TEACHERS' COMPETENCY AND ITS IMPLICATIONS ON TEACHERS' RESILIENCE IN FACING SOCIETY 5.0

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ABSTRACT

This research was aimed at exploring current teachers' competency and its implications on teachers' readiness in facing society 5.0. As teachers play a pivotal role in helping students facing their future, it becomes mandatory for the teachers to adapt and adjust themselves with the current situation where cutting-edge technology has already influenced our lives in many ways, including education. Teachers nowadays are supposed to equip themselves with at least five competencies: digital literacy, critical thinking, adaptability, and communication. In order to find the answers, the researchers used a descriptive qualitative research design. There were two research instruments employed in this study; questionnaire and interviews. The questionnaire was distributed to thirty-two teachers and three teachers were interviewed. The results showed that of those four competencies, critical thinking is the lowest (81%) and communication is the highest (87.75%). Meanwhile digital literation and adaptability almost shares same result (around 84%). It could be inferred that the critical thinking is the area that needs improvement.

Keyword: *Teachers' Competency, Teachers' Resilience, Society 5.0*

INTRODUCTION

We have been living in the 21st century and the landscape of society as well as education is continuously evolving. One of the factors that makes differences is the development of technology, globalization and the growing interconnectedness of the world, educators should seriously consider this for the sake of their students' future readiness (Sulaiman & Ismail, 2020). It is a challenge for educators and teachers to prepare their students for uncertain future and ever-changing. Consequently, teachers are responsible for fostering a learning environment that not only imparts academic knowledge but also cultivates critical thinking, adaptability, and a global mindset among their students so that they are ready to embrace society 5.0.

Society 5.0 is an interesting concept that has earned attention in contemporary discussion. Society 5.0 was firstly introduced by Japan government in 2019 (Narvaez Rojas, Alomia Peñafiel, Loaiza Buitrago, & Tavera Romero, 2021). This concept focuses on human (human-centered) and based on technology. This concept is the development of industrial revolution 4.0 where society or citizen could overcome any problems and social challenges through technology and humanism (Pereira, Lima, & Charrua-Santos, 2020). Fundamentally, it is not much different from 4.0 which stressed on the use of Artificial Intelligence (AI) or any other means of technology to solve human's problem meanwhile 5.0 also sees cutting-edge technology but it sees human as the main controller, not vice versa.

In society 5.0, teachers work not only for imparting knowledge and skills but also for teaching students how to navigate and connect them to the power of technology. Teachers play a pivotal role in shaping the future of education and, consequently, the future of society. In addition, teachers nowadays are meant to prepare students to be ready for a future that is reliant on technology (Ghavifekr & Rosdy, 2015). Besides, teachers have to ensure that their students are digital literate and have critical thinking skills to survive in a rapidly changing world.

Currently teachers need particular competences in order to prepare students with uncertainty and upcoming future ahead. Basically, teachers' competence refers to their ability to effectively teach and guide students in a way that promotes their intellectual, emotional, and social development (Gamayao & Biñas, 2021; Tazitabong, 2021). In the context of Society 5.0, teachers must possess a range of skills and knowledge in order to keep up with the rapidly changing technological advancements and societal trends. Competencies such as digital literacy, critical thinking, communication, and adaptability are no longer optional; they are imperative for educators to effectively prepare students for the challenges of a technology-driven world.

As shown in the Table 1 below taken from Yulianto (2021), previous literature said differences about the teacher's competence in the era of 5.0 but the researcher of this current study concise them into four major competencies such as digital literacy, critical thinking, communication, and adaptability. The researchers believed that these four majors can accommodate teachers in facing 5.0 society.

