



## The use of qr-code media in PKN subjects to foster the democratic character of 21st century students

**Ade Aransyah<sup>1</sup>, Herpratiwi<sup>2</sup>, M. Mona Adha<sup>3</sup>**

<sup>1,2,3</sup>University of Lampung

<sup>1</sup>aransyahade91@gmail.com, <sup>2</sup>Herpratiwi64@yahoo.com, <sup>3</sup>mohammad.monaadha@fkip.unila.ac.id

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**ABSTRAK**

*Character is a crucial thing that every human being must have. Along with the development of the times, students who today are commonly referred to as the millennial generation, must also have a strong character, so that they are not uprooted from the noble cultural roots of the Indonesian nation. 21st century education is no longer a discourse or idea, but must be able to be realized through a learning QR code is a two-dimensional image that presents a data, especially data in the form of text. The purpose of this study is to find out how to use QR-Codes in the field of education by utilizing QR-Codes as a learning medium, especially in Civics subjects with the hope that students can grow democratic character in various lives. The method used in this study used the SLR (Systematic Literature Review) method, data collection was carried out using documentation and reviewing all articles related to qr-code and civics subjects of democratic character. The result of this study is that the use of Qr-Code media can help the process of delivering messages or learning to students, so that they can achieve the expected learning outcomes, especially in PPKn learning in fostering democratic character, in 21st century students.*

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### INTRODUCTION

Education has an important role in determining the back and forth of a nation, because through education it is expected to be able to produce intelligent and competent human beings to advance the nation (Wijayanti & Wulandari, 2016). Education is the spearhead of national development, because in it there is a coaching process to create reliable and quality human resources (HR). At this time the excellence of a nation is no longer characterized by the abundance of natural wealth, but rather in the excellence of Human Resources (HR) (Sutardi & Sugiharsono, 2016). Education functions to develop abilities and shape the character and civilization of a dignified nation in order to educate the nation's life (Rosyad & Zuchdi, 2018). National education functions to develop abilities and shape the character and civilization of a dignified nation in educating the nation's life (Hinton, 1974).

The 1945 Constitution of the Republic of Indonesia article 31 paragraph 2 states that the government organizes a national education system regulated by law. Article 3 of Law No. 20 of 2003 concerning the National Education System confirms that national education functions to develop abilities and form a dignified national character and civilization in order to educate the nation's life, aiming to develop the potential of students to become human beings who have faith and piety in God Almighty, have a noble character, healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens (Sobri et al., 2019).

The transformation of world civilization has entered the era of Information and Communication Technology (ICT), where humans are characterized by the phenomenon of a technological society (Coal & Darmawan, 2017). We cannot avoid technological developments anymore in the 21st century. The development of technology that is evenly distributed and increasingly prevalent in every field of life, including in the field of education, forces mankind to keep up with the pace of technological development. In 21st century education technology has become the main complement in every learning activity. New innovations have emerged to support learning activities as a result of technological developments (Putri, 2019).

21st century education is no longer a discourse or idea, but must be able to be realized through a learning. The output of 21st century education according to a speech delivered by Anies Baswedan (2018) must meet three main components, namely: (1) character; (2) 4K competencies, namely critical thinking, communicative creative, and collaborative; (3) literacy consisting of reading literacy, cultural literacy, financial literacy, and technological literacy (Nindiantika et al., 2019). Basically,

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formal education at school will be very helpful if the school emphasizes education that shapes the character of the child. Along with the fading of moral values in today's society, schools must be able to improve the quality of their education and expand character education programs (Adriani et al., 2018).

Education must always be designed to be ready to face the times. The presence of the industrial revolution 4.0 requires the world of education to be able to use technology in the learning process in order to have the ability (skill) and be able to compete in the world of work. In this context, then the world of education applies 21st century learning which is synonymous with technological developments. One of the things that affects the learning process is the learning media. Learning Media basically aims to create an environment that supports the teaching and learning process and the distribution of messages in order to achieve learning objectives (Eva et al., 2020).

Learning in the 21st century has differences from learning in the past. In the past, learning was carried out without paying attention to standards, while now it requires standards as a reference to achieve learning objectives. Through established standards, teachers have guidelines. Through established standards, teachers have definite guidelines on what is taught and what is to be achieved. Advances in information and communication technology have changed human lifestyles, both in working, socializing, playing and learning. Entering the 21st century, technology has entered into various aspects of life, including in the field of education. Teachers and students, lecturers and students, educators and students are required to have the ability to teach and learn in this 21st century (Putri, 2019).

