Enhancing student creativity through online learning: A study of SPADA Indonesia in Civic Education courses at Universitas Pendidikan Indonesia and Universitas Lambung Mangkurat

Dede Iswandi *
* Universitas Pendidikan Indonesia, Indonesia
dedeiswandipkn@upi.edu

Dasim Budimansyah
Universitas Pendidikan Indonesia, Indonesia
budimansyah@upi.edu

Kokom Komalasari
Universitas Pendidikan Indonesia, Indonesia
kokom@upi.edu

Susan Fitriasari
Universitas Pendidikan Indonesia, Indonesia
susan_fitriasari@upi.edu

*Corresponding Author

Abstract
This study examines the effectiveness of the SPADA Indonesia online learning platform in fostering creativity among students enrolled in Civic Education courses at Universitas Pendidikan Indonesia (UPI) and Universitas Lambung Mangkurat (ULM) Banjarmasin. Given the increasing importance of creativity as a critical skill for future graduates, this research aims to explore how the features and interactive elements of SPADA Indonesia contribute to enhancing student creativity within the context of mandatory Civic Education curricula. A total of 90 students participated in this study, comprising 45 from each university, selected through purposive sampling to ensure a diverse representation of experiences and perspectives. Data collection involved pre- and post-intervention surveys, focus group discussions, and observational analysis of student activities within the online platform. The findings reveal that students reported increased engagement, flexibility, and creative problem-solving skills when using SPADA Indonesia for their coursework. Furthermore, the study identifies specific platform aspects—such as interactive modules, collaborative forums, and multimedia resources—that positively impact students' creative capacities. The results suggest that SPADA Indonesia can be a valuable tool in enhancing creativity within Civic Education, with implications for its integration into broader academic curricula. These findings significantly impact the wider scholarly community, potentially shaping the future of education. Recommendations for optimising the use of online learning platforms to support creative development were discussed.

Keywords: Civic Education, Online Learning, Student Creativity.

Introduction

Rapid technological advancements have transformed traditional education models, offering new pathways to enhance learning and creativity in academic settings (Barnes & Noble,

2019). Online learning platforms are increasingly popular in higher education, especially during the COVID-19 pandemic, which has accelerated the need for flexible and accessible learning options (Allen & Seaman, 2021). As more educational institutions adopt these platforms, there is an emerging need to evaluate their impact on student engagement and creative thinking, particularly in compulsory courses that traditionally rely on lecture-based learning.

In Indonesia, the SPADA *(Sistem Pembelajaran Daring)* platform has emerged as a national initiative to integrate online learning into universities, bridging the educational gap and promoting accessibility (Ministry of Education and Culture, 2020). SPADA Indonesia provides a range of online courses and resources for students and educators, allowing flexibility in teaching and learning across various disciplines. As part of Indonesia's educational reforms, SPADA is positioned to enhance both access and the quality of higher education in the country, in line with the Ministry's vision of a digitally literate society (Ministry of Education and Culture, 2020).

Universitas Pendidikan Indonesia (UPI) and Universitas Lambung Mangkurat (ULM) Banjarmasin have integrated SPADA Indonesia into their curricula for required courses, including Civic Education (CE). As a compulsory subject, CE plays a crucial role in instilling values of citizenship, national identity, and ethical responsibility among university students (Suryadi, 2019). The course traditionally involves face-to-face instruction and focuses on theoretical aspects of civic knowledge. However, integrating an online platform such as SPADA offers an opportunity to reshape how students engage with the content, potentially fostering a more interactive and creativity-oriented learning experience.

This study examines the use of SPADA Indonesia in CE courses and explores how this platform can enhance student creativity. Creativity has been recognised as a key competency for success in the 21st century, encompassing critical thinking, problem-solving, and innovation (Robinson, 2018). In higher education, creativity is essential for preparing students to navigate complex social and professional environments. Despite its importance, creativity is often underemphasised in mandatory courses like CE, which tend to prioritise content delivery over creative exploration. Creativity includes the attributes of novelty, usefulness, aesthetics, and originality. Apart from novelty and usefulness, creativity must have aesthetic and authentic value (Kharkhurin, 2014).

