Student Participation with E-Voting in the Digital Era

Oki Suprianto
Department of Civic Education
Universitas Pendidikan Indonesia. Indonesia
okisuprianto@upi.edu

Idrus Affandi
Department of Civic Education
Universitas Pendidikan Indonesia. Indonesia
idrusaffandi@gmail.com

Abstract- *This study aims to examine the efficacy of the election implementation by e-voting methods in increasing student participation in the digital age. At present, the implementation of general elections is less able to adapt to the times, attract the interest of novice voters and reduce abstentions. Therefore, the e-voting method is considered as an alternative media that can solve various problems.* **This study uses a qualitative approach with case study focused on student participation with e-voting in the digital era. The purpose of using the case study method is to find out how the e-voting method is implemented in the selection of student council leaders in schools. The results show the implementation of the e-voting method in the election of the student council president is the result of the creativity of students by utilizing laptops and the internet network as a medium plus the encouragement from the school to continue to develop it. The implementation of this election runs more effectively and efficiently compared to the conventional method which is enough to spend time, costs and human resources, the confidentiality of the data is guaranteed safe.**

Keywords: e-voting, political participation, civic participation, digital era

I. INTRODUCTION

The practice of organizing general elections in Indonesia still uses a manual system starting from the time the election took place, meeting ballots from various polling stations (*TPS*), the process of counting votes to the demonstration of the votes produced. The system used can be called very time-consuming, energy, and also cost. How not, every click in the general election with a manual system takes quite a long time. Each voter is required to vote by nominating selected candidates on a piece of paper whose size is adjusted to the number of candidates. The larger the candidate pairs in the election, the greater the paper size needed in the election.

In addition, the collection of ballot papers in an election is arguably quite complicated because the ballots that have entered the ballot box must be issued again to then be counted in the vote so that the final results of the votes obtained by each pair of candidates. The process up to the vote counting stage requires considerable time and cost, not to mention paying for every witness in the polling station. The e-voting application that was built reduces the problem of the process of printing votes because the votes obtained in the form of data can be directly given at the time of voting [1].

Another disadvantage of the manual electoral system is that everyone has the opportunity to only vote in a particular area. based on the location on the National Identity Card (*KTP*). This condition makes it possible for anyone outside the area in accordance with their *KTP*s to be reluctant to go home just to hold elections. This is certainly if spelled out in very large numbers directly contribute to the number of abstentions of voters.

In fact, in the current development of science and technology digital technology should be adapted as an alternative to increase citizen participation. The use of communication and information technology is in line with democratic principles, namely increasing transparency, accountability, participation, equal rights and obligations of citizens (especially the right to information). It is also hoped that the presence of information and communication technology that has been fully connected to the internet today is able to cut the complicated bureaucratic process so that the state is increasingly able to be accessed by the general public [2].

The existence of e-voting is very important as the process of digitizing general elections that remains in principle while maintaining the confidentiality of each voter. In addition, e-voting is also able to reduce the level of electoral fraud, low cost, and efficient. That is, citizens need to be facilitated with a cutting-edge media, one of which is by utilizing the use of digital technology / information technology.

The same thing needs to be paid attention to the democratic process of students, especially in the school environment. After all school is the most important place for the ongoing democratic process, starting from school children begin to socialize, get to know many friends in collaboration, and take responsibility apart from a more limited family environment. Political interest primarily arises and develops during the school period. The influence of the school environment is far stronger than the influence of family or friends [3]. Schools become a strategic position in developing democratization especially in the political field because at this time children political interests emerge and develop. For the purposes of information exchange, indicated by the public welcomed 19 - 34, which amounted to 49.52

percent. But to conclude the largest at the age of 13-18, which is equal to 75.50 percent [4].

The younger generation in this context is more than just youth because they still have the same substance. Definitively, Law Number 40 of 2009 concerning Youth describes youth are Indonesian citizens who are in a period of development and development that reaches 16 (sixteen) to 30 (thirty) years. This underlines that the younger generation has a limit in 16 years to 30 years. So someone who is under 16 years or more than 30 years can no longer be used as a youth.

Young generation can be broadly categorized as being related in the same period as happened in childhood- children towards independence in adulthood [5]. This opinion has the meaning that the younger generation is a generation in the transition from childhood to the age of maturity.

Thus, it is clear that the younger generation determines the transition period from someone who will pass through childhood and will divert the adult phase. If you continue with the growing global process of this peesat. the most prominent of the generations are those who support the best against technological and information developments that make it easy for them to cope with the various changes that occur.

II. THEORETICAL REVIEW

E-voting as Political Media Participation

Election *(general election)* study is recognized globally, as an arena for forming representative democracy and holding a change of government. *E-voting is* interpreted as an electronic election by utilizing the internet from registration to electronic counting, and allowing for remote selection. E-voting can also be interpreted as a method of taking and calculating voting results with the help of electronic devices or digital technology [6].

