Young digital citizen answers: Can online learning improve the quality of civic education learning?

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ABSTRACT
Technological developments have an impact on various fields, in the field of education, the development of 21st-century learning requires lecturers and learners to be creative and innovative in utilizing digital media effectively, by using the right methods, the learning process in the digital era will be carried out optimally, to improve the quality of learning by learning objectives. This research uses a mixed design approach with the survey method. The participant and sample of this study were lecturers and students of the Pancasila & Civic Education Study Program at the UPI using online learning in an online learning system (SPADA UPI) and Integrated Online Learning System (SPOT UPI) at Universitas Pendidikan Indonesia. The results show that online learning can improve the quality of Civics learning if technology can be integrated into the Civics learning curriculum, lecturers who can use digital media and digital literacy, and teaching materials that can develop 21st century civic competencies to prepare young citizens in facing the era of disruption. Students as young citizens can be directed to master digital citizenship skills so that they can become citizens who have democratic, wise and responsible competencies in the digital era.

Introduction
The development of 21st-century learning requires lecturers and students to be creative and innovative in utilizing digital media effectively. Online learning has not been fully running well, of course, there are several problems such as how lectures can plan the learning process well, use methods, media, and implement these to the younger generation of digital citizens through digital channels. Today, the development of technology in every layer of life and element of society has led to the digital direction. In the development of technology, all people in the world, including the people of Indonesia use digital technology and cannot be separated from digital devices for the necessities of life in the 21st century. Data obtained from the Internet World Stats Top 20 Countries with Highest Number of Internet Users – June 30, 2019 (MiniwattsMarketingGroup, 2018) Indonesia is ranked 4th in the world with 171,260,000 internet users with an increase of 8.463% from 2000 to 2019. It shows that the Indonesian people are technology-consumptive societies and meeting their needs requires digital technology. Technological developments make people depend on digital devices to easily and quickly meet life's needs. Technological developments in Indonesia experience dynamic changes at every level of life, including in education. Education can take advantage of the potential of technological advances and the use of digital media to support success in learning. The
use of digital media in the learning process in the 21st century education era has the potential to be developed especially for students, according to research revealed by Butler et al., revealing that “students can embrace digital media in the learning process, especially mobile learning that can be used anywhere” (Butler et al., 2021). It can be understood that in the digital learning process in the era of disruption, every student can use digital media anywhere and anytime to learn.

Syahputra (2018) stated that 21st century learning is essentially an implication of the development of society from time to time until now, it has shifted towards an informative society that is marked by the development of digitalization. In education in Indonesia, chances are quite dynamic along with the times and human needs in each era. Education in Indonesia has entered the 21st-century education pattern. This change is felt along with changes in the curriculum from time to time. The change in the pattern of education in the 21st century that is felt today is one of the characteristics of the era of globalization or what is called the era of openness, the growing era evidences this, the development of science and technology” (Suryadi, 2002). Based on this, it can be understood that technological developments, especially in the field of education, have experienced quite dynamic developments as seen from changes in the Indonesian language curriculum which have increased towards a 21st century education pattern that uses technology as the basis for its development.

The process of technological development that is integrated into the education system has not gone well, such as how the application of lectures in meeting the learning needs of young citizens in the digital era, of course, this needs to pay attention to the right learning methods in the digital era and the learning process on digital channels, so that need to use it. The right method in the learning process so that it can run properly and correctly. As stated by Sarker et al., (2019), technology must be integrated at all levels of the curriculum, in input processes, procedures, and learning methods to benefit from technological developments in the 21st century. Technology is the main tool that needs to be developed continuously at all levels of the education curriculum to develop learning through digital media so that it can be effective and optimal. To support optimizing the use of technology in the learning process, lectures must have the ability to use technology and create good and interesting learning media. “The Teacher Training Institute (LPTK) as an educational entity that produces prospective lectures/teachers needs to equip teachers and teacher candidates to be skilled in using technology, especially ICT because of the challenges of future teachers are related to ICT.” (Sole & Anggraeni, 2018). Based on this, mastery of digital technology in learning in the 21st century is very important to achieve success in learning and become a challenge for lectures in the future.

