# Facing the challenges of society 5.0 digital character competence: Review of education and teaching strategies for prospective teachers

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## Abstract

Era society 5.0 in the field of education must be strengthened by making changes in competencies that are taught to learners and applying innovative learning models in schools. Education in Indonesia needs new innovations to advance the quality of Indonesian education. Many other countries have implemented education and teaching strategies that lead to digital character in era 5.0 in the field of education and successfully show the quality of education in the country. Strategies that can support digital competence in era 5.0 are needed to determine the success of its application at various levels of education, it requires a mature readiness to do so. The purpose of this research is to find out education and teaching strategies for prospective teachers or students to be ready to face digital character in the era of society 5.0 in Indonesia. Research is conducted using the method of literature study of reference sources. This research obtained the following results: 1) Education and teaching strategies for prospective teachers or students to be ready to face digital character in the era of society 5.0 in Indonesia in 2016-2022 found 20 research articles; 2) Parameters that can be taken from the article there are 3, namely: research methods, teaching strategies and competencies that must be owned by prospective teachers; 3) Research methods that are widely used by researchers are types of qualitative research methods; 4) Education teaching strategies and competencies that must be owned by prospective teachers in each journal is different.

Keywords: digital character education, literature review, society 5.0, teaching strategies

## INTRODUCTION

In the process of teaching and learning in the present century, there is certainly a way to teach it. Students in the 21st century have their own characteristics, namely in control, love with many learning options, like to work together and users of digital technology. Teachers in the 21st century today must ensure the teaching they use needs to be improved through the use of technology, developing students' abilities.

A teacher must be able to use technology for all processes in the administration, assessment and reporting of student learning outcomes. Teacher strategies to be able to improve students' learning skills and outcomes include Collaborative Problem Solving (collaborative problem solving, collaborative inquiry learning, collaborative problem-based learning); Blended Learning, and Project Based learning (Arifin & Setiawan, 2020). 21st century skills include creative, critical, flexible, open, innovative, agile, competitive, problem-sensitive, informed, able to work in cross-field teams and adapt to change. These points are important competencies to face the challenges and demands of life in era 5.0 including in the field of education (Sumarno, 2019).

Era society 5.0 is an era including the world of education that requires education to equip students with competencies that must be owned by Indonesian students. Critical thingking and problem solving, communication, collaboration, and creativity and innovation are mandatory competencies mastered by students. That way students have the ability to support to face this era 5.0 from educational facilities including the development of all intelligence (Putri, et al., 2021).

The way that can be done by many parties for Indonesian education in order to face society 5.0 is in terms of government infrastructure must be able to increase the equalization of internet connection, in terms of human resources, namely teachers must have skills in the field of digital and creative thinking (Hermawan, et al., 2020). In this era teachers must be more innovative and dynamic in teaching in the classroom, balanced with the government that must be able to synchronize between education and industry so that graduates are produced with the required criteria. The unemployment rate can be suppressed with this step. In addition, the application of technology becomes an important factor to build a strong foundation of Indonesian education in the face of society 5.0 (Ely et al., 2020).

The position of a teacher or a teacher in this era must be multifunctional not only in the position of transferring knowledge only to do it must also emphasize character education, morals and transparency. The development of technology today can replace the position of teachers to transfer science however, regarding the application of soft skills and hard skills will not be replaced by as sophisticated as the technology (Nastiti & Abdu, 2020). The existence of society 5.0 makes it an opportunity to be able to make technology in the field of education so as not to change the role of both teachers and teachers in teaching moral education and transparency to students (Kinanti & Kencana, 2021).

Prospective professional teachers need readiness and many factors that affect readiness. Era society 5.0 will directly or indirectly affect all areas of life, in the field of education must be strengthened by making changes in competencies that are taught to learners and applying innovative learning models in schools. Readiness to become a teacher with maximum ability needs to be possessed to carry out his main duties as a professional teacher.

Therefore, there needs to be a discussion on education and teaching strategies for prospective teachers or students to be ready to face the challenges of digital character that have become part of the society 5.0 era. The formulation of this authorship problem is how the education and teaching strategy for prospective teachers or students to be ready to face digital character in the era of society 5.0, with the aim of knowing the education and teaching strategies for prospective teachers or students to be ready to face digital character in the era of society 5.0 in Indonesia.

