



Economics Teachers' Awareness and Response to Curriculum Changes in Banjarmasin and Barito Kuala

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Abstract

This study investigates the awareness levels of economics teachers in senior high schools regarding curriculum changes in the digital era, with a focus on internet use in Banjarmasin City and Barito Kuala (Batola) Regency, South Kalimantan, Indonesia. Using a survey research design, data were gathered through documentation and questionnaires to measure teachers' self-efficacy and concerns in adopting e-learning practices. The population of this study was all economics teachers in the two regions, while the sample consisted of selected economics teachers who participated in the survey. The study refers to curriculum changes within the framework of the Indonesian national curriculum, particularly the transition toward the Kurikulum 2013 (K13) and digital-based learning adaptation in the current curriculum policy. Results show that teachers' overall internet self-efficacy is moderate, with an average score of 3.73 on a 6-point Likert scale. Teachers rated reading texts from websites highest (4.15), while creating simple webpages with text, images, and links was rated lowest (2.65). About 54.76% of economics teachers actively engaged in e-learning, reaching the management (2.38%), consequence (21.43%), collaboration (9.52%), and refocusing (21.43%) stages of concern. A significant positive correlation exists between internet self-efficacy and levels of concern in implementing e-learning. The findings highlight the importance of boosting teachers' confidence in using digital tools to increase their engagement with e-learning. It is recommended that economics education programs raise awareness of digital-era curriculum changes, provide practical e-learning resources, and offer continuous mentoring to help teachers effectively integrate technology into their teaching practices.

How to Cite

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INTRODUCTION

Changes in the Indonesian educational curriculum are a reflection of continual efforts to adapt the national education system to global dynamics and the development of the times. History records that the Indonesian curriculum has undergone eleven revisions, starting from the 1947 Lesson Plan up to the 2013 Curriculum (K13). These changes include the 1952 Detailed Lesson Plan, 1964 Education Plan, and the 1968, 1975, 1984, and 1994 curricula, followed by the Competency-Based Curriculum (2004) and the School-Based Curriculum (2006). All of these reforms were made to adapt education to the times and the needs of students. These curriculum changes reflect the necessity to accommodate advancements in science and technology, social values, and the nation's developmental needs (Rahmah, 2015). Curriculum development not only represents an adjustment to external challenges but also constitutes a systematic improvement of the direction, content, and process of education to produce graduates who are relevant to contemporary demands. The curriculum must be designed with due regard to principles such as relevance, effectiveness, efficiency, and flexibility, all of which contribute to the quality of national education (Machmud et al., 2021).

In the context of curriculum change, the adoption of Information and Communication Technology (ICT) becomes an inseparable element. The paradigm shift from conventional to digital learning demands that teachers possess adequate digital competence to integrate technology into the teaching and learning process (Garzón-Artacho et al., 2021). In recent years, the use of technology in education has not only functioned as a learning medium but also as a tool to enhance the quality of interaction and collaboration in learning. Research shows that teachers with digital skills can be more adaptive in managing digital classrooms and designing technology-based learning such as Smart Learning and Digital Games-Based Learning (Gresinta & Tukiran, 2024). The-

refore, technological training and ongoing professional development have become increasingly important to support the role of teachers in implementing curriculum changes that respond to the demands of the digital era (Dele-Ajayi et al., 2021).

Curriculum reform has contributed to teachers' commitment to continuous professional development (Tikkanen et al., 2020). Developing a coherent understanding of the curriculum has been shown to shape the extent to which such reforms are perceived as impactful on the development of school practices (Sullanmaa et al., 2019). However, little is known about how teachers' experiences in change management and knowledge sharing within school communities are connected to their perceptions of curriculum coherence and school impact over time during reform processes (Sullanmaa et al., 2024).

Theoretically, curriculum changes in Indonesia are designed to adapt the education system to the development of the times and the demands of the 21st century, which emphasize technology integration and the improvement of teacher competence. However, various theories state that the success of curriculum change largely depends on teachers' readiness to master digital competencies and effectively implement ICT-based learning. On the other hand, there is a gap between these theoretical demands and empirical conditions in the field, where many teachers still lack adequate digital literacy and technological readiness. This indicates a theoretical gap between the ideal concept of curriculum change, which requires the digitalization of learning, and the reality of its implementation in schools.