Table 1. Teacher's Competency According to Some Literature

Minister of education regulation (2007)	Qusthalani (2018)	Alimuddin (2019)	Risdianto (2019)	Muhajir in Yusnaini (2019)
a. Pedagogical competence b. Personality competence c. Social competence d. Professional competence	a. Educational competence b. Competence for technological commercialisation c. Competence in globalization d. Competence in future strategies e. Counsellor competence	a. Leadership b. Digital literacy c. Communication d. Emotional intelligence e. Enterpreneurship f. Teamwork g. Problem solving	a. Creativity b. Critical thinking c. Communication d. Collaboration	a. Critical thinking b. Creativity and innovation c. Interpersonal skills and communication d. Teamwork and collaboration e. Confident

Source: Minister education regulation (2007), Qusthalani (2018), Alimuddin (2019), Risdianto (2019), and Muhajir in Yusnaini (2019) (In Yulianto (2021)

The first is digital literacy is the teacher's competency in using various Information Communication Technology (ICT) in preparing lesson, delivering lesson and doing or making assessment (Kartikawati & Nurhasanah, 2024; Rasyid & Nuriyah, 2023). However, the digital literacy is not limited to only how to use and incorporate ICT but also teachers are supposed to literate themselves in the importance of digital citizenship and online safety (Atmazaki & Indriyani, 2019) so that they could teach their students how to be safe in becoming digital citizen.

Next, critical thinking becomes mandatory for teachers to possess in this century to teach and guide their students in facing opportunities and challenges ahead. Critical thinking skills refer to a person's ability to critically analyze information, understand different perspectives, and make well-informed decisions (Oner & Aggul, 2021). A prominent key in critical thinking is to evaluate information and sources as we live in a digital age where everything is at the tip of our finger, there are thousands and abundant information on the internet but not all of them are valid and reliable. Therefore, teachers have to make sure that they are able to discern fact from opinion, identify bias and evaluate credibility of sources.

Then, communication skill is another competency that teacher should equip with (Abid, Hussain, & Shoaib, 2019; Dela Cruz, 2019). As to be effective teachers should posses with this skill to fulfil their role in the classroom. Teacher deals with students who need to be taught, guided, and educated, and a pivotal element to achieve an effective teaching and learning process is an effective communication in terms of teacher's ability to convey information to their students. Teachers' work is not only delivering lesson in a clear and understandable way, but also teachers

are supposed to see their students who have their ways and needs. In that case, teachers must be able to listen and engage with their students to build pleasant and positive learning environment.

The last, life is constant as well as education, we face changes in our everyday life. Therefore, teacher's adaptability skill is important. Adaptability skill can mean teacher's character to adjust their teaching methods and strategies to meet the diverse needs of their students (Perez, Valera, & Limos-Galay, 2023; Thant Sin, 2022). This character can be seen through their flexibility, open-minded, and willingness to try new approaches to accommodate and support students effectively. Adaptability is a part of survival kit in today's constantly changing educational landscape. Furthermore, the rapid pace of change in the 21st century requires educators to be lifelong learners themselves. Teachers must be willing and able to continuously update their skills and knowledge in order to keep pace with advancements in technology, changes in pedagogy, and shifts in societal needs (Grimus, 2020; Li, 2022; Mardiana, 2020). This requires a commitment to professional development, self-reflection, and a growth mindset.

There are similar researchers conducted by Nur, Arifin, Soeryanto, Mutohhari, & Daryono (2023) and Alayda et al. (2022), both of these studies' scope were looking at teachers' competency in era of society 5.0. The studies highlight the teachers' need to promote collaboration, clear communication, and digital skills to prepare students for the students' future. The findings of those study also revealed the teachers as participants have enough competencies in those area.

Due to the importance of teacher's competence in educational landscape, this paper puts an attempt to shed a light on exploring the teachers' competence gaps and its impacts on teachers' resilience in facing 5.0 society. By examining the current state of teachers' competency on digital literacy, critical thinking, communication skill and adaptability hopefully could propose strategies for improvement. Ultimately, addressing these competency gaps is essential not only for the professional development of teachers but also for the holistic development of students who will thrive in the dynamic environment of Society 5.0.

METHOD

This research was aimed at finding the teachers' four major important competency that teachers should have in this century. In order to seek for the answer, the researchers employed descriptive qualitative. There were thirty-two participants involved in this study. They came from various major. There were two instruments used in this study; questionnaire and interview.