The school, as a formal educational institution, is an institution that is expected to be able to develop and maintain democratic values among students. Schools must be able to contribute to the improvement of the democratic attitudes of students, in accordance with the expectations of the family, society, nation, and state. Democratic education should be socialized to the whole society, including students who will inherit this nation and country in the future. Democracy can be pursued through education, both formal and informal education, as well as non-formal education. Democratic culture highly values equality of human dignity, degrees, and dignity. In democratic culture it is developed how human beings should respect each other the diversity that has become their nature. In addition, democracy also values the differences that exist between people.

Civic Education schools need to be developed as a center for developing insights, attitudes, and skills in life and a democratic life to build a democratic life (Rachmadtullah, 2015). The purpose of Civic Education in schools is more emphasized on mastering knowledge and skills that can provide students with provisions in facing daily life (Rachmadtullah & Wardani Reza, 2016). Character is a crucial thing that every human being must have. Along with the development of the times, students who today are commonly referred to as the millennial generation, must also have a strong character, so that they are not uprooted from the noble cultural roots of the Indonesian nation. Learning organized by schools today must be able to understand the characteristics of millennial generation students (Sulton et al., 2020).

Character education is an education in regulating a person's attitude to have a good personality. Character education is a process of transforming values into virtue (Anwar, 2017). Character education is not an easy one, especially with the heterogeneous conditions of Indonesian society. But all of that can start from a small environment first. Schools, for example, become the main educational agents launched by the government itself to implement character education in all aspects. The cultivation of optimized character through the learning process in the classroom can be integrated with various materials in the field of study (Astiarini, 2016).

There are four types of conservation characters that can be developed during the educational process, namely (1) cultural value-based character education, which is the truth of God's revelation (moral conservation); (2) cultural-based character education, including in the form of ethics, Pancasila, literary appreciation, exemplary historical figures and national leaders (cultural conservation); (3) environmental-based character education (environmental conservation), and (4) character education based on self-potential, namely personal attitudes, the result of an awareness process of self-potential empowerment directed at improving the quality of education (humanist conservation) (Machin, 2014).

Democracy education aims to prepare students as citizens who are able to think critically and act democratically through learning activities that instill awareness of three things, namely: 1.)

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Democracy is a form of social life that guarantees the rights of its members as citizens; 2.) Democracy is a learning process for society (learning process) that is gradual and cannot necessarily simply imitate from other groups of people; and 3.) The survival of democratic life depends on the ability and success of society itself in transforming democratic values (freedom, equality and justice), as well as the degree of loyalty of its members to a democratic political system (Ilyasir, 2020).

Democracy requires real efforts from every citizen and state organizer to behave in such a way that it supports a democratic government or political system in relation to the formation of democratic and responsible citizens, teachers have a strategic and important role, namely shaping the attitudes of students in their daily behavior, nature idealistic, legislative and normative. The learning process that is able to grow and develop democratic values is still experiencing various obstacles so that there is a need for improvements. (Chayati, Nur and Supriyanto, Eko Supriyanto and Yahya, 2015).

The contributing factors of pkn learning that experienced democratic constraints were, lack of understanding of students in understanding the material provided by educators, lack of learning media used by educators in delivering learning. Another problem that is also faced by educators today is the unavailability of learning innovation and creativity in the form of character learning models that can be used as a basis for application in the learning process to develop noble attitudes and characters, even at the basic education level. Character learning model based on the value of character education to form a golden generation with character as stated in the form of RPP, LKS, an assessment instrument to measure character.

The moment of 100 years of independence will be a benchmark for the achievement and success of Indonesia's development in various fields, one of which is the field of education and human resource empowerment. Education as one of the pillars of human resource development needs to innovate so that this demographic bonus can be directed in a positive direction and benefit Indonesia's development. (Amran et al., 2019).

One of the goals of the education system in Indonesia is to be successful is that an innovation or development of teaching materials or modules is needed. Teaching materials must be adapted to today's developments that integrate with the industrial revolution 4.0. One of the developments of teaching materials that can be in line with the development of industry 4.0 is that teaching materials are not only presented in text form, but also by integrating using QR codes. A QR code is a two-dimensional image that presents data, especially text-shaped data (Mustakim et al., 2013). QR codes were chosen based on the experience of a researcher from Korea (Lee, 2011) stated that using QR and smartphones applied in the classroom can provide many advantages. Educators can make adjustments to class needs and picture guidebooks for selected existing field study sites and are easy to use according to the level of their learners (Chandra et al., 2020).