Worldwide, governments and educational institutions are vigorously promoting technology integration to facilitate remote learning opportunities for students (Amankwah et al., 2024). Digital technologies commonly chosen include Facebook, blogs, Skype, and WhatsApp, which offer unique potential to facilitate and enhance learning (Lathipatud Durriyah & Zuhdi, 2018). Nevertheless, the reality in Indonesia reveals a considerable gap

between educational policy demands and the readiness of teachers, particularly in technology mastery. Indonesia faces limitations in infrastructure, inadequate training and professional development for teachers and lecturers, and a digital divide across regions (Rabani et al., 2023). Several studies note that many teachers in Indonesia still face challenges in creativity, digital literacy, as well as in operating complex hardware and software (Mutohhari et al., 2021; Rasimin et al., 2024). According to Falloon, (2020), digital literacy refers to the ability to understand, use, and utilise digital technologies effectively and efficiently, including skills in searching for, evaluating, creating, and communicating information across various digital platforms, along with ethical considerations and critical thinking about digital content. Factors such as age, training background, and type of school also become important determinants in achieving digital skills (Garzón-Artacho et al., 2021). In some areas, such as coastal or remote regions, infrastructure constraints, lack of training, and absence of systemic support widen the digital divide among teachers (Hamsiah et al., 2024). Moreover, differences in digital literacy by gender and age further complicate this issue (Rachmadtullah et al., 2023; Karabulut Coskun & Bayir, 2025). Technology-based learning has become a requisite for children to be taught from an early age (Pramono et al., 2023).

An et al., (2021) identified four thematic challenges for teachers in the forthcoming period, among them (1) professional development for online learning; (2) access to technology; (3) technology training for teachers and students; and (4) action planning and communication. Hence, educational technology innovation becomes critically important in addressing these challenges. Innovation is not merely concerned with using digital devices but also involves designing learning that can stimulate pupil motivation and create constructive, collaborative learning environments (Thomassen et al., 2019). Innovations in educational technology and teaching methods provide po-

werful tools to enhance digital literacy in early childhood (Kaynar et al., 2020). Technologies such as the metaverse, interactive applications, and game-based approaches are potential instruments in raising digital literacy and teaching effectiveness (Behnamnia et al., 2020; Machmud et al., 2021). Teachers must master technology in order to effectively integrate learning that aligns with the educational goals of the 21st century (Bui, 2022).

Collaboration among stakeholders including teachers, schools, communities, and the technology industry also plays a significant role in creating a highly competitive learning ecosystem (Statti & Torres, 2020). The use of technology in education has proven to generate several benefits, including enhancing learning quality and pupil motivation and improving administrative task efficiency for teachers and lecturers (Rabani et al., 2023).

This study is important to bridge the gap between curriculum policy and teacher readiness in facing educational transformation in the digital era. The ability to face global competition, technological development, and the demands of an information-based labor market requires education systems to adapt to rapid social and economic changes (Gümüş, 2022). In this context, teachers play a strategic role in developing students' critical thinking, decision-making, and problem-solving skills to face the challenges of the 21st century. This study is also aligned with the spirit of education for sustainable development, which emphasizes the importance of continuously transforming the education system (Zhang et al., 2020). Furthermore, understanding teachers' concerns regarding curriculum changes in the digital era may provide valuable input for more targeted and contextual teacher training policies.

Economics teachers were selected as the focus of this study because economics education is closely related to digital technology development, social behavior, financial literacy, entrepreneurship, and the dynamics of the global economy. Economics teachers are not only required to understand theoretical

concepts but also to integrate digital technology and connect learning materials with real economic phenomena such as the digital economy, electronic transactions, digital consumer behavior, inflation, and changes in the labor market caused by technological advancement (Tafner & Casper, 2023). Therefore, economics teachers play an important role in preparing students to understand modern economic realities and make rational economic decisions. However, the limited empirical data regarding economics teachers' perceptions and readiness to adopt digital technology indicates a gap in the academic literature (Dalle et al., 2021; Mainake & McCrocklin, 2021). Previous findings also indicate that economics education is an essential component in preparing students for the modern economy and requires continuous strengthening through professional teacher development programs (Fahrurrozi et al., 2021; Yidana & Arthur, 2023; Perales & Aróstegui, 2024).

The objectives of this research are to explore in depth the responses of economics teachers in the regions of Banjarmasin and Barito Kuala to curriculum reform in the digital era, particularly in these two distinct areas. Specifically, the study aims to: (1) map the level of concern among economics teachers towards curriculum change; (2) identify the extent to which economics teachers utilise the Internet in teaching; and (3) understand the perceptions of economics teachers regarding the implementation of curriculum changes in the digital era.