Smith & Clark explained that e-voting is a new method that exists today that is used to channel the rights of a citizen. This method generally uses digital facilities such as PC *(Personal Computer)* or computers, *browsers,* cellular phones, or even digital [6]. All these devices provide convenience and benefits that are not small for both the organizer and the users, namely voters. This opinion strengthens what has been conveyed by Kersting & Baldersheim under e-voting as alternative media providing many conveniences in many ways.

The existence of e-voting is very important as the process of digitizing general elections that remains in principle while maintaining the confidentiality of each voter. In addition, e-voting is also able to reduce the level of electoral fraud, low cost, and efficient [7].

The e-voting method is very useful for students because they will choose comfortably, without having to get a ballot. The convenience of e-voting will increase this demographic intention to participate in the electoral process [8]. The increasing involvement of citizens in a country is very

important because the consequences of a democratic country are the involvement of citizens in determining government policies.

E-voting has advantages compared to the use of conventional methods namely: 1) effective and efficient vote counting; 2) save paper; 3) practical; 4) flexible; 5) available language options; 6) available choice information; 7) minimize voter errors. Preece, et al (2012) the use of e-voting methods have *usability goals* including effectiveness, efficiency, security, usefulness, easy to learn, and easy to remember [9]. Thus, the media of political participation can be interpreted as a means or tool used in voting during general elections using the help of electronic devices. This media is also equipped with internet assistance so that it is possible for everyone to take part in this election without being limited by long distances.

Student Civic Participation

Citizen participation is needed so that the state process can take place well. Participation is usually interpreted as involvement and participation in a particular activity [10]. The involvement of citizens in certain activities can be classified into participation. This explanation implies that participation is a conscious effort by citizens to establish personal communication between individuals and individuals and with groups. with other people.

Furthermore, Political participation in a democratic country is an indicator of the implementation of the highest legal authority of the people by the people (people's sovereignty), which is manifested in their involvement in the democratic party (election). The higher level of political participation indicates that people follow and understand and involve themselves in state activities. On the other hand, a low level of political participation generally indicates that people are less appreciative or interested in the problems or activities of the state [11].

Students are everyone who is officially registered to take lessons in the world of Education [12]. Students or students are one of the human components that occupy a central position in the teaching-learning process, in the learning process students as parties who want to achieve their goals have goals and then want to achieve them optimally. Students will be a determining factor, so that it can affect everything needed to achieve their learning goals. Beside that, schools can be a place of interaction and communication through the use of the latest technology to make decisions relating to the school itself [13].

Thus, the *civic participation of* students is defined as a conscious effort carried out by citizens with status as a student in the school to be actively involved both individually and in groups in a state's affairs and to achieve certain goals. The involvement of the citizens is carried out because there is an encouragement from the outside as well as from within themselves consciously. But in this case, there are other terms that can be used, namely political participation because both *civic participation* and political participation are essentially

the same terms, namely the involvement of citizens in state affairs.

The Digital Era

Rapid flow of globalization cannot be dammed and avoided by everyone even a country, avoiding it is tantamount to closing themselves to the challenges of the times and causing lagging. The current of globalization caused many changes in various aspects of life. Technological progress is very rapid in various fields, for example in the fields of transportation, communication, health, education, and other fields so as to make people increasingly need technology to facilitate all work in this life [14].

The rapid changes that occur due to globalization ultimately have an impact on the replacement of human position in some ways by tools or machines to work on a number of things so that this right is often referred to as the term digital technology. Digital technology is a technology that is no longer using human power or manually. Digital systems are the development of analog systems. Digitalization tends to be an automatic operating system with a format that can be read by computers [15]. This condition allows a higher value of efficiency and effectiveness in performing certain jobs. In addition, in terms of financing can also be minimized compared to having to use a manual system.

The use of digital media in the selection of student council leaders in this school is very innovative as part of the use and technology in the digital era which is adapted into the activities of students in schools to stimulate and part of learning facilities so that they can participate in student council elections. In terms of the world of education technological advances bring enormous benefits, both in terms of delivering lessons for teachers and understanding of material for students. The use of digital learning media in some schools has become a mandatory tool for every school [16]. This explanation indicates that some schools have used technology and information as effective media in the aspect of Education so that the learning process or various activities in the school can run efficiently. Indirectly, when the use of digital technology is implemented and given to them schools also have the opportunity to learn a mindset that can enable them to stretch and explore the potential of this interactive media

III. RESEARCH METHODS

This research uses the case study method because the researcher aims to explore and study problems that are both unique and limited in nature. The problem that the researcher intends is related to the implementation of the e-voting method as a medium for student political participation in increasing student civic participation in the digital age. Meanwhile. Its unique and limited nature is that it only exists and is applied at 13 Bandung Vocational High School (*SMKN 13 Bandung*). The case study method is a research strategy in which researchers investigate carefully a program, event, activity, process, or group of individuals [17].

In addition, case studies were selected in this study for several reasons. First, as the problem under study regarding the level of civic participation of students by applying the e-voting method in the selection of student council leaders so this research is limited to a particular unit. Secondly, this research was carried out thoroughly and thoroughly although the research was limited to a particular unit. Third, this research focuses on how the relationship as well as the e-voting process as a media for political participation of students in increasing student civic participation in the digital age. Fourth, research takes place naturally without any manipulation.