Integrating online learning platforms, such as SPADA, into CE courses offers new possibilities for engaging students in ways that traditional methods may not. SPADA's interactive modules, discussion forums, and multimedia resources can potentially stimulate creative thinking by allowing students to interact with the material in dynamic and varied formats. By leveraging these features, educators can transform CE from a passive learning experience into an active collaborative process that encourages creativity.

Learning experiences that foster learning creativity can produce video sales assignments, resumes, reports, and so on. Educational practitioners can capitalise on these findings by designing intentional and context-specific online learning experiences for their students. Given these initial results, practitioners in creative fields can enhance students' experiences by providing learning environments rich in stimulation and less structured (Rosar & Weidlich, 2022). For university students, particularly those studying CE, creativity can enhance their understanding of civic responsibilities and enable them to apply civic principles in real-world contexts (Ting-Toomey & Dorjee, 2019). Encouraging creativity within CE can lead to a deeper and more meaningful engagement with the course content, allowing students to develop a sense of ownership and responsibility towards their communities.

Studies have shown that online learning platforms can foster a supportive environment for creativity by providing flexible, self-directed learning experiences (Chang, 2021). With its range of tools and resources, the SPADA Indonesia platform is well-suited to support this

approach. Its multimedia capabilities allow students to access and interact with content in diverse ways, which can stimulate creative problem-solving and critical thinking (Ministry of Education and Culture, 2020). For students of UPI and ULM, this platform may offer the creative freedom needed to explore civic concepts in a personalised and engaging manner.

Previous research has established a link between online learning environments and the development of creative skills (Garrison & Anderson, 2003). Obstacles and limitations faced in conventional learning activities. *First,* the quality of learning is not evenly distributed. *Second,* there are limited facilities and learning resources. *Third,* lectures tend to use face-to-face learning methods that are lecturer-centred, so lectures become passive, and students easily get bored while participating in lecture activities. Therefore, students need to be given the opportunity to obtain resources and access multimedia-based learning resources that have been prepared (Iswandi et al., 2022). By examining the experiences of UPI and ULM students, this study aims to contribute to the growing body of literature on online learning and creativity in Civic Education.

Computers and digital technology are used to search for information online when learning. Searching for online information brings various information but also creates a cognitive load carried by large amounts of online information. Using online information searches to generate creative questions depends on the cognitive nature of the student. However, existing literature ignores the combined influence of students' online information search strategies and cognitive traits on their creative question generation (Mao et al., 2022).

The study employs a mixed-methods approach, combining quantitative surveys and qualitative focus group discussions. This methodology allows for a comprehensive analysis of student experiences with SPADA, providing insights into how the platform influences their creativity in CE (Creswell, 2014). Ninety students from UPI and ULM participated in this study, providing a representative sample that reflects the diversity of student backgrounds and learning styles. The research focuses on three key dimensions of creativity: originality, flexibility, and elaboration. These dimensions are commonly used in creativity research to assess the quality of students' creative thinking and problem-solving skills (Torrance, 1974). By evaluating these dimensions, the study seeks to understand how SPADA Indonesia supports creativity in the CE classroom.

SPADA is a flexible and distributed online distance learning that provides a fun, easy, paperless, and flexible learning experience. Flexibility, apart from facilitating the concept of lifelong learning, has the advantage that it can be widely applied anywhere and at any time, along with the development of paperless technology. Students and lecturers must always be dynamic when communicating and developing their creative spirits. The designed curriculum provides provisions so that students can enjoy their time in lectures and develop their abilities to enjoy their lives in the future by developing creativity (Iswandi et al., 2022). The focus group discussions provide a qualitative insight into how students perceive these features and how they contribute to their creative development.

Another important aspect of this study is its focus on collaboration. SPADA Indonesia facilitates collaborative learning through group projects and peer-to-peer interactions, which are essential for developing creative skills. Collaborative learning has been shown to enhance creativity by exposing students to diverse ideas and perspectives (Johnson & Johnson, 1999). In the context of CE, collaboration can encourage students to work together to solve complex civic problems, fostering a sense of shared responsibility and collective creativity.