METHODS

Research Design

This study employed a quantitative research design with a survey approach to capture the current phenomenon of economics teachers' concerns regarding curriculum changes in the digital era. The survey method was

selected due to its appropriateness for investigating attitudes, perceptions, and behaviours within a defined population over a specific period. This design enables the systematic collection of data that can be quantified and generalized to represent the broader target group. The research aimed to explore how economics teachers respond to curriculum reforms in the context of the digital era, particularly in relation to their awareness of and engagement with digital tools in teaching and learning.

Participants

The study involved a total of 76 senior high school economics teachers (from two distinct regions in South Kalimantan, Indonesia). Of these, 53 participants were from schools located in the urban area of Banjarmasin, while the remaining 23 participants represented schools in the more rural region of Barito Kuala. All participants were actively teaching economics at the time of the study and possessed varying levels of teaching experience and exposure to professional development related to digital learning. This demographic diversity provided a valuable basis for examining differences in teacher readiness and responses to curriculum changes in the digital era.

Instruments

Data were collected through a structured questionnaire adapted from the instrument developed by Holt and Hord (2007), which focuses on individuals' concerns and readiness in adopting change, particularly in educational settings. The questionnaire items were tailored to reflect the specific context of curriculum reform and the Indonesian educational environment with 36 items. It included both closed-ended and Likert-scale items to measure the level of concern, frequency of digital technology use, and teachers' self-assessed readiness to integrate digital tools in teaching.

Table 1. Stages of Concern (SoC) Instrument and Sample Questions

Stage	Brief Description	Sample Questions
Stage 0 – Unconcerned	Individuals show little or no concern or involvement with the innovation.	1. “I am not concerned about this innovation at this time.” 2. “Currently, other priorities prevent me from focusing my attention on this innovation.”
Stage 1 – Informational	Individuals begin to show interest and seek basic information about the innovation.	1. “I have a very limited knowledge of the innovation.” 2. “I would like to discuss the possibility of using the innovation.”
Stage 2 – Personal	Individuals become concerned about how the innovation affects their role, responsibilities, and personal abilities.	1. “I am concerned about my ability to manage all the innovation requires.” 2. “I am concerned about time spent working with nonacademic problems related to this innovation.”
Stage 3 – Management	Individuals focus on the processes, organization, and efficient use of the innovation.	1. “I would like to know how to use the innovation.” 2. “I would like to have more information on time and energy commitments required by this innovation.”
Stage 4 – Consequence	Individuals focus on the impact of the innovation on students, outcomes, or the organization.	1. “I am concerned about the impact on students.” 2. “I would like to know how the innovation affects students.”
Stage 5 – Collaboration	Individuals seek to coordinate and cooperate with others regarding the use of the innovation.	1. “I would like to develop working relationships with both our faculty and outside faculty.” 2. “I would like to coordinate my effort with others to maximize the innovation’s effects.”
Stage 6 – Refocusing	Individuals explore ways to improve, modify, or replace the innovation with better alternatives.	1. “I would like to help other faculty in their use of the innovation.” 2. “I would like to know what other faculty are doing in this area.”

Source: Processed Primary Data (2025)

Data Analysis

The data collected from the questionnaires were analysed using descriptive quantitative techniques. Frequencies, percentages, means, and standard deviations were calculated to summarise participants’ responses and to identify general trends. This approach enabled the researchers to illustrate overall patterns of

concern, levels of digital engagement, and perceptions among economics teachers regarding the implementation of curriculum changes in the digital era. The use of descriptive statistics was deemed appropriate for this exploratory phase of the research, as it provided a clear overview of the current conditions and teacher readiness within the studied context.

RESULTS AND DISCUSSION

Demographic Characteristics of Respondents

This study involved 76 high school economics teachers, consisting of 53 teachers from Banjarmasin City and 23 teachers from Barito Kuala Regency. The demographic profile of the respondents is presented in Table 1.

Table 2. presents the demographic profile of the 76 economics teachers who participated in the study. The respondent group was predominantly female, accounting for 73.7%

of the total. In terms of age, the largest group fell within the 45 to 54 years range (43.5%), indicating that most participants are well-established in their careers. A majority of the teachers held a Bachelor's degree in Economics Education (40.3%), suggesting formal training specifically for teaching economics. Regarding teaching experience, the highest percentage was found in the 5 to 10 years range (20.1%), followed by those with 16 to 20 years of experience (13.9%), indicating a diverse range of experience levels within the sample.