## RESEARCH METHOD

In the process of teaching and learning in the present century, there is certainly a way to teach This research reviewed articles related to education and teaching strategies for prospective teachers or students to be ready to face the challenges of digital character. Literature studies are searches and literature research by reading various books, journals, proceedings and other publications correlate with topics raised in the research so as to produce a writing (Marzali, 2016).
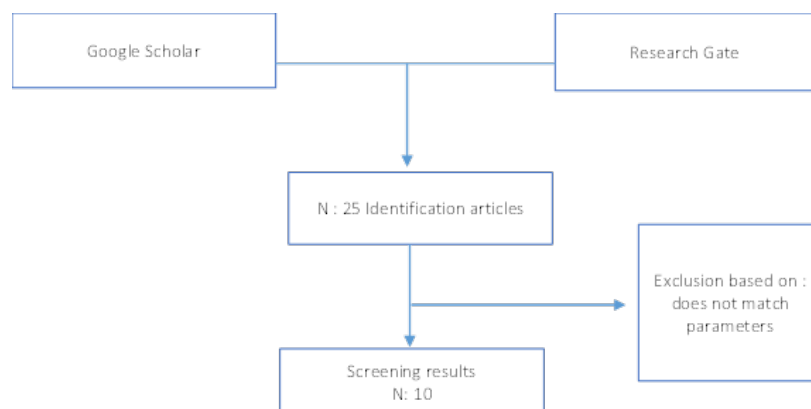


**Figure 1.** Flow chart of identification of research articles

Articles studied in the form of national journals, international journals, indexed journals, proceedings, scientific articles and from popular books. Research articles obtained from the last 5 years. The source of the literature was identified from Google scholar 8 articles, and ResearchGate 2 articles. The total number of articles identified is 25 articles. After the selection of the remaining 10 articles that correspond to the parameters based on the research method (See Figure 1).

## RESULTS AND DISCUSSION

Following the explained method, we got many sources as presented in Table 1.

**Table 1.** Sources of review

| No | Researcher & year | Research title | Parameter | | |
|---|---|---|---|---|---|
| | | | Research method | Education/ teaching strategy | Competences |
| 1 | Afif, Nur (2019) | Teaching and Learning in the Digital Age (IQ Science of the Qur'an: Journal of Islamic Education) | Qualitative | Immediacy of learning | Must be able to design learning activities |
| 2 | Vivianti (2018) | Digital Teaching and Learning with Character Education: Teaching Strategies for Digital Natives (Proceedings of XXI Century Teacher Professionalism, National Seminar of IKA UNY) | Qualitative | Digital Teaching and Learning Containing Character Education | Keeping up with the times and implementing appropriate learning strategies |
| 3 | Nuryadin (2020) | Values and Character Learning Strategy Facing the Challenges of the Industrial Age 4.0 (STAINU Purworejo: Al Ghazali Journal: Journal of Islamic Education and Islamic Studies) | Library Research | E-learning, Flipped Learning, Online Learning and Quantum learning | Exploration and creation through self-study |
| 4 | Yasid (2020) | Literacy Character-Based Learning Strategy Digital Faces the COVID-19 Pandemic (Proceedings of the 2020 National Thematic Online Discussion "Education in a Pandemic Period: Studying from the Regions") | Descriptive qualitative | Project-based learning | Must find new innovation breakthroughs in the learning process and educators Must be able to manage both classroom and online classes |
| 5 | Septiana, Istiqomah, & Rahmawati (2020) | Learning Strategies in Developing the Character of School Students Fundamentals in the Industrial Revolution 4.0 Era: Exploration Studies of Thailand and Indonesia (Proceeding International Conference on Islamic Education, Maulana Malik Ibrahim State Islamic University (UIN) Malang) | Qualitative approach | NHT, strategy play, role playing, singing, direct method, question and answer, scaffolding, modeling, and behavioral (reinforcement & punishment) | teaching who impact on student character development |

| No | Researcher & year | Research title | Parameter | | |
|---|---|---|---|---|---|
| | | | Research method | Education/ teaching strategy | Competences |
| 6 | Santika (2020) | Character Education in Online Learning (Indonesian Values and Character Education Journal) | Qualitative descriptive | Multiple intelligences | The facilitator can identify all the advantages and disadvantages of the learning models that will be applied so that they actually create an effective learning and the ability to plan learning. |
| 7 | Purnasari & Sadewo (2021) | Basic Education Learning Strategies at the Frontier in the Digital Age (Basicedu Journal: Journal of Elementary Education) | Qualitative | Direct learning | Technology mastery |
| 8 | Astuti, Asikin, & Waluya (2019) | Learning Strategies in Facing the Challenges of the Industrial Revolution 4.0 (Proceedings of the National Postgraduate Seminar PROSNAMPAS) | Qualitative | (1) assisting students in learning, (2) providing opportunities to develop and excel, (3) strengthening character education, (4) technology literacy, and (5) becoming effective teachers. | Prepare students to be able to create jobs that do not currently exist, prepare students to solve problems that do not yet exist, and prepare children to be able to use technology |
| 9 | Emi, Eti , & Utama (2020) | Development of Ethnoscience-Based Digital Pocket Book in Singkawang City Elementary School (Educational Journal: Journal of Research Results and Literature Studies in the Field of Education, Teaching and Learning) | ADDIE | Digital pocket book on heat material and its transfer. | Creating simple learning media so that learning can be carried out widely so as to create professional teachers |
| 10 | Laser (2019) | Education and Industrial Revolution 4.0 (Jurnal Handayani PGSD FIP Unimed) | Library research | Curriculum reorientation using ICT-based learning, internet of things, big data, computer, enterpreneurship, and internship. | Educational competence, competence for technological commercialization, competence in globalization, competence in future strategies, and counselor competence. |