The first instrument was a closed-ended questionnaire which was divided into five sections; demographic information, digital literation, critical thinking, communication skill, and adaptability. Each section consisted of five positive statements which used to see the participants' competency. The five Likert-scale questionnaires were used to get the data with the provisions of the scores presented in Table 2 below.

Table 2. Likert-scale Score

Alternative Answers	Score (P_n)
Strongly Agree (SA)	5
Agree (A)	4
Neutral (N)	3
Disagree (D)	2
Strongly Disagree (SD)	1

Researchers used Microsoft Excel for the data analysis process by using several formulas. The first step, the results of the respondents' answers are multiplied by the score according to the Likert-scale score in Table 2 as in the following formula.

$$Total\ Score = T\ \times P_n$$

Note:

T : Total respondent

P_n : Number of Likert scale score

After knowing the total score of the answer results, the percentage is then calculated using a formula according to the Likert-scale provisions as follows.

$$Percentage = \frac{Total\ Score}{Total\ Ideal\ Score\ (Maximum\ Score)} \times 100\ \%$$

The last step to analyze the result of the questionnaire was to create intervals to determine the limits of the answers percentage as the percentage categories. The percentage categories in Table 3 below.

Table 3. Percentage Categories

Interval	Category
$0\% \leq Percentage < 20\%$	Very low
$20\% \leq Percentage < 40\%$	Low
$40\% \leq Percentage < 60\%$	Enough
$60\% \leq Percentage < 80\%$	High
$80\% \leq Percentage \leq 100\%$	Very high

The second instrument was interview. The structured interview was used to get in depth data as well as clarified participants answered in the questionnaire. However, due to the limited time, the researchers randomly selected the participants. There were only three participants who were willing and able to be interviewed. The data from the interview were transcribed and analyzed using thematic analysis. The researchers then identified the themes and interpreted them under certain theme.

The data analysis technique used in this study is the Miles, Huberman, & Saldaña (2014) model with the following stages: (1) data condensation , (2) data display, and (3) conclusion drawing/verification. Meanwhile, to test the credibility and validity of the research data, the researchers used the triangulation method by comparing the results of the questionnaire with the results of the interviews.

RESULTS AND DISCUSSIONS

There were thirty-two participants who have participated in filling the questionnaire. There were 61.3% of them were women and mostly participants are in their 20s-30s as well as 31s-40s. This means that mostly they are millennials teachers. Millennials are generations who were born between 1980 and 2000. According to Montenery et al. (2013) those years were the times when technology started to take part in our lives, and the generations at that time were the first to use the enjoyable technology that was integrated into our daily lives, such as cell phones, Myspace, Facebook, the iPad, etc.

The participants were all teachers who graduated from university. Many of them (61.3%) graduated from S1 (undergraduate) and some of them (25.6%) held S2 (master degree) while the rest of the, (12.9%) took PPG (Teacher Profession Program). Those participants were from all school level, starting from elementary to senior/vocational high school. With the distribution, 45% were from senior and vocational high school, 40 of them came from junior high school and the rest of them were from elementary school.

The participants had various teaching experiences. Mostly they have been teaching for more than six years. 19.4% of them even have been teaching for more than 15 years. 32.3% of the participants have been teaching for more than six years. Meanwhile only 12.9% of the participants have been teachers for more than ten years.

The following Table 4, Table 5, Table 6, and Table 7 are presented the data taken from the questionnaire. There are four sections; digital literation, critical thinking, communication skills, and adaptability.

Table 4. The Result of Digital Literacy Section

No	Statement	*N*	*T*					Total Score	Percentage	Category
			SD	D	N	A	SA			
1	I am comfortable using various digital tools and technologies for educational purposes.	32	0	0	0	14	18	146	91.25%	Very high
2	I can effectively integrate technology into my lesson plans.	32	0	0	5	19	8	131	81.88%	Very high
3	I am familiar with online resources and platforms that enhance learning.	32	0	2	2	21	7	129	80.63%	Very high
4	I can troubleshoot basic technical issues	32	0	0	3	21	8	133	83.13%	Very high

	that may arise during teaching.									
5	I understand the importance of digital citizenship and online safety for students.	32	0	0	1	21	10	137	85.63%	Very high
		Mean							**84.5%**	**Very high**