Table 2. Demographic Profile of Respondent Economics Teachers (N=76)

Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male	20	26.3
	Female	56	73.7
Age	≤ 35 years	27	18.8
	35 to 44 years	12	8.3
	45 to 54 years	31	43.5
	≥ 55 years	6	4.2
Highest Education	Bachelor's in Economics (Non-Teaching)	8	5.6
	Bachelor's in Economics Education	58	40.3
	Master's (Non-Education)	3	2.1
	Master's in Education	7	4.9
Teaching Experience	≤ 5 years	4	2.8
	5 to 10 years	29	20.1
	11 to 15 years	8	5.6
	16 to 20 years	20	13.9
	21 to 25 years	13	9.0
	26 to 30 years	2	1.4
	≥ 31 years	2	1.4

Source: Processed Primary Data (2025)

Mapping the Level of Concern of Economics Teachers toward Curriculum Changes

This section maps the economics teachers' level of concern (awareness and response) regarding the implementation of the digital-era curriculum, assessed using the Stages of Concern (SoC) model.

Table 3 demonstrates that the majority of economics teachers have moved beyond

initial self-concerns regarding the digital. The highest frequencies are concentrated in the Impact-Concern stages: Consequence (21.05%) and Refocusing (21.05%). Teachers at the Consequence stage are actively concerned with the effect of e-learning on students and are motivated to promote its use. Those at the Refocusing stage show a proactive response by exploring and modifying implementation

strategies for better results. Conversely, the low percentage in the Management (2.63%) and Collaboration (9.52%) stages suggests that while teachers are focused on student impact

and personal optimization, there is a relatively limited focus on the organizational challenges of e-learning and inter-teacher cooperation.

Table 3. Level of Concern of Economics Teachers toward Curriculum Implementation in the Digital Era

Awareness Level	Focus	Freq (%)
I. Self Stage (Self-Concern)		
Awareness	Awareness of the innovation	3.95
Informational	Seeking further information	15.79
Personal	Impact on self, role, and workload	20.94
II. Task Stage (Task-Concern)		
Management	Managing resources and time	2.63
III. Impact Stage (Impact-Concern)		
Consequence	Impact on students, effectiveness	21.05
Collaboration	Collaborating with others	9.52
Refocusing	Exploring modifications for greater benefit	21.05

Source: Processed Primary Data (2025)

Identifying the Extent to Which Economics Teachers Utilize the Internet in Teaching

This section addresses the extent of internet utilization by evaluating the teachers'

self-efficacy in using various internet network functions for e-learning. The overall mean self-efficacy score is 3.73 (on a 1-6 scale), placing it in the Moderate category (2.71–4.40).

Table 4. Economics Teachers' Self-Assessment of Their Ability to Use Internet Networks

Aspect of Internet Usage Ability	Mean Score	Interpretation Category
Reading text from websites	4.15	Moderate
Replying to e-mail messages	4.05	Moderate
Opening a web browser	4.03	Moderate
Printing from websites	4.00	Moderate
Sending an e-mail to someone	3.90	Moderate
Copying part of a text from a site and saving it	3.89	Moderate
Downloading and saving images to disk	3.88	Moderate
Logging in and out of e-mail systems	3.70	Moderate
Searching websites using keywords	3.53	Moderate
Accessing a specific site by typing its URL	3.49	Moderate
Creating a simple web page (text, images, links)	2.65	Low

Source: Processed Primary Data (2025)

Table 4 highlights that teachers' perceived competence is highest for consumptive and communicative basic skills, such as reading texts from websites (4.15) and responding to e-mails (4.05). These skills are foundational

for accessing digital information and engaging in online communication. Conversely, the self-assessed ability to create a simple web page (2.65) is significantly Low, indicating a lack of confidence in higher-order, content-creation

skills required to develop custom digital learning materials. This gap between information consumption and creation is a crucial finding regarding the actual utilization of the internet in teaching.

Understanding Economics Teachers' Perceptions in Implementing the Digital Curriculum

This section analyzes the teachers' self-efficacy and perception regarding their capability to adopt and manage various digital learning models, representing their understanding of the digital curriculum's implementation requirements.

Table 5 shows a robust and High self-

Table 5. Economics Teachers' Self-Assessment of Ability to Use Digital Learning Models

Digital Learning Model / Ability	Mean Score	Interpretation Category
Blended learning (mix of traditional and online)	5.94	High
Managing changes in learning models	5.94	High
Guiding developments in online technology	5.88	High
Open learning	5.06	High
Using Massive Open Online Courses (MOOCs)	4.50	High
Fully online learning	4.10	Moderate

Source: Processed Primary Data (2025)

The findings of this study offer valuable insights into economics teachers' readiness and responses to curriculum changes in the digital era, particularly in the regions of Banjarmasin and Barito Kuala. The data reveal a dual pattern: teachers exhibit both proactive concerns and significant limitations in mastering advanced digital skills.