After analyzing research articles from the last 5 years, for research methods there are 4 types of research methods used by researchers who were reviewed from 10 articles (See Table 2).

Table 2. Research methods in the reviewed sources

| No | Method type | Percentage |
|----|----------------------|---------------------------|
| 1 | ADDIE | 1/ 10 x 100% = 10% |
| 2 | Qualitative | 5/10 x 100% = 50% |
| 3 | Library research | 2/10 x 100% = 20% |
| 4 | Qualitative descriptive | 2/10 x 100% = 20 % |

The parameters taken for further analysis are the educational/teaching strategies and competencies that prospective teachers/teachers must possess that are used by researchers whose articles are analyzed. There are 10 education/teaching strategies and competencies. This is because each of the journals discusses different strategies which are effective strategies according to the author.

*Subsection*

Learning in the current era is growing following the fulfillment of the needs and progress of the times. In the 21st century or era 5.0, which emphasizes digitization, students who are increasingly proficient in using technology need to be equipped with good characters. Teachers as student companions in schools are required to have a better digital character than students. Teachers are the pillars of education. Therefore, the success of education in a country is strongly influenced by the strategic role of teachers. That is the reason teacher competence must continue to be improved along with the times. Teachers have a very heavy task load, not only responsible to their students, but also to the state. Teachers even have a central role in efforts to realize the goals of national education.

According to (Awulloh et al., 2021) Strengthening Character Education through digital literacy can be a strategy in order to face the era of society 5.0. Through digital literacy, efforts to strengthen the five main characters, namely: nationalism, independence, religious, integrity, and mutual cooperation can be developed effectively and systematically. The implementation of literacy, especially digital literacy, is carried out in a planned manner by involving all parties related to class, school and community based.

Character education is something that is fundamental in order to shape the character or personality of students. What can be done in strengthening character education is the integration of both teachers, parents, and also other parties in order to welcome the era of society 5.0. Through comprehensive learning models, it is also expected to have good implications (Sukarno, 2020).

In this literature study, we discuss an overview of educational and teaching strategies for prospective teachers or students to be ready to face the challenges of digital character in the era of society 5.0 in Indonesia. The articles analyzed were 10 articles from the last 5 years. Each article analyzed has a different research method. There are qualitative methods, qualitative descriptive, ADDIE, and library research. The research method that is most widely used by researchers in research related to the Description of Educational and Teaching Strategies for Prospective Teachers or Students to Be Ready to Face the Challenge of Digital Character in the Era of Society 5.0 in Indonesia is a qualitative research method. Quantitative research (Saefu, 2009)is a measurement that involves measuring the level of a certain characteristic. This method is to find something in the observation so that the observer must know what characterizes that thing. This research method aims to gain a general understanding of social reality from the participant's perspective.

In designing the strategy, it is certainly supported by the competencies of qualified teachers in this 5.0 era. Competence is a collection of knowledge, behavior, and skills that teachers must possess to achieve learning and educational goals. There are four competencies that must be owned by an elementary school teacher, namely, pedagogic competence, personality competence, social competence, and professional competence. How to improve the four competencies that must be owned by teachers can be done by means of training, classroom action research and utilizing existing learning resources. In 10 research articles analyzed, the readiness of teachers in era 5.0 is that they must be proficient in mastering technology and continue to innovate in learning (Gunawan, et al., 2020).

## CONCLUSION

The conclusions that can be drawn from this scientific article are Educational and Teaching Strategies for Prospective Teachers or Students to Be Ready to Face the Challenges of Digital Character in the Era of Society 5.0. In Indonesia, 10 research articles were found. There are 3 parameters that can be taken from the article, namely: Educational and teaching strategies for prospective teachers or students to be ready to face the challenges of digital character in the era of society 5.0 in Indonesia in 2016-2022 found 10 research articles, Parameters that can be taken from the article are 3 namely: research methods, education/teaching strategies and competencies that must be possessed by prospective teachers/teachers. The research method that is widely used by researchers is the type of qualitative research method. The education/teaching strategies and competencies that prospective teachers/teachers must possess in each journal are different.

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