Table 5. The Result of Critical Thinking Section

No	Statement	*N*	*T*					Total Score	Percentage	Category
			SD	D	N	A	SA			
1	I can analyse and evaluate information from multiple sources critically.	32	0	0	7	18	7	128	80 %	Very high
2	I encourage students to question assumptions and think independently.	32	0	0	3	18	11	136	85%	Very high
3	I am able to develop lesson plans that promote critical thinking skills among students	32	0	0	4	21	7	131	81.88%	Very high
4	I can identify biases in information and teach students to do the same.	32	0	1	8	19	4	122	76.25%	High
5	I regularly reflect on my teaching practices to improve my effectiveness.	32	0	0	4	21	7	131	81.88%	Very high
		Mean							**81%**	**Very high**

Table 6. The Result of Communication Section

No	Statement	*N*	*T*					Total Score	Percentage	Category
			SD	D	N	A	SA			
1	I can clearly articulate my ideas and instructions to students.	32	0	0	4	19	9	133	83.13 %	Very high
2	I actively listen to students' questions and concerns.	32	0	0	2	19	11	137	85.63%	Very high
3	I am comfortable facilitating discussions and encouraging student participation.	32	0	0	0	17	15	143	89.38%	Very high
4	I can provide constructive feedback to students on their work.	32	0	0	0	15	17	145	90.63%	Very high
5	I adapt my communication style to meet the needs of diverse learners.	32	0	0	0	16	16	144	90%	Very high
		Mean							**87.75%**	**Very high**

Table 7. The Result of Adaptability Section

No	Statement	*N*	*T*					Total Score	Percentage	Category
			SD	D	N	A	SA			
1	I can adjust my teaching strategies based on the needs of my students.	32	0	0	5	19	8	131	81.88 %	Very high
2	I am open to incorporating new teaching methods and technologies.	32	0	0	0	24	8	136	85%	Very high
3	I can handle unexpected challenges in the	32	0	0	5	22	5	128	80%	Very high

	classroom effectively.									
4	I am willing to seek professional development opportunities to enhance my skills.	32	0	0	1	19	12	139	86.88%	Very high
5	I can collaborate with colleagues to improve teaching practices and student outcomes.	32	0	0	2	17	13	139	86.88%	Very high
		Mean							**84.13%**	**Very high**

The result above revealed that each section has very high mean. Of those four, critical thinking is the lowest (81%) and communication is the highest (87.75). Meanwhile digital literation and adaptability almost shares same result (around 84%). It could be inferred that the critical thinking is the area that needs improvement.

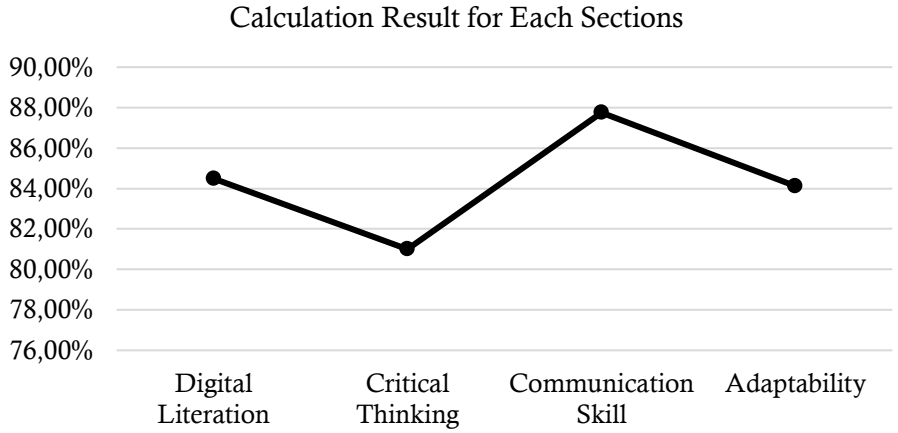


Figure 1. Calculation Result for Each Section

In order to get more data as well as cross check with the data taken from questionnaire, the researchers did interviews with three participants. There were seven questions in the interview sections which were made to gather related data on technology incorporation in the teaching process, critical thinking activities in the classroom, communication skill, and adaptability.