The mapping of teacher concerns shows a strong concentration at the Impact-Concern stages, particularly at the Consequence (21.05%) and Refocusing (21.05%) levels. This suggests that most teachers are no longer preoccupied with logistical issues of implementation (i.e., Management stage), but are instead focusing on the effectiveness of online learning in improving student outcomes and exploring ways to optimize digital technology integration. This finding contrasts with previous studies such as Dele-Ajayi et al., (2021), which reported teacher concerns clustering

perception of capability across most digital learning model management skills. Teachers are most confident in implementing blended learning (5.94) and in their capacity to manage changes in learning models (5.94). This suggests a strong understanding that the digital in curriculum implementing will likely be implemented in a hybrid format, integrating traditional methods with technology. Although competence in "Fully online learning" is rated as moderate (4.10), the consistently high scores across all other management and guidance items reflect a positive and high level of cognitive readiness and acceptance of the necessary pedagogical changes for curriculum reform and implementation.

around the Awareness, Informational, and Management stages. The shift observed in this study indicates a transition from basic acceptance to deeper pedagogical engagement with technology a key factor for sustainable curriculum transformation (Boz & Cetin-Dindar, 2023; Zhang et al., 2020).

However, the relatively low percentage of teachers at the Collaboration stage (9.52%) suggests that despite high individual motivation, the culture of peer learning and support remains underdeveloped. This lack of collaboration can hinder the systemic integration of complex educational innovations (Salmons, 2023; Statti & Torres, 2020).

In terms of internet use, teachers reported a moderate level of self-efficacy (mean score: 3.73). They demonstrated stronger competence in consumptive digital skills such as reading online texts (mean: 4.15) and basic communication. This indicates a foundational

ability to access and use digital information especially important in areas like Barito Kuala, where infrastructure challenges persist (Hamsiah et al., 2024; Rabani et al., 2023). On the other hand, low self-efficacy was reported in content creation tasks such as building simple websites (mean: 2.65). This aligns with broader findings that many teachers lack higher-order digital skills, such as creativity, design, and critical thinking (Garzón-Artacho et al., 2021; Mutohhari et al., 2021).

This limitation suggests that many teachers remain passive users of technology rather than active creators of digital learning experiences. As Falloon, (2020) argues, this restricts their ability to transform pedagogy and limits the full potential of curriculum reform through technology.

Interestingly, teachers reported a high level of self-efficacy (mean: 5.94) in adopting blended learning models and managing educational change. This perception reflects a pragmatic, outcome-oriented mindset. Teachers seem to view the curriculum not as a mandate for full digital instruction, but as a framework that encourages the strategic integration of technology to complement traditional teaching methods. Blended approaches are particularly appropriate given the current limitations in infrastructure and skills (Bui, 2022; Rasimin et al., 2024).

Moreover, these findings support previous research indicating that digital literacy is influenced by demographic variables such as gender and age (Rachmadtullah et al., 2023; Karabulut Coskun & Bayir, 2025). Therefore, training programs must be inclusive and differentiated, especially for a teaching workforce that is predominantly female and in the mid-to-late stages of their careers (An et al., 2021).

Additional insights also come from Hur, (2025), who found that although teachers initially lacked knowledge and awareness of artificial intelligence (AI), targeted AI literacy education significantly increased their confidence and awareness. However, concerns persisted even after training, such as fears of being replaced by AI and potential negative

effects of generative AI on students' critical thinking development. This emphasizes the need to address not only technical skills but also ethical, pedagogical, and social dimensions of digital competency.

While the current study found that teachers are highly focused on impact concerns, a study by Amankwah et al., (2024) showed that demographic characteristics like age, gender, and teaching experience had no significant relationship with overall levels of concern. This suggests that contextual and institutional factors may play a more influential role than individual characteristics in shaping readiness for change.

In relation to curriculum interaction, as noted by Tran & O'Connor, (2024), curriculum competence involves what teachers pay attention to, how they interpret curriculum content, and why they make instructional decisions including when to introduce specific concepts or skills based on local student needs. This process not only involves applying the curriculum but also actively shapes teachers' knowledge and pedagogical orientation. This aligns with the shift observed by (Nalbantoglu & Bümen, 2024), where teachers moved from curriculum compliance to more systematic and intentional adaptation based on classroom conditions and available resources.

From a broader perspective, Tomczyk, (2024) highlighted the need to reform pre-service teacher training curricula to cover key areas such as: creating and managing digital content, integrating ICT across subjects, developing soft skills, increasing classroom interactivity, distance learning, advanced digital competencies, predictive learning, analyzing ICT's impact on human life, data protection, electronic risks, support for learners with disabilities, and understanding media messages. These findings further confirm that digital curriculum reform must be accompanied by comprehensive and adaptive teacher training systems.