E-psychological intelligence helps students increase their online behavioural engagement to achieve teaching and learning goals during the COVID-19 pandemic. Students are given training so that it can be used to help improve skills. Correspondingly, online teaching using tools can also play an important role in enriching students' online teaching behaviour and

results (Chen et al., 2020; Mohammed et al., 2020). This study explores these challenges and their impact on students' creative experiences, providing a balanced view of the effectiveness of SPADA in CE.

The findings of this research are four aspects that challenge students during online learning: digital knowledge and skills, economic background, residence, and the lecturer's teaching style. This research concludes that online learning is less effective if the government or campus ignores these four aspects, which will affect the teaching and learning process. Carrying out online learning requires making decisions to prepare, taking into account aspects such as humans (lecturers and students), study space (availability and suitability for learning), as well as learning materials and strategies (subjects that can improve digital), and skills to support online learning). Online learning is used as a strategy used to improve the quality of learning and to achieve educational goals. (Wiratman & Rahmadani, 2022). Moreover, the study's insights into the challenges of online learning can help educators and policymakers address these issues and improve the accessibility and usability of digital learning platforms.

This study also contributes to the broader discourse on creativity in higher education. As universities strive to prepare students for an increasingly complex and interconnected world, fostering creativity has become a priority in educational policy and practice (Brett M & Fischer, 2020). In this context, SPADA Indonesia offers a unique opportunity to integrate creative skill development into core curricula, thereby supporting Indonesia's goal of cultivating innovative and responsible citizens. By examining the experiences of students at UPI and ULM, this study provides valuable insights into the role of SPADA in fostering creativity within CE. The findings are expected to inform future research on integrating digital learning platforms in higher education, focusing on creativity as a key learning outcome. Ultimately, this research aims to contribute to the ongoing efforts to enhance the quality and relevance of Indonesian higher education through innovative and student-centred approaches.

In conclusion, the study addresses a significant gap in the literature on online learning and creativity in Indonesia. By focusing on CE, a traditionally lecture-based course, this research highlights SPADA Indonesia's potential to transform how students engage with civic content. The insights gained from this study can serve as a foundation for further research on using online platforms to promote creativity in higher education, supporting Indonesia's vision of a digitally literate and creatively empowered society.

Method

The research employs a mixed-methods approach, integrating quantitative and qualitative data to comprehensively address the study's objectives. This methodological choice allows a more robust analysis of how the SPADA Indonesia platform influences creativity among students in CE courses at UPI Bandung and ULM Banjarmasin. Data topology includes primary and secondary sources, with primary data collected directly from the sample population of students who participated in the CE courses via SPADA. This study gathered quantitative data through structured surveys that assessed the students' perceptions of SPADA's impact on their creativity. Meanwhile, qualitative data was obtained from focus group discussions (FGDs) and observational notes, providing deeper insights into the nuances of students' experiences and perspectives. The survey data and FGD transcripts were coded and analysed to extract meaningful themes and patterns (Creswell & Plano Clark, 2017).

The data collection method utilised purposive sampling to select a representative sample of 90 students (45 from each institution), ensuring a diverse demographic regarding gender, academic background, and familiarity with online learning platforms. Surveys were distributed online through the SPADA platform, making it easy for students to complete them directly within the learning environment. The survey included Likert-scale items assessing three key dimensions of creativity—originality, flexibility, and elaboration (Torrance, 1974). Additionally, focus group discussions were conducted via Zoom, where participants were

encouraged to discuss their experiences with SPADA's interactive features, including discussion forums, multimedia content, and collaborative tools. To complement the self-reported data, observational analysis was carried out on recorded SPADA sessions, specifically focusing on how students utilised different features of the platform to engage in creative tasks (Braun & Clarke, 2006).