Regarding the integration of technology in teaching and learning process, the participant 1 said that she normally used video taken from YouTube to help her students understand and engage them in the process. Further, she explained that she used platforms such as Ruang Guru and Zenius. It goes the same way with the participant 2, he stated that he used WhatsApp as a means of online resources as well as Google meet or Zoom. Meanwhile participant 3 said that she incorporated

technology such as Quipper in her classroom but she did not use it quite often in the classroom because her school didn't support the facility like projector or Wi-Fi. In addition, she explained that when she used technology in the classroom, it will distract them and the English lesson would not be delivered as they focused on the technology. She then clarified that it happened because she was teaching at one of state junior high school in rural area where many of her students did not get used to learn with technology as not all of them had handphone. As Isma et al. (2023) stated, there are still many schools that lack of facilities and infrastructure, as well as limited internet access. Limited support for educational technology, both in terms of devices and the teachers' knowledge in integrating technology into learning, has hampered the quality of learning and student comfort in the teaching and learning process (Suryatni, 2021).

The next question was asking about how the participants build critical thinking in their classroom. All of them had the same respond that they used discussion as a means of building critical thinking. In addition, the participants tried to teach their students critical thinking by motivating and encouraging them to ask. For example, participant 1 often gave her students open-ended questions and invited them to have reflection on what they have learnt at the end of the lesson. Meanwhile participant 2 and 3, they teach critical thinking by providing problem solving in their day-to-day teaching as well as they gave up to date knowledge or with updated events. This is included in one of the strategies for developing and teaching critical thinking in the classroom, namely the immersion strategy (Cáceres, Nussbaum, & Ortiz, 2020). This strategy invites students to ask questions and engage in deep thinking, exchanging ideas to develop critical thinking skills explicitly (Huber & Kuncel, 2016).

In terms of communication skill, the participants being interviewed said that they all tried to build a rapport with the students. In case of their communication skill in delivering lesson, they thought that they all delivered well in their teaching. They also gave a room for their students to talk and share ideas, even mostly the students share unrelated topics with the lesson; but they still listen. Participant 1, for instance, said that her students often shared their problems with friends, other teachers, or even with parents. On the other hand, participant 2 shared that he doesn't like a quiet class, he prefers to have a 'noisy' one that full of questions and students' engagement. He facilitated his students through games and various activities so that they do not get bored in his class. The participant 3 also did the same thing, she often opens for questions and discussion with the students. They shared a same perspective in terms of communication skill for the teachers that nowadays teachers have to be able to see through their students' way of communication and try to adapt their communication style to meet the needs of diverse learners. As Khan, Khan, Zia-Ul-Islam, Khan (2017) stated that good communication skills of teacher are the basic need of students' academic success, but poor communication skills of teacher may cause failure of students to learn and promote their academics.

The last question was related to their adaptability skill. They were asked how they have improved their teaching skills and adapted in the past year. All of them answered that they often participated in training conducted by either governments or other institutions. They also used platforms and tried variety of medias, platforms and teaching methods to create supportive learning environment for their students. Andres et al. (2021) stated that the higher of the level of teachers'

adaptability also gives a high teaching performance. Adaptable teachers are better able to navigate the novelty, uncertainty, and constant change that occur in teaching effectively.

As it is discussed in the introduction before that teachers play an important role in the teaching and learning process. In the constantly changing landscape of education, the role of teachers has become increasingly complex and demanding. With the emergence of Society of 5.0, which is marked by the integration of the physical, digital, and actual worlds, teachers are indispensable to have a higher level of competence as a means to effectively face the challenges brought about by this new era.

The implications of teachers' competence on their resilience in facing Society 5.0 are significant. Teachers who are competent are better equipped to adapt to the changing demands of the education system and to meet the diverse needs of their students (Alayda et al., 2022; Pratama, Saputra, Pratiwi, & Lestari, 2022). As this study tried to attempt seeking or assessing teachers' competencies on four areas; digital literary, critical thinking, communication skill, and adaptability.