Although economics teachers demonstrate strong awareness and concern centered on improving student outcomes (Refocu-

sing stage), there remains a significant gap in their ability to create meaningful digital content. This misalignment highlights the urgent need for professional development that moves beyond basic ICT training toward ongoing mentorship, with a focus on content creation and innovative pedagogy (Kaynar et al., 2020; (Gresinta & Tukiran, 2024) Addressing infrastructure limitations in rural areas and strengthening collaborative practices will be crucial to turning teacher motivation into effective and equitable implementation of digital-era curriculum reforms (Amankwah et al., 2024).

CONCLUSION

This study concludes that economics teachers in Banjarmasin and Barito Kuala exhibit a proactive and pedagogically mature response to curriculum changes in the digital era. Their primary concerns are concentrated at the Impact-Concern stages, particularly at the Consequence and Refocusing levels. This indicates a strong motivation to improve student outcomes and a desire to optimize teaching practices beyond mere compliance with policy changes. However, this high pedagogical awareness is constrained by moderate levels of digital self-efficacy (mean: 3.73), characterized by a significant disparity between consumptive digital skills, such as reading online texts (mean: 4.15), and limited confidence in higher-order content creation skills, such as creating simple web pages (mean: 2.65). Despite these limitations, the teachers demonstrate high readiness for implementing blended learning approaches and confidence in managing educational change (mean: 5.94), suggesting that they are strategically prepared to integrate digital tools as enhancements to existing classroom practices.

To bridge the gap between high pedagogical intent and limited content creation skills, it is strongly recommended that professional development programs in economic education shift their emphasis from basic digital literacy to intensive and sustained mentoring focused on digital content creation and instructional

design. These programs should prioritize the development of creative competencies aligned with the Refocusing stage of teacher concern, and simultaneously cultivate a culture of collaboration to address the low participation in the Collaboration stage. By fostering peer learning, resource sharing, and community-based support, teachers can collectively innovate and scale effective e-learning practices beyond individual classrooms. Additionally, training initiatives should be sensitive to demographic variations, particularly in relation to gender and age, and must be supported by policies that ensure equitable infrastructure and access especially in rural or under-resourced areas such as Barito Kuala. Addressing these critical aspects is essential for translating teacher motivation into effective, scalable, and sustainable implementation of curriculum reform in the digital era.

In line with these findings, the implications of this study suggest that economics teachers need to develop competencies in digital content creation, school management should strengthen mentoring and collaborative support systems, future research should employ more robust statistical techniques to enhance analytical rigor, and education policy must ensure equitable infrastructure across rural and urban schools to reduce the digital divide. This study has a limitation in that it used a relatively small sample size, which means the findings cannot be fully generalized to a broader population. Therefore, future research is recommended to involve a larger and more diverse sample in order to provide a more comprehensive understanding and to enhance the validity and generalizability of the results in a wider context. In addition, future studies are encouraged to employ quantitative research approaches using more robust statistical techniques, such as regression analysis with SPSS, or structural equation modeling using SmartPLS or similar software, in order to test hypotheses more rigorously and provide stronger empirical validation of the relationships among variables.