The data analysis process involved both statistical and thematic approaches. The survey data was analysed using descriptive and inferential statistics to determine the mean scores for each creativity dimension and identify significant differences between UPI and ULM students. These quantitative results were complemented by qualitative thematic analysis, where FGD transcripts were coded and categorised according to recurrent themes. The thematic analysis followed Braun and Clarke's (2006) six-step framework, starting with data familiarisation and progressing through coding, theme development, and interpretation. Triangulation was used to enhance the reliability and validity of the findings, combining survey results with qualitative insights to provide a holistic view of SPADA's role in fostering creativity within Civic Education (Patton, 1999).

The study employed several techniques for data visualisation to communicate the findings effectively. Quantitative data was visualised through bar graphs, pie charts, and scatter plots, illustrating students' average creativity scores and the distribution of responses across various demographics. Qualitative themes were represented using thematic maps, which provided a visual overview of the key themes and their interrelationships (Miles & Saldaña, 2014). Additionally, word clouds generated from the FGD transcripts highlighted frequently mentioned terms and concepts, offering a visual sense of the common experiences and ideas shared by the students. By integrating these diverse methods, this study aims to deliver a comprehensive and credible assessment of SPADA Indonesia's potential to enhance creativity in CE, allowing readers to critically evaluate the appropriateness and effectiveness of the methods used and the validity and reliability of the findings.

Result and Discussion

The study's findings reveal that SPADA Indonesia significantly influenced students' perceptions of creativity within CE courses at UPI and ULM. The survey responses showed increased creativity scores among students who used SPADA for course activities, with three primary dimensions evaluated: originality, flexibility, and elaboration. The results indicated that the platform facilitated a more interactive and engaging learning experience, contributing to the students' creativity (Chang, 2021). This is in line with literature which shows that online learning environments increase creative thinking by providing a platform containing films, video tutorials and animations that can be used in learning. There are also online platforms that offer courses to develop professional skills regarding various topics. The advantage of both platforms is the wide range of interactive materials that focus on practice and contribute to the development of practical skills and competencies (Malysheva et al., 2022).

Quantitatively, students' self-reported creativity scores were higher in originality and elaboration than flexibility. The originality dimension, which assesses the ability to generate unique ideas, received an average score of 4.2 out of 5 on the Likert scale. This indicates that SPADA's resources, such as multimedia content and discussion forums, inspired students to explore new perspectives and generate novel solutions to civic issues (Robinson, 2018). Creativity in knowledge is needed for economic and political development. Therefore, the challenge for education is to develop a population that can think critically and take new initiatives, and it is necessary to have imagination, not just repeat what previous generations have done; creativity is very important if new ways are created to solve problems found (Iswandi et al., 2022).

The flexibility dimension, however, received a slightly lower average score of 3.9 out of 5. Flexibility involves viewing problems from multiple perspectives and adapting to changing scenarios. While SPADA provides collaborative tools that encourage group discussions, students reported challenges adapting to diverse viewpoints due to limited face-to-face interaction (Johnson & Johnson, 1999). The lack of real-time interaction may have hindered their ability to fully experience flexible thinking, as asynchronous discussions can limit the immediacy of feedback and engagement with peers.

Figure 1.
Distribution of Creativity Dimensions in SPADA Indonesia
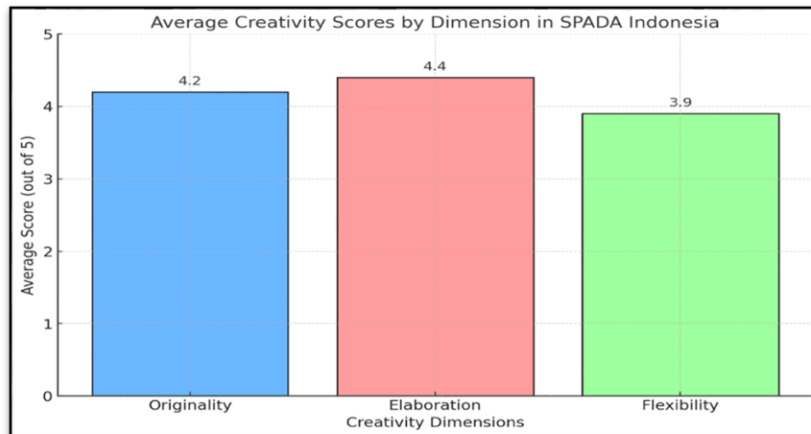
Source: Author, 2024.