First of all, teachers have to be more likely digital literate. It is shown in the result of the questionnaire that mostly the participants reflected themselves as a digital literate. Digital literation has become an essential in today's classroom since technology keeps on advancing continuously and become more connected to our daily lives (Anwar, Mardisentosa, & Williams, 2021; Morris & Parker, 2014; Rintaningrum, 2023; Sawang, O'Connor, & Ali, 2017). Therefore, being digital literate currently helps teachers become more up to date with the current situation and prepare students better in facing the more modern world. In addition, being able to integrate new technologies into their teaching practices, engage with students in innovative ways, and create a supportive and inclusive learning environment. A competent teacher is able to stay up-to-date on the latest technological advancements and adapt their teaching methods to incorporate these changes into their curriculum (Perez et al., 2023).

However, based on the result above, critical thinking seems become the area that needs to be improved. Building and teaching critical thinking is also associated with discussion and problem solving. Some studies supported that discussion and problem-solving activities can enhance critical thinking skill (Wardani & Fiorintina, 2023; Wijayati, Ardiyani, & Hidayat, 2022). To effectively engage students in such activities, teachers have to be able to use a variety of techniques such as asking questions, facilitating discussions, and encouraging participation (Finn & Schrodt, 2016; Rrustemi & Sylaj, 2022).

CONCLUSIONS

Teachers play a crucial role in shaping the minds and futures of students. In order to effectively educate students, teachers must possess a range of competencies, such as digital literacy, critical thinking, adaptability, and communication. On the other hand, teachers who lack competence may struggle to keep up with the demands of Society 5.0, leading to feelings of inadequacy, frustration, and burnout. They may find it difficult to engage with students, adapt to new technologies, and meet the expectations of their school and community. The research results showed that of those four competencies, critical thinking is the lowest (81%) and communication

is the highest (87.75%). Meanwhile digital literation and adaptability almost shares same result (around 84%). It could be inferred that the critical thinking is the area that needs improvement. Furthermore, teacher needs to sharpen their critical thinking of both of themselves and students. Suggestions for the development of this research that can be carried out by other researchers are research related to how to develop each competency that teachers must have as a basis for developing better learning and academic success for students.

REFERENCES

Abid, N., Hussain, T., & Shoaib, A. (2019). Educators' Competence Level in Effective Communication and Proficient Use of Information Communication Technologies (ECPUICT). *Literacy Information and Computer Education Journal (LICEJ)*, *10*(2), 3153–3159. https://doi.org/10.20533/licej.2040.2589.2019.0414

Alayda, F. I., Sudira, P., & Mutohhari, F. (2022). Competency of Vocational Education Teachers in the Society Era 5.0. *Jurnal Pendidikan Dan Pengajaran*, *55*(3), 587–598. https://doi.org/10.23887/jpp.v55i3.46812

Andres, L. M., Cruz, Jacqueline B. Dela Gonzaga, M. P., Rodriguez, I. S., Sanchez, J. A., & Ortiz, A. F. (2021). Teachers' Level of Adaptability and Performance: Their Response to the Rapidly Transforming Academic World. *International Journal of English Literature and Social Sciences*, *6*(3), 326–331. https://doi.org/10.22161/ijels.63.46

Anwar, A. S., Mardisentosa, B., & Williams, A. (2021). The Role Of Technology In Education. *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, *3*(1), 36–40. https://doi.org/10.34306/itsdi.v3i1.524

Atmazaki, & Indriyani, V. (2019). Digital Literacy Competencies for Teacher Education Students. *1st International Conference on Education, Social Sciences and Humanities (ICESSHum 2019)*, *335*(ICESSHum), 1010–1018. https://doi.org/10.2991/icesshum-19.2019.156

Cáceres, M., Nussbaum, M., & Ortiz, J. (2020). Integrating critical thinking into the classroom: A teacher's perspective. *Thinking Skills and Creativity*, *37*, 100674. https://doi.org/10.1016/j.tsc.2020.100674