21st-century education must of course be able to employ the right method, so that educational goals can be achieved optimally, as expressed (Tondeur et al., 2017), that previous programs aimed at improving the quality of education by using technology often fails because of a mismatch between technology and the learning process, as a result, the technology integration process is not effective and the use of technology is not only technical skills using technology but the learning process must combine technology with education so that the learning process runs effectively. This statement can be understood that in the 21st century which combines openness, science and technology must require the right method so that the learning process can be effective and run as it should. Ministry of Education and Culture Research and Development of Republic Indonesia state that “The world in the 21st century is also characterized by the abundance of (1) information that is available anywhere and can be accessed at any time; (2) faster computing; (3) automation that replaces routine jobs; and (4) communication that can be done from anywhere and anywhere.” (Kementerian Pendidikan dan Kebudayaan, 2013)
Based on this, technology as a learning medium can be used as a forum to attract interest and attention in the development of the learning process, especially in the phenomenon of society, especially young citizens who are increasingly thick with the use of digital technology in various aspects of life. 21st century education requires citizens to be digitally literate to adapt to the times. The characteristics of 21st-century education as described affect the quality of civic education in the digital era. The utilization of technological advances and the use of digital media becomes an urgency to realize the success of the educational process in the 21st century. Therefore, this study aims to analyze the learning process using digital media that can attract students' attention to motivate students to learn in the 21st century. In addition, lecturers are expected to be able to create and design online learning media as the right method and attract the attention of students in the implementation of teaching and learning in higher education so that the objectives of learning can be achieved effectively.

**Method**

This study employed a qualitative and quantitative approach (mixed design) using survey method mainly. Survey research is a procedure in quantitative research wherein administering a survey on a sample or an entire population of people to describe attitudes, opinions, behaviors, or specific characteristics of the population (Creswell, 2015). The data were gathered from 98 students from a population of 130 students, and the selection was based on the Krejcie & Morgan table and the Slovin formula. The 98 students were users of UPI Online Learning System (SPOT UPI) and (SPADA UPI) application at the Civic Education Study Program, Universitas Pendidikan Indonesia. All instruments were developed by the research team after reviewing various concepts and theories related to the investigated issue. Qualitative data analysis (Sugiono, 2016) was conducted through several stages, namely: 1) Examining all available data from various sources; 2) Conducting data reduction which is carried out using a core summary; 3) Arrangement in units and categorized in the next step, then the categories are made while coding, and 4) Checking the validity of the data. This stage was done after the participants completed the data in processing the results of substantive research using certain methods. Quantitative analysis was run through correlation analysis and descriptive/proportion statistics.

**Result and Discussion**

**The Implementation and Constraints Faced by Lectures in Online Learning to Improve Learning Quality**

In improving the quality of online learning, a lecture cannot be separated from the obstacles it faces. According to the results of data collection, it shows that several obstacles that are considered important to be overcome in improving the quality of learning in online learning areas can be seen in the following table 1.

<table>
<thead>
<tr>
<th>No</th>
<th>Indicator</th>
<th>Very important</th>
<th>Important</th>
<th>No comment</th>
<th>Unimportant</th>
<th>Very unimportant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Internet availability</td>
<td>85.5%</td>
<td>9.6%</td>
<td>2.4%</td>
<td>1.4%</td>
<td>1.1%</td>
</tr>
<tr>
<td>2</td>
<td>The Importance of Internet Connection and data plan Assistance</td>
<td>79.5%</td>
<td>15.7%</td>
<td>0%</td>
<td>2.4%</td>
<td>2.4%</td>
</tr>
</tbody>
</table>
Based on these data, in online learning there are still various obstacles faced by both lectures and students. Barriers to online learning include a) Lack of interaction between lecturers and students in online learning; b) Support of limited resources and infrastructure; c) Limited access to learning resources; d) The learning process is rigid and less interesting. So, in that case, efforts are needed to be made by lectures and students to improve the quality of learning.

The right strategies and methods in online learning with optimal use of digital media will have implications for improving the quality of learning (Dhawan, 2020; Kebritchi et al., 2017; Singh et al., 2021, 2022). The quality of learning is a very decisive factor for improving the quality of education. Learning quality is seen in systematic and synergistic interactions between teacher learning, student learning behavior and impact, materials, media, and learning climate in producing optimal learning processes and outcomes (Singh et al., 2021). Strategies and methods in learning support the realization of successful learning. In learning in the 21st century, the right methods and strategies have implications for the success of the learning process so that educational goals can be achieved optimally. As Tondeur et al., (2017), that the learning process must combine technology with education so that the learning process runs effectively. This statement can be understood that in the 21st century the combination of science and technology must be carried out so that the learning process can be effective and run as it should.