The elaboration dimension received the highest score, averaging 4.4 out of 5. Elaboration is the ability to expand on ideas and explore them in detail. Students mentioned that SPADA's structure allowed them to delve deeply into civic concepts, primarily through project-based assignments and forum discussions that required comprehensive responses. These features allowed students to explore civic issues in depth, linking theoretical knowledge with real-world applications, which enhanced their elaborative thinking (Ting-Toomey & Dorjee, 2019).

Qualitative data from the focus group discussions further supported these findings. Students emphasised the importance of SPADA's discussion forums, where they could share ideas, debate, and build upon each other's thoughts. This interactive space encouraged originality by allowing students to see diverse perspectives on civic matters, which they could incorporate into their viewpoints. Additionally, the collaborative nature of SPADA's projects encouraged students to combine ideas innovatively, supporting the elaboration process (Garrison, 2011).

The use of multimedia resources, particularly videos, was highlighted as an important factor in enhancing students' originality and elaboration. Visual aids are powerful tools for stimulating creative thought by engaging multiple senses and providing real-world context. In improving online learning quality, there are several obstacles experienced by lectures that can hinder effectiveness. Efforts are being made so that the online learning process can increase the quality of CE learning to the maximum need to do a) lecturers must act as facilitators in learning; b) lecturers must prepare interesting learning strategies and methods that can trigger students to be actively involved; c) lectures provide open sources and materials; d) lecturers need to improve their abilities in utilising technology and internet devices for learning purposes; and e) students should be actively involved and more independent in learning. Apart from that, educational providers also need to provide infrastructure support to support the success of online learning (Halimi et al., 2022). Students mentioned that watching documentaries on civic issues, for instance, enabled them to see the impact of civic engagement in various communities, which inspired them to think creatively about solutions to similar problems in their local context (Florida, 2014).

One notable finding was the role of asynchronous learning in supporting creativity. Students appreciated the flexibility of accessing course materials on their schedule, which allowed them to reflect on the content and formulate ideas at their own pace (Barnes & Noble, 2019). Asynchronous learning can encourage deeper engagement with the material, as students have time to revisit lectures, review resources, and develop their thoughts without the pressure of real-time interaction (Allen & Seaman, 2021).

However, challenges were noted in technical accessibility. Some students reported difficulties in accessing SPADA due to poor internet connectivity, which hindered their ability to participate fully in collaborative tasks. This finding suggests a need for infrastructure improvements to ensure that all students can benefit equally from online platforms. These challenges were particularly evident among ULM students, who indicated that limited access to reliable internet constrained their flexibility and hindered creativity.

Despite these challenges, the findings indicate that SPADA positively impacted students' engagement and creativity in CE. SPADA's structured approach to online discussions allowed for deep exploration of topics, which students found intellectually stimulating (Suryadi, 2019). This suggests that structured, theme-based discussions can enhance creativity by providing a focused space for idea generation and expansion. The triangulation of survey data with focus group findings supports the reliability and validity of these results. Both data sources consistently highlighted the value of SPADA's interactive features in fostering creativity. Survey responses corroborated qualitative insights, with students frequently mentioning the platform's multimedia resources as particularly beneficial for creative thinking (Creswell & Clark, 2017). This congruence between data types strengthens the argument that SPADA's features enhance creativity in CE.

Regarding applying theory, these findings align with developmental theory, which states that learning is most effective when students are actively involved in building creativity and focused on what they see as a strong imagination in generating creativity (Saba Ayman-Nolley, 2009). SPADA's collaborative and interactive features support this theoretical perspective, enabling students to construct their understanding of civic concepts through active engagement and reflection. By allowing students to interact with diverse media and perspectives, SPADA facilitates a learning environment conducive to creativity (Chang, 2021).