QR Codes hold a much larger volume of information than barcodes. THE QR code has the ability to access data from a storage device or the internet quickly and can be read through a smartphone. In learning QR codes can be used as a medium for storing material, examples of questions and even practice questions (Yahya & Bakri, 2019). The purpose of this study is that the use of QR-Codes in the field of education is to utilize QR-Code Media as a learning medium, especially in Civics subjects with the hope that students can grow democratic character in various lives.

## RESEARCH METHODS

This research uses the "Literature" method which means it is a critical analysis of the research that is being carried out on a special topic or in the form of questions about a part of science. helps us in compiling a frame of mind that is in accordance with the theory, findings, and results of previous research in solving problem formulations in the research we make. The SLR method is used to identify, review, evaluate, and interpret all available research with the topic area of the phenomenon of interest, with specific research questions relevant.

Data analysis was carried out using journal articles from Google Scholar, Research Gate, SINTA, DOAJ, and Scopus. The keyword is Qr-Code, and the character of democracy is civics lessons. The articles collected are only articles that were published in the time span of 2019 to 2022. From various articles, researchers selected 8 articles that are closely related to the keywords used. The next step, researchers grouped articles related to the use of Qr-Code in Civics subjects to foster democratic character in 21st century students.

## RESULT AND DISCUSSION

### Results

21st century education is no longer a discourse or idea, but must be able to be realized through a learning process, Civics is a lesson that emphasizes character building with the hope that students will be able to implement in everyday life, especially in democratic attitudes in order to create a person with a noble, healthy and knowledgeable character. QR-Code is a two-dimensional image that presents a data, especially data in the form of text. The results of the research conducted by reviewing the journals in the literature review can be seen that the use of the QR-Code can be adapted through modification of learning media, then expert assessments and trials carried out that the media is suitable for use in the teaching and learning process in various subject areas.

### Discussion

The influence of technology on 21st century education is very much felt. Starting from the availability of various variations of learning media to learning new models that take advantage of technological developments. According to the Big Dictionary of Indonesian (KBBI) technology is the scientific method of achieving practical goals; applied science; 2 overall means of providing the necessary goods for the survival and comfort of human life. In the 21st century the development of technology is going so fast.

Advances in information media and technology have been felt by almost all levels of society, both in terms of positive and negative aspects of their use. This is because accessing information media and technology is classified as very easy or affordable for various groups, both for young people and the elderly and the rich and lower middle class. Even in general, nowadays children aged 5-12 years are the most users of technology. Therefore, it is not surprising that the positive impact of the development of information media and technology for children aged 5 to 12 years is said to be the multitasking generation (Putri, 2019).

Based on the table of the results of related studies that have been carried out, the table data shows the use of teaching materials using QR codes in learning functions to strengthen learning in the classroom. Which later, through the QR code, teachers can deliver teaching materials not only during face-to-face meetings but before face-to-face learning begins or after face-to-face (outside the classroom) (Chandra et al., 2020). The innovation process of QR-Code-based Genealogical Tree media is based on historical thinking analysis with Singosari Kingdom material, namely: Barcode-Based Genealogical Tree Design in learning media designed using paper.

Barcode design is designed using the utilization of QR & Barcode Scanner application. QR-Code-based Genealogical Tree media design with Singosari Kingdom material which is compiled based on historical thinking analysis (Chronology and Causality) (Manullang & Hastuti, 2021). The QR Code printed by prospective students through the new student admission system contains temporary student data to be scanned by the PMB committee operator so that the data can be entered in the PMB database offline. In this way, the PMB committee operator does not enter manually through the system and is more efficient in reducing spam on the online registration form (Gunawan, 2015).

## CONCLUSIONS

Based on the results of research that has been carried out in the table of research results, it is explained that the benefits of using QR-Code media in learning can be used and practiced directly, especially in PKN lessons to grow democratic character, especially in the 21st century. The use of QR-Code can also help educators and learners during the learning process which is not boring and fun. The use of QR-Code can be used in all subjects with a more modern learning model, especially in the modern-era of the 21st century.

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