Dela Cruz, L. (2019). Communicative Competencies and Pre-Service Teaching Performance: Basis for Communication Skills Enhancement. *JPAIR Multidisciplinary Research*, *38*(1), 125–140. https://doi.org/10.7719/jpair.v38i1.728

Finn, A. N., & Schrodt, P. (2016). Teacher discussion facilitation: a new measure and its associations with students' perceived understanding, interest, and engagement. *Communication Education*, *65*(4), 445–462. https://doi.org/10.1080/03634523.2016.1202997

Gamayao, M. D., & Biñas, E. E. (2021). Teaching Competence and Pedagogical Content Knowledge of Science Teachers in the First District of Capiz, Philippines: Basis for a Sustainable Instructional Program. *European Journal of Humanities and Educational Advancements (EJHEA)*, *2*(1), 26–34.

Ghavifekr, S., & Rosdy, W. A. W. (2015). Teaching and Learning with Technology: Effectiveness of ICT Integration in Schools. *International Journal of Research in Education and Science*

(IJRES), *1*(2), 175–191. https://doi.org/10.21890/ijres.23596

Grimus, M. (2020). *Emerging Technologies: Impacting Learning, Pedagogy and Curriculum Development*. https://doi.org/10.1007/978-981-15-0618-5_8

Huber, C. R., & Kuncel, N. R. (2016). Does College Teach Critical Thinking? A Meta-Analysis. *Review of Educational Research*, *86*(2), 431–468. https://doi.org/10.3102/0034654315605917

Isma, A., Isma, A., Isma, A., & Isma, A. (2023). Peta Permasalahan Pendidikan Abad 21 di Indonesia. *Jurnal Pendidikan Terapan (JUPITER)*, *1*(3), 11–28. https://doi.org/10.61255/jupiter.v1i3.153

Kartikawati, D., & Nurhasanah. (2024). The Role of Teachers and Digital Literacy Competencies. *Asian Journal of Social and Humanities*, *2*(11), 2839–2847. https://doi.org/10.59888/ajosh.v2i11.408

Khan, A., Khan, S., Zia-Ul-Islam, S., & Khan, M. (2017). Communication Skills of a Teacher and Its Role in the Development of the Students' Academic Success. *Journal of Education and Practice*, *8*(1), 18–21. Retrieved from https://eric.ed.gov/?id=EJ1131770

Li, L. (2022). Reskilling and Upskilling the Future-ready Workforce for Industry 4.0 and Beyond. *Information Systems Frontiers*, *26*(5), 1697–1712. https://doi.org/10.1007/s10796-022-10308-y

Mardiana, H. (2020). Lecturers' Adaptability To Technological Change And Its Impact On The Teaching Process. *JPI (Jurnal Pendidikan Indonesia)*, *9*(2), 275–289. https://doi.org/10.23887/jpi-undiksha.v9i2.24595

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis A Methods Sourcebook Edition 3*. Amerika: SAGE Publications Inc.

Montenery, S. M., Walker, M., Sorensen, E., Thompson, R., Kirklin, D., White, R., & Ross, C. (2013). Millennial Generation Student Nurses' Perceptions of the Impact of Multiple Technologies on Learning. *Nursing Education Perspectives*, *34*(6), 405–409. https://doi.org/10.5480/10-451

Morris, R. C., & Parker, L. C. (2014). Examining the connection between classroom technology and student engagement. *Journal of Teaching and Learning with Technology*, *3*(1), 1–15. https://doi.org/10.14434/jotlt.v3n1.4720

Narvaez Rojas, C., Alomia Peñafiel, G. A., Loaiza Buitrago, D. F., & Tavera Romero, C. A. (2021). Society 5.0: A Japanese Concept for a Superintelligent Society. *Sustainability*, *13*(12), 1–16. https://doi.org/10.3390/su13126567

Nur, H. R., Arifin, Z., Soeryanto, Mutohhari, F., & Daryono, R. W. (2023). Society 5.0 competency: Readiness level of teachers and students in automotive engineering vocational school. *AIP Conference Proceedings*, *2671*(March). https://doi.org/10.1063/5.0114613