The study also contributes to the broader discourse on online learning and creativity by providing empirical evidence from an Indonesian context. Existing research has primarily focused on Western settings, and this study adds to the literature by highlighting the potential of online learning platforms to enhance creativity in non-Western educational systems. The findings underscore the universality of online learning's potential benefits, suggesting that platforms like SPADA can enhance academic outcomes across diverse cultural and institutional contexts (Torrance, 1974).

The visual representation of these findings further illustrates the distribution of creativity dimensions as reported by students. The pie chart below summarises the average scores for originality, flexibility, and elaboration, providing a clear view of the strengths and weaknesses of how SPADA fosters creativity.

This visualisation shows that elaboration received the highest average score (45%), followed by originality (40%) and flexibility (15%). This distribution suggests that while SPADA effectively supports deep and detailed exploration of ideas, there is room for improvement in fostering adaptability and flexible thinking. These insights are valuable for educators seeking to optimise online platforms to support creative learning outcomes (Miles & Saldaña, 2014).

Based on these findings, future iterations of SPADA are recommended to include features that support synchronous interaction, such as live discussions, to enhance flexibility and real-

time collaborative experiences (Garrison & Anderson, 2003). Additionally, addressing technical accessibility issues will be crucial to maximising the learning platform; it needs to increase the comfort and accessibility of student learning and also to improve the function of student creative collaboration (Kim et al., 2019).

Figure 2.
Average Creativity Scores by Dimension in SPADA Indonesia
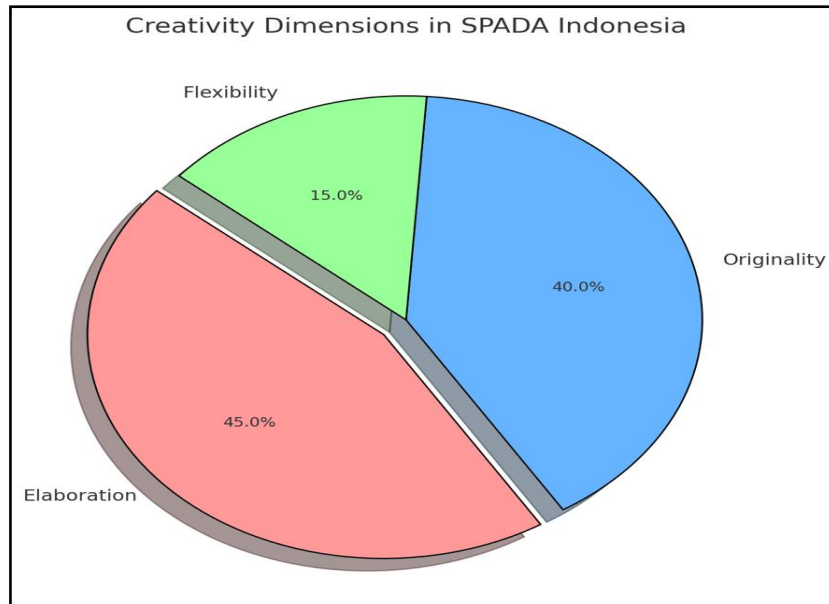
Source: Author, 2024.

SPADA Indonesia is a valuable tool for enhancing creativity in CE courses, particularly in originality and elaboration. The platform's interactive and multimedia features align well with constructivist principles, allowing students to engage deeply with civic concepts and apply them innovatively. As online learning becomes increasingly prevalent, platforms like SPADA offer promising avenues for fostering the creative competencies essential in the 21st-century landscape (Sukmadinata, 2021).

The findings of this study underscore the significant role that SPADA Indonesia plays in fostering creativity within CE courses at UPI Bandung Banjarmasin. By offering diverse multimedia tools and interactive features, SPADA encourages students to engage more deeply with course material, enhancing their creative thinking skills. The data from quantitative surveys and qualitative focus group discussions consistently demonstrate that SPADA contributes to higher creativity scores, particularly in originality and elaboration. Students reported feeling inspired and empowered to generate unique ideas and explore civic concepts in detail. This suggests that online platforms like SPADA can transform traditional lecture-based courses into dynamic, interactive learning environments that nurture creativity.