REFERENCES

- Amankwah, F., Sarfo, F. K., Aboagye, M. O., Konin, D., & Dzakpasu, R. K. (2024). Concerns of university teachers about the adoption of the Moodle learning management system in a Ghanaian University campus. *Education Inquiry*, 15(3), 312-332. <https://doi.org/10.1080/20004508.2022.2109849>
- An, Y., Kaplan-Rakowski, R., Yang, J., Conan, J., Kinard, W., & Daugherty, L. A. (2021). Examining K-12 teachers' feelings, experiences, and perspectives regarding online teaching during the early stage of the COVID-19 pandemic. *Educational Technology Research and Development*, 69(5), 2589-2613. <https://doi.org/10.1007/s11423-021-10008-5>
- Behnamnia, N., Kamsin, A., Ismail, M. A. B., & Hayati, A. (2020). The effective components of creativity in digital game-based learning among young children: A case study. *Children and Youth Services Review*, 116. <https://doi.org/10.1016/j.childyouth.2020.105227>
- Boz, Y., & Cetin-Dindar, A. (2023). Teaching concerns, self-efficacy beliefs and constructivist learning environment of pre-service science teachers: a modelling study. *European Journal of Teacher Education*, 46(2). <https://doi.org/10.1080/02619768.2021.1919079>
- Bui, T. H. (2022). English teachers' integration of digital technologies in the classroom. In *International Journal of Educational Research Open* (Vol. 3). <https://doi.org/10.1016/j.ijedro.2022.100204>
- Dalle, J., Raisinghani, M. S., Putra, A. P., Suriansyah, A., Hadi, S., & Sahara, B. (2021). A Technology Acceptance Case of Indonesian Senior School Teachers. *International Journal of Online Pedagogy and Course Design*, 11(4). <https://doi.org/10.4018/ijopcd.2021100104>
- Dele-Ajayi, O., Fasae, O. D., & Okoli, A. (2021). Teachers' concerns about integrating information and communication technologies in the classrooms. *PLoS ONE*, 16(5 May). <https://doi.org/10.1371/journal.pone.0249703>
- Fahrurrozi, M., Haritani, H., & ... (2021). *Human Resource Management Education: it Challenges and Alternatives for Teacher Economics Quality Development*. Review of
- Falloon, G. (2020). From digital literacy to digital competence: the teacher digital competency (TDC) framework. *Educational Technology Research and Development*, 68(5). <https://doi.org/10.1007/s11423-020-09767-4>
- Garzón-Artacho, E., Sola-Martínez, T., Romero-Rodríguez, J. M., & Gómez-García, G. (2021). Teachers' perceptions of digital competence at the lifelong learning stage. *Heliyon*, 7(7). <https://doi.org/10.1016/j.heliyon.2021.e07513>
- Gresinta, E., & Tukiran, M. (2024). Literature Review: Teacher Innovativeness in Learning in the Digital Era. *International Journal of Social And Management Studies (IJOSMAS)*, 5(3). <https://doi.org/10.5555/ijosmas.v5i3.401>
- Hamsiah, A., Angreani, A. V., Zubair, A. G. H., Rahmadhanningsih, S., Swandi, A., Rahim, A., & Rizal, A. (2024). Transforming Education in Coastal Indonesia: A Survey of Digital Literacy and Competence Among Educators. *International Journal of Religion*, 5(11). <https://doi.org/10.61707/59p9jn39>
- Hur, J. W. (2025). Fostering AI literacy: overcoming concerns and nurturing confidence among preservice teachers. *Information and Learning Science*, 126(1-2). <https://doi.org/10.1108/ILS-11-2023-0170>
- Karabulut Coskun, B., & Bayir, E. A. (2025). Pre-Service Teachers' Individual Innovativeness and Technology Standards: An Exploratory Study. *Participatory Educational Research*, 12(2). <https://doi.org/10.17275/per.25.26.12.2>
- Kaynar, N., Sadik, O., & Boichuk, E. (2020). Technology in Early Childhood Education: Electronic Books for Improving Students' Literacy Skills. *TechTrends*, 64(6). <https://doi.org/10.1007/s11528-020-00520-5>
- Lathipatud Durriyah, T., & Zuhdi, M. (2018). Digital Literacy With EFL Student Teachers: Exploring Indonesian Student Teachers' Initial Perception About Integrating Digital Technologies Into a Teaching Unit. *International Journal of Education and Literacy*