Oner, D., & Aggul, Y. G. (2021). Critical Thinking for Teachers. *Thinking: Integrated Education and Learning*, *5*, 319–336. https://doi.org/10.1007/978-3-031-15963-3_18

Pereira, A. G., Lima, T. M., & Charrua-Santos, F. (2020). Industry 4.0 and Society 5.0: Opportunities and Threats. *International Journal of Recent Technology and Engineering (IJRTE)*, *8*(5), 3305–3308. https://doi.org/10.35940/ijrte.d8764.018520

Perez, R. B., Valera, J. S., & Limos-Galay, J. A. (2023). Teacher learning skills and adaptability

to change of secondary school teachers in Rizal District. *International Journal of Research Studies in Management*, *11*(2), 17–30. https://doi.org/10.5861/ijrsm.2023.1013

Pratama, R. A., Saputra, M. A., Pratiwi, I. M., & Lestari, N. I. (2022). Student Teachers's Readiness to Face Society 5.0 Challenges: Are They Ready to Teach with Competencies Needed? *Proceedings of the Universitas Lampung International Conference on Social Sciences (ULICoSS 2021)*, *628*(ULICoSS), 470–476. https://doi.org/10.2991/assehr.k.220102.061

Rasyid, F., & Nuriyah, W. A. (2023). Teachers' Competence in Digital Literacy in The Teaching of English at Islamic Senior High Schools. *International Conference on Education*, 413–422.

Rintaningrum, R. (2023). Technology integration in English language teaching and learning: Benefits and challenges. *Cogent Education*, *10*(1), 1–21. https://doi.org/10.1080/2331186X.2022.2164690

Rrustemi, J., & Sylaj, V. (2022). Exploring the Facilitation of the Student Learning Process Through Dominant Teaching Techniques. *International Journal of Learning, Teaching and Educational Research*, *21*(11), 409–425. https://doi.org/10.26803/ijlter.21.11.23

Sawang, S., O'Connor, P., & Ali, M. (2017). IEngage: Using Technology to Enhance Students' Engagement in a Large Classroom. *Journal of Learning Design*, *10*(1), 11–19. https://doi.org/10.5204/jld.v9i3.292

Sulaiman, J., & Ismail, S. N. (2020). Teacher Competence and 21st Century Skills in Transformation Schools 2025 (TS25). *Universal Journal of Educational Research*, *8*(8), 3536–3544. https://doi.org/10.13189/ujer.2020.080829

Suryatni, L. (2021). Teknologi Pendidikan sebagai Pelaksanaan Sistem Informasi dalam Perkuliahan Online di Masa Pandemi Covid-19. *JSI (Jurnal Sistem Informasi) Universitas Suryadarma*, *8*(1), 31–46. https://doi.org/10.35968/jsi.v8i1.607

Tazitabong, A. J. (2021). Influence of Teacher's Competence on Students Learning in Some Selected Secondary Schools in Buea Municipality in the South West Region of Cameroon. *International Journal of Scientific and Management Research*, *4*(8), 93–115. https://doi.org/10.37502/ijsmr.2021.4809

Thant Sin, K. K. (2022). Adaptability and problem solving as survival skills: How did student teachers learn to survive? *GiLE Journal of Skills Development*, *2*(1), 61–70. https://doi.org/10.52398/gjsd.2022.v2.i1.pp61-70

Wardani, I. S., & Fiorintina, E. (2023). Building Critical Thinking Skills of 21st Century Students through Problem Based Learning Model. *Jurnal Pendidikan Indonesia (JPI)*, *12*(3), 461–470. https://doi.org/10.23887/jpiundiksha.v12i3.58789

Wijayati, P. H., Ardiyani, D. K., & Hidayat, E. (2022). Feedback Strategies: An Effort To Enhance the Critical Thinking Skills of Daf-Learners in Indonesia. *International Journal of Education (IJE)*, *15*(2), 79–88. https://doi.org/10.17509/ije.v15i2.29076

Yulianto. (2021). The Needs of Training to Improve Teacher Competence in Preparing Society 5.0. *Technium Social Sciences Journal*, *20*, 275–286. Retrieved from https://techniumscience.com/index.php/socialsciences/article/view/3532