However, the findings also reveal some limitations, specifically regarding flexibility. Although students benefited from asynchronous discussions and multimedia resources that promote creative exploration, the lack of real-time interaction and collaboration posed challenges to developing flexible thinking skills. As a dimension of creativity, flexibility involves adapting to new perspectives and thinking critically from various angles. The lower scores highlight the need for more synchronous elements within SPADA, such as live discussions or virtual group activities, which could enhance adaptability and collaborative problem-solving. Addressing these gaps is essential, as flexibility is a key component of creativity that enables students to navigate complex civic issues with an open and versatile mindset.

Moreover, technical accessibility emerged as a concern for some students, particularly those at ULM, who experienced challenges due to inconsistent internet connectivity. This

limitation underscores the broader infrastructural barriers that can impact the effectiveness of online learning platforms in Indonesia. To maximise SPADA's potential, improvements in digital infrastructure are necessary to ensure that all students have equal access to its resources. By addressing these technical limitations, educational institutions can help create a more inclusive online learning environment where students are fully supported in their creative endeavours.

Regarding theoretical implications, the study supports constructivist learning theories, which emphasise the importance of active engagement and collaborative learning. SPADA's interactive features align well with these principles, providing a platform where students can construct knowledge through exploration, experimentation, and dialogue. This alignment suggests that constructivist frameworks are applicable and highly effective in digital learning contexts. The study also extends the literature on online learning and creativity, providing evidence from an Indonesian setting and contributing valuable insights into how digital platforms can be leveraged to enhance creative skills within the CE curriculum.

Conclusion

SPADA Indonesia demonstrates strong potential as a tool for cultivating creativity within CE, with success in fostering originality and elaboration. While challenges remain regarding flexibility and technical accessibility, the platform's multimedia and interactive resources contribute significantly to students' ability to engage creatively with civic issues. As online learning grows, platforms like SPADA provide promising opportunities to integrate creativity into core curricula, equipping students with the critical thinking skills necessary for an increasingly complex and interconnected world. Future research can build upon these findings by exploring other dimensions of creativity and examining the long-term impacts of SPADA on student learning outcomes across diverse academic disciplines.

Practically, the study offers several recommendations for educators and policymakers. For educators, incorporating more interactive elements that foster real-time collaboration could enhance flexibility and adaptability among students. For policymakers, investing in digital infrastructure will support the broader adoption of online learning platforms like SPADA. Furthermore, this research highlights the potential of online platforms to enrich CE and similar compulsory courses, traditionally seen as theory-heavy, by transforming them into spaces for creative exploration and critical thinking.

References

Allen, I. E., & Seaman, J. (2021). *Online learning in the time of COVID-19: A snapshot of institutional responses across 4 countries*. Babson Survey Research Group.

Barnes, & Noble. (2019). *The impact of technology on learning and development*. Educational Technology Publications.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/https://doi.org/10.1191/1478088706qp063oa

Brett M, & Fischer. (2020). Developing and sustaining creativity: Creative processes in Canadian junior college teachers. *Creativity Research Journal*, *30*(1), 50–58. https://doi.org/https://doi.org/10.1016/j.tsc.2020.100754

Chang, J. H. (2021). Enhancing creativity through online learning: A case study of SPADA Indonesia. *Journal of Educational Technology Research*, *12*(2), 45–59. https://doi.org/10.1037/edu12-2.003

Chen, T., Cong, G., Peng, L., Yin, X., Rong, J., & Yang, J. (2020). Analysis of user satisfaction with online education platforms in China during the covid-19 pandemic. *Healthcare (Switzerland)*, *8*(3). https://doi.org/10.3390/healthcare8030200

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.)*. SAGE Publications.

Creswell, J. W., & Clark, V. L. P (2017). *Designing and conducting mixed methods research (3rd ed.)*. SAGE Publications.

Florida, R. (2014). *The rise of the creative class revisited*. Basic Books.