According to Kerr (1999), Civic Education learning is broadly formulated for the preparation process so that responsibilities as citizens can be taken over. Education teaches and provides experience for students to carry out their rights and obligations properly as citizens. “In Civic Education learning, innovation is needed as an effort to strengthen and achieve civic competence and the scientific development of Civic Education in accordance with the development and learning needs in the digital era” (Trisiana et al., 2019). The innovation needed in this digital era is innovation in online learning to improve the quality of civics learning. "Online learning is learning that uses the internet network with accessibility, connectivity, flexibility, and the ability to bring up various types of learning interactions" (Moore et al., 2011). In line with this, research conducted by Selwyn et al., (2017) shows that the use of the internet and multimedia technology is able to change the way.
Through online learning, students can carry out learning without space and time limits and can learn independently in developing student competencies in the learning process in the digital era.

The implementation of online-based Civics learning improves the quality of learning in facing the challenges of the 21st century. The success of learning using digital media in online learning must use the right procedures and methods as well as the needs of students as young digital citizens, such as the needs of lectures who are prepared and well planned, more interactive, communicative, and creative in creating content and learning media so that students can be interested and understand the material presented. The characteristics of the right media in Civics learning as value education include: the media is able to carry a number of hopeful messages, contains values and morals, is arranged in accordance with the development of information technology in the era of globalization, uses real learning, is able to attract interest, attention and make students critical thinking and affordable by students’ learning abilities.

The online Civic Education learning process can take advantage of several existing media that students can use easily, such as LMS media, discussion forums, learning videos, Google Classroom virtual rooms, Zoom Meetings, and other digital media. In the context of Civics learning, online learning can be directed to apply citizenship and digital literacy as digital citizenship. Winataputra & Budimansyah (2012) argues that talking about digital citizenship, citizenship is the main goal in building citizen skills in the digital era. In the context of Civics learning itself, this bold learning can be directed to apply civic attitudes, civic character, and civic knowledge in the dynamics and challenges of the 21st century which is an urgency for everyone to be able to take advantage of technology if they do not want to be left behind which is very dynamic. Online learning in civic education is designed so that students have civic competence. Citizenship competence as proposed by Branson namely: (1) Civic knowledge (knowledge of citizenship), related to the content or what citizens should know; (2) Civic skills, consisting of intellectual and participatory skills of relevant citizens; and (3) Civic disposition (civic disposition) which implies public and private character which is important for the maintenance and development of constitutional democracy (M. S. Branson, 1998; M. stimman Branson, 2001; Margaret S. Branson, 1999). This bold approach can support lectures and students to discover the broadest possible knowledge and skills if they can be well integrated with technology as a learning tool.

The results of this study demonstrate that in improving the quality of online learning there are several obstacles experienced by lectures that hinder its effectiveness. Therefore, relevant efforts must be adequately addressed so that the online learning process in improving the quality of Civics learning can run optimally. These include a) Lectures must act as facilitators in learning; b) Lectures must prepare interesting learning strategies and methods that can trigger students to be actively involved; c) Lectures provide open sources and materials; d) Lectures need to improve their ability to use technology and internet devices for their learning purposes; and e) Students ought to be actively involved and more independent in learning. In addition, it is also necessary to support the infrastructure resources provided by educational institutions to support the success of online learning.

These efforts can help success in online learning for Civic Education to facilitate the citizens’ digital literacy improvement. Other than that, in the development of 21st century education, in the learning process of civic education, the development of citizen competencies also needs to be leveled so that they become citizens who are able to survive in the era of disruption. Developing the competence of citizens who are ready to face the challenges of the disruption era is of more concern for lecturers, in addition to learning techniques that need to be developed in facilitating and increasing student motivation in online learning, substance also needs to be considered, the substance which includes how to develop the competence of citizens who are able to develop on the
challenges of the era of disruption, on the substance of learning civics education in universities, students are directed to become good citizens in digital media. The important urgency is how students become citizens with character, ethics and digital literacy in using digital media, of course this is to prepare future citizens in the era of disruption.

**Online Learning Process to Improve the Quality of Civics Learning.**

A learning process is carried out to improve one's knowledge and abilities. “Learning is an activity carried out by a person to achieve the desired competence. Through the learning process, a person can experience a process of change by gaining better knowledge, skills, and attitudes.” (Pribadi, 2009, p. 21). In the learning process there are activities to choose, determine, and develop methods to achieve the learning process results. Along with the development of science and technology, this learning activity can be done online from distance. Online-based learning means a learning process using a network using digital technology. "There is no direct face-to-face contact between teachers and students in the learning process." (Munir, 2009). Communication takes place in two directions, bridged by media such as television, radio, telephone, internet, video, and so on. Online learning can be done without the limitations of space and time.