- Studies*, 6(3). <https://doi.org/10.7575/aiac.ijels.v6n.3p.53>
- Machmud, M. T., Widiyan, A. P., & Ramadhani, N. R. (2021). The development and policies of ICT supporting educational technology in Singapore, Thailand, Indonesia, and Myanmar. *International Journal of Evaluation and Research in Education*, 10(1). <https://doi.org/10.11591/ijere.v10i1.20786>
- Mainake, E., & McCrocklin, S. M. (2021). Indonesian Teachers' Perceived Technology Literacy for Enabling Technology-Enhanced English Instruction. *New Horizons in English Studies*, 2021(6). <https://doi.org/10.17951/nh.2021.6.18-35>
- Mutohhari, F., Sofyan, H., & Nurtanto, M. (2021). *Technological Competencies: A Study on the Acceptance of Digital Technology on Vocational Teachers in Indonesia*. <https://doi.org/10.4108/eai.6-3-2021.2305971>
- Nalbantoglu, Ü. Y., & Bümen, N. T. (2024). Changes in the curriculum adaptation skills of teachers as a result of professional development support: A Turkish case study. *Teaching and Teacher Education*, 137. <https://doi.org/10.1016/j.tate.2023.104386>
- Perales, F. J., & Aróstegui, J. L. (2024). The STEAM approach: Implementation and educational, social and economic consequences. *Arts Education Policy Review*, 125(2). <https://doi.org/10.1080/10632913.2021.1974997>
- Pramono, S. A., Yusuf, R., Saputra, N., Sari, H. N., Aina, M., & Utami, A. R. (2023). The Relationship Between Teacher Self-Efficacy and the Ability to Integrate Technology Literacy in Civics Learning in Banda Aceh. *AL-ISHLAH: Jurnal Pendidikan*, 15(3). <https://doi.org/10.35445/alishlah.v15i3.3579>
- Rabani, S., Khairat, A., Guilin, X., & Jiao, D. (2023). The Role Of Technology In Indonesian Education At Present. *Journal of Computer Science Advancements*, 1(2). <https://doi.org/10.55849/jsca.v1i1.403>
- Rachmadtullah, R., Setiawan, B., Wasesa, A. J. A., & Wicaksono, J. W. (2023). Elementary school teachers' perceptions of the potential of metaverse technology as a transformation of interactive learning media in Indonesia. *International Journal of Innovative Research and Scientific Studies*, 6(1). <https://doi.org/10.53894/ijirss.v6i1.1119>
- Rahmah, A. (2015). Digital Literacy Learning System for Indonesian Citizen. *Procedia Computer Science*, 72. <https://doi.org/10.1016/j.procs.2015.12.109>
- Rasimin, Semma, A. B., Zakiyuddin, Ali, M., & Helmy, M. I. (2024). Multi-dimensional challenges in the Indonesian social science information technology-based learning: A systematic literature review. *Heliyon*, 10(7). <https://doi.org/10.1016/j.heliyon.2024.e28706>
- Salmons, J. (2023). LEARNING TO COLLABORATE, COLLABORATING TO LEARN: Engaging Students in the Classroom and Online. In *Learning to Collaborate, Collaborating to Learn: Engaging Students in the Classroom and Online*. <https://doi.org/10.4324/9781003445708>
- Statti, A., & Torres, K. M. (2020). Digital Literacy: The Need for Technology Integration and Its Impact on Learning and Engagement in Community School Environments. *Peabody Journal of Education*, 95(1). <https://doi.org/10.1080/0161956X.2019.1702426>
- Sullanmaa, J., Pyhäntö, K., Pietarinen, J., & Soini, T. (2019). Curriculum coherence as perceived by district-level stakeholders in large-scale national curriculum reform in Finland. *Curriculum Journal*, 30(3). <https://doi.org/10.1080/09585176.2019.1607512>
- Sullanmaa, J., Pyhäntö, K., Pietarinen, J., & Soini, T. (2024). Relationships between change management, knowledge sharing, curriculum coherence and school impact in national curriculum reform: a longitudinal approach. *International Journal of Leadership in Education*, 27(6). <https://doi.org/10.1080/13603124.2021.1972165>
- Tafner, G., & Casper, M. (2023). Understanding economics does not equal understanding the economy: designing teacher education from a socio-economic perspective. *International Journal of Pluralism and Economics Education*, 13(3). <https://doi.org/10.1504/IJPEE.2022.129245>

- Thomassen, M. L., Løje, H., & Basaiawmoit, R. V. (2019). Creativity, invention, innovation and entrepreneurship, connected in theory separated in practice - Can we strengthen engineering education by understanding the overlaps and the differences between the four concepts in an educational context. *Proceedings of the 46th SEFI Annual Conference 2018: Creativity, Innovation and Entrepreneurship for Engineering Education Excellence*.
- Tikkanen, L., Pyhältö, K., Pietarinen, J., & Soini, T. (2020). Lessons learnt from a large-scale curriculum reform: The strategies to enhance development work and reduce reform-related stress. *Journal of Educational Change*, 21(4). <https://doi.org/10.1007/s10833-019-09363-1>
- Tomczyk, L. (2024). Digital competence among pre-service teachers: A global perspective on curriculum change as viewed by experts from 33 countries. *Evaluation and Program Planning*, 105. <https://doi.org/10.1016/j.evalprogplan.2024.102449>
- Tran, D., & O'Connor, B. R. (2024). Teacher curriculum competence: how teachers act in curriculum making. *Journal of Curriculum Studies*, 56(1). <https://doi.org/10.1080/00220272.2023.2271541>
- Yidana, M. B., & Arthur, F. (2023). Exploring economics teachers' efficacy beliefs in the teaching of economics. *Cogent Education*, 10(1). <https://doi.org/10.1080/2331186X.2023.2222652>
- Zhang, T., Shaikh, Z. A., Yumashev, A. V., & Chlad, M. (2020). Applied model of E-learning in the framework of education for sustainable development. *Sustainability (Switzerland)*, 12(16). <https://doi.org/10.3390/SU12166420>