on the results of a study of 7 relevant journals, it can be seen that the existence of the Covid-19 pandemic has had an impact on reducing the quality and competence of prospective teacher students, this is especially in terms of pedagogy and the ability to integrate appropriate technology. Therefore, there is a need for support in the form of policies that can be implemented by tertiary institutions through faculties in the field of education related to changes in the education system based on blended learning by providing adequate infrastructure in the future.

CONCLUSION

Based on the findings of a comprehensive review study, it is possible to draw the conclusion that the Covid-19 epidemic has reduced the quality of potential teacher students, particularly in their capacity to communicate information and has an effect on self-efficacy. According to several research, future teachers' students were less prepared to participate in online teaching practice since they had to be proficient in both the technology that would be utilized in teaching practice and the teaching material. In order to strengthen pedagogical, social, and professional aspects for the sustainability of the education system, as well as to provide technology-based facilities and infrastructure, there is a need for special regulations and programs.

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