Online learning can be developed in all subjects, including civics learning. Civic Education Learning in Law Number 20 of 2003 concerning the National Education System states that "Civic Education is an effort to equip students with basic knowledge and skills about state relations and early education in order to become citizens who can be relied on by the nation and state." (Undang-Undang Republik Indonesia. Nomor 20 Tahun 2003).

Learning media serves to help students improve understanding, present data interestingly and reliably, facilitate data interpretation, and condense information (Lewin & Pearson, 2005; Moore et al., 2011; Selwyn & Oliver, 2011). Civics learning media is designed to facilitate the creation of an appropriate learning process and success in achieving learning objectives (Chu, 2020; Jiang & Gu, 2022; Römer et al., 2022). In the research conducted, the distance learning process applies an online Learning Management System based on SPOT UPI and SPADA UPI. The distance learning system begins with planning managed by lectures (lecturers), then learning materials are delivered (delivery content) to students (students) which must refer to the learning design. In the process of collecting data from respondents regarding the online learning process in improving the quality of learning, in general, respondents consider it important that: 1) it is important for students to develop from passive participants to active participants in online learning; 2) students need to collect data and information in solving problems; 3) students need to learn from theory, discussion, and experience in the field; 4) lecturers need to develop from conveying knowledge in front of the class to becoming learning facilitators; and 5) it is important to use interactive and collaborative teaching materials, it can be understood that in the online learning process students and lectures can play an active role in the learning process, this collaboration creates a communicative and interactive learning environment, civic education has an important role in forming intelligent citizens and good in the digital age. In the 21st century learning paradigm, education is characterized by differences in learning orientation, where there must be an educational interaction between teachers and students to achieve learning goals (Conklin, 2009; Scott, 2014)

The learning process must be directed at the formation of creative, innovative, and characterized students in the digital era by utilizing technological advances and digital media, from the opinions of experts and research results (Conklin, 2009; Gallardo-Echenique et al., 2015; Scott, 2014). It can be understood that civic education learning in the development of 21st century education, especially online learning, is able to provide a meaningful role, such as making students more active than before, digital media literacy, critical thinking, creative and innovative in learning or
when preparing students to become teachers who are able to fight digital adaptation in the future (Biamba et al., 2021; Dias & Soares, 2018; Sampermans et al., 2021; Wong et al., 2017).

**Online Learning Strategies in Improving Learning Quality**

Today, 21st century skills are needed to support success in rapid technological developments. “Three life expectancies are needed in the 21st century, namely learning and innovation skills, digital literacy skills, and life and career skills.” (Trilling & Fadel, 2009). With this, the ability to adapt in today's digital era is very urgent, in line with five abilities in dealing with the digital era in the 21st century, as follows: (1) complex problem solving (solving) complexes; (2) social skills; (3) process skills; (4) system skills; (5) cognitive abilities.

The 21st century skills education curriculum is applied to support current technological developments. Following this era, the 2013 Civic Education curriculum was prepared to be able to answer the challenges of the 21st century, known as the era of disruption or the digital era that gave birth to millennials and digital citizens. Civics curriculum is expected to be able to equip students to have citizenship skills initiated by experts. In the 21st century, competencies need to create learning exercises, support human resources and infrastructure, collaborate collaboratively to share experiences and interactions in the classroom, enable students to learn relevant to the world context, and support community interaction in learning, both direct and indirect. In the opinion of Arif & Aulia (2016), in the study of Pancasila and Civic Education (PKn/PPKn), the process of globalization and rapid advancement of ICT has brought citizens into the information age. This era is marked by the birth of digital citizenship (digital citizenship) due to the use of digital technology in almost all their life activities. Then Arif & Aulia (2016) explained further about alternatives for developing digital citizenship through Civics learning, which could refer to the elements of digital citizenship. The nine elements that together form “digital citizenship, namely digital access, digital commerce, digital communication, digital literacy, digital ethics, digital law, rights and obligations of digital citizens, digital health and wellness, and digital security.” (Ribble & Bailey, 2007).