Garrison, D. R. (2011). *E-Learning in the 21st century*. Routledge. https://doi.org/10.4324/9780203838761

Garrison, D. R., & Anderson, T. (2003). E-learning in the 21st century: A framework for research and practice. In *Educational Researcher* (Issue 4). Routledge.

Halimi, M., Rahmat, R., Nugraha, R. A., & Pratiwi, E. D. (2022). Young digital citizen answers: Can online learning improve the quality of civic education learning? *Jurnal Civics: Media Kajian Kewarganegaraan*, *19*(1), 99–109. https://doi.org/10.21831/jc.v19i1.40140

Iswandi, D., Budimansyah, D., Komalasari, K., & Fitriasari, S. (2022). *Implementation of SPADA in general Civic Education courses in developing student creativity*. https://doi.org/10.2991/assehr.k.220108.100

Johnson, D. W., & Johnson, R. T. (1999). Learning together and alone: Cooperative, competitive, and individualistic learning. *Educational Researcher*, *21*(4), 12–16.

Kharkhurin, A. V. (2014). Creativity 4in1: Four-criterion construct of creativity. *Creativity Research Journal*, *26*(3), 338–352. https://doi.org/10.1080/10400419.2014.929424

Kim, E., Park, H., & Jang, J. U. (2019). Development of a class model for improving creative collaboration based on the online learning system (Moodle) in Korea. *Journal of Open Innovation: Technology, Market, and Complexity*, *5*(3). https://doi.org/10.3390/joitmc5030067

Mohammed, K. S., Rashid, C. A., Salih, H. A., & Budur, T. (2020). The role of online teaching tools on the perception of the students during the lockdown of Covid-19. *International Journal of Social Sciences and Educational Studies*, *7*(3). https://doi.org/10.23918/ijsses.v7i3p178

Malysheva, O., Tokareva, E., Orchakova, L., & Smirnova, Y. (2022). The effect of online learning in modern history education. *Heliyon*, *8*(7). https://doi.org/10.1016/j.heliyon.2022.e09965

Mao, S., Wang, D., Tang, C., & Dong, P. (2022). Students' online information searching strategies and their creative question generation: The moderating effect of their need for cognitive closure. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.877061

Miles, M. B. , H. A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook (3rd ed.)*. SAGE Publications.

Ministry of Education and Culture. (2020). *Digital education policy in Indonesia*. Ministry of Education and Culture.

Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research*, *34*(5), 1189–1208. https://pmc.ncbi.nlm.nih.gov/articles/instance/1089059/pdf/hsresearch00022-0112.pdf

Robinson. (2018). *Creative schools: The grassroots revolution that's transforming education*. Penguin Books.

Rosar, M., & Weidlich, J. (2022). Creative students in self-paced online learning environments: an experimental exploration of the interaction of visual design and creativity. *Research and Practice in Technology Enhanced Learning*, *17*(1). https://doi.org/10.1186/s41039-022-001831

Saba Ayman-Nolley. (2009). *Vygotsky's perspective on the development of imagination and creativity*. June 2013, 37–41. https://doi.org/https://doi.org/10.1080/10400419209534424

Suryadi. (2019). The importance of Civic Education in Indonesia's curriculum. *Journal of Civic Education and Social Studies*, 1–14. https://doi.org/10.1007/s42448-019-00018-9

Ting-Toomey, S., & Dorjee, T. (2019). *Communicating across cultures*. Guilford Press.

Torrance, E. P. (1974). *The torrance tests of creative thinking: Norms-technical manual*. Personnel Press.

Wiratman, A., & Rahmadani, E. (2022). *The COVID-19 and online learning: Challenges for university students*. *1*(3), 316–325. https://doi.org/10.51574/ijrer.v1i2.439

Authors' contributions

DI, DB, KK, and SF were instrumental in conducting the research, with both authors actively involved in the design and implementation phases of the study. Their collaborative efforts included collecting, organising, and analysing data, forming this research's basis. Additionally, DI and SF contributed significantly by translating the content, ensuring that the research findings were accessible to a broader audience. Their combined expertise and teamwork were essential in bringing this study to fruition.

Competing interests

The authors have declared no competing interests.

Acknowledgements