Improving the quality of learning in online learning needs to use the right strategy. "Distance learning will be effective compared to conventional learning if previously making distance learning based on WAB that considers various aspects needed and their trade-offs." (Munir, 2009). Distance learning can work well if there is an interaction between students and lecturers with media or tools to support the learning process. The pattern of interaction must be active and interactive, “The role of the teacher in the 21st century must shift from a “knowledge-planting” pattern, towards a role as a mentor, directing discussion and measuring student learning progress”. Trade-of-technology learning media used in direct face-to-face interactions between students and lectures such as conventional learning can be optimized to establish interactions between lecturers and students. Tetep & Suparman (2019)) in their research revealed the importance of the role of digital media literacy for an lecture. In line with that, lectures must also be digitally literate to provide interesting digital-based learning to achieve optimal learning goals.

One way to distribute time to respondents is by choosing several modes that can be used in learning based on their level of importance, which can be seen in the following graph.

The graph shows that many media can be used in online learning. Respondents consider the Learning Management System, discussion forums, and learning videos to have a very important role. The rest, learning media through virtual face-to-face in zoom meetings and google meet are considered important to be optimized. It can be understood that in online learning by utilizing digital technology, it is necessary to have a main container and varied strategies by combining the use of several media and features that exist in digital media to support students in the online learning process effectively, so that they can be understood. That LMS media as the main forum for online...
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Online learning is a very necessary mode to use. Then discussion forums and learning videos become media used to make students interested in the online learning process, from the data, virtual face-to-face video media becomes the second supporting media that needs to be varied with learning in LMS, it can be understood that online learning is not entirely just transferring learning in the classroom to study in cyberspace. However, according to the survey results, the use of zoom, google meet, WebEx and the like are supporting media and can be varied in the online learning process using LMS.

Figure 1
Digital Medium Pie Diagram for Online Learning Support

Source: processed and developed by the Research Team, 2020

In 21st century learning, digital literacy online learning competencies and supporting infrastructure need to be developed to improve the quality of learning. Likewise in Civics learning, online learning can be effective by directing citizens to have digital citizenship skills through online learning processes through discussions, learning videos, and extracting information using digital technology wisely. Nine elements that together make up digital citizenship, namely “digital access, digital commerce, digital communications, digital literacy, digital ethics, digital law, rights and obligations of digital citizens, digital health and well-being, and digital security.” (Ribble & Bailey, 2007). Talking about digital citizenship, citizenship skills are the main goal in building citizen skills in the digital era.

Strategies in online civic education learning must be well prepared. Strategies in online learning are: (1) Lectures need to make material planning with the right method in online learning to improve the quality of learning. (2) Lectures create interesting learning media except LMS, lecture must create interesting learning media such as through learning videos, discussion forums, infographics, audio learning, quiz and so on by utilizing digital technology. (3) Lectures build virtual interactions with students through zoom meetings, google meetings and other virtual spaces to provide encouragement, direction and reflection in learning. (4) Then students are directed to learn independently and can increase their activeness and sharpness in analyzing thinking in solving a problem facilitated by teaching resources or materials provided by lecturers in the digital space. Thus, through a strategy that has been well planned and integrated with the use of digital technology, online civic education learning can be optimal.

Conclusions

The online learning process can be carried out through the LMS as the main container filled with interesting learning content such as discussion forums and learning videos that can be in various
features or digital media platforms, then the interaction between lectures and students can be developed in virtual face-to-face services. In implementing online learning, there are still several obstacles faced by lecturers and students. The main problems are network access, familiarity to the new forms of interaction, and online learning infrastructure. Learning in networks needs to apply the right strategies and methods so that it can run effectively and optimally, such as discussion forums and learning videos that become learning content that can attract the attention of students in learning. In the context of Civic Education, online learning can improve the quality of Civics learning if the curriculum can allow properly the integration of affordable and suitable technology. Young Citizens can be directed to master digital citizenship skills so that they can become competent, democratic, and responsible citizens in the digital era, students are possibly directed to become better young digital citizens, such as digital ethics, digital communication, and understanding digital or digital literacy. Through learning in the SPOT UPI and SPADA UPI-based networks, students as young digital citizens can increase their knowledge (civic knowledge), civic skills, and civic disposition which are integrated with technology effectively by utilizing the convenience obtained from integrating digital technology in the learning process. Students may construct their knowledge, learn independently, think critically, and possess the skills as wise and responsible digital citizens for the development of 21st-century civilization.

References


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