Based on the research method, this research will produce something unique with the nature and character that is limited to one particular research unit, which is related to the method used as a means of democracy, namely the distribution of suffrage in relation to increasing student civic participation in the digital age

IV. RESULTS AND DISCUSSION

Substantially, the selection of student council president still has some similarities with conventional systems in general, it's just that there are differences in terms of the media. In the beginning before the election begins, the committee first holds regular meetings to prepare for the election by using the e-voting method, registering various needs in the field, determining the number of voting booths, setting the position of the polling place, and so forth.

The determination of the Permanent Voter List (*DPT*) is not as complicated as the large-scale general elections in general. Permanent Voter List (*DPT*) is students at 13 Bandung Vocational High School (*SMKN 13 Bandung*) who are still active in school, it is they who automatically have the same voting rights to vote and be elected in the student council election. In addition, those who are included in the DPT are the teachers and academic staff of 13 Bandung Vocational High School, they have the same opportunity to be involved in the selection of student council leaders as voters.

The organizer of the student council election with the e-voting method is the management of class representative assembly 13 Bandung Vocational High School (*MPK SMKN 13 Bandung*) Substantially, the election of the student council president still has some similarities with the conventional system in general, it's just that there are differences in terms of media. At the beginning before the election begins, the committee first holds meetings to prepare the election organizers routinely using the e-voting method, register various needs in the field, determine the number of voting booths, set the position of the polling place, and so on.

The committee calls the voters both students and teachers in turn from their rooms to enter the field where the election and each voter's data will be verified by the committee. The voters will be given a numeric token as a password to each voter who will be used when logging in to the student council election web. Next, the voters enter the

voting booth area and will be confronted on the student council election web. at that time, the screen will switch and display the page *PILKETOS IT SMKN 13 BANDUNG*. Voters will be asked to log in using the NIS for students and the NIP for the teacher and the tokens in the form of tokens that have been obtained previously. When voters log in, the screen on the web will display the candidates for each student council president then voters choose the candidates as they wish. In the final stage, one of the voters' fingers will then be given ink as a sign of having casted his vote, and finished.

During the selection process, the temporary vote will automatically be seen and the final vote can be obtained if the selection process is also completed. The process of vote counting in the selection of student council leaders by using the e-voting method is *quick count* is automatically carried out directly by the system so that the acquisition of votes can be monitored at any time, especially by the server / operator and school people in general.

With regard to the principle of the general election, the principal of 13 Bandung Vocational High School (*SMK 13 Bandung*) also commented that the implementation of student council elections in schools with e-voting had met the principle of overflow**.** It can be seen that during the electoral process there is involvement of students in choosing not by coercion from any party, students have independent suffrage in accordance with their own needs, the selection process is not carried out in an open place but behind the voting chambers, and finally the calculation results the vote also is not generally known by others. Indirectly, this implementation is also a way for the process of maturing students, especially in making a decision. Furthermore the teen identity that was formed by internet use included decision making, reflection ability, and ego strength [18].

The right to choose is very decisive and calculated in a democratic country, where one person's voice is very valuable for the birth of a leader. In addition, schools as miniature countries provide flexibility for students to actively participate in school administration especially during the election of student council leaders, especially students at the high school / vocational level are almost at the age of adults who will soon have the right to vote in elections. Unfortunately, social and political education is even more unimportant in many schools. Even though interest in political participation must be raised from a young age [3]. The hope is that the education and experience they get while in school can be implemented in a broader life, namely in the community, for example participating in general elections.

According to the election organizing committee, the votes obtained were not like in conventional elections having to wait for the election process to be completed and then the votes counted manually. Unlike the e-voting method, this media presents an automated system that is able to read the progress of vote acquisition during the electoral process until it is finished so that the implementation of the e-voting method is very practical and does not take much time. This is as expressed by Riera & Brown that e-voting has advantages compared to the use of conventional methods, namely: 1) effective and efficient vote counting; 2) save paper; 3) practical; 4) flexible; 5) available language options; 6) available choice information; 7) minimize voter errors [9].

Thus, in today's digital era, it is appropriate for schools to adapt themselves to the development of increasingly rapid technological and information developments. This adjustment is especially in facilities and infrastructure to increase student involvement in schools so that they have a direct role in school. This is an effort to recognize the position of students in school as someone who has the ability and rights that need to be channeled properly.

V. CONCLUSION

The e-voting method can be used as an alternative media in the election of student organization chairman. Its existence answers the challenges of digital technology that is growing rapidly. The application of the e-voting method at Vocational High School 13 Bandung for the election of the student organization chairman gives a contribution which very effective and efficient both material and moral thus the election process could be presented more interesting and innovative. The student council election system with this e-voting system facilitates the student council election process, and provides accurate, fast and reliable voting results and can reduce the number of students who do not vote and will not interfere with the learning process [19]. In addition, the e-voting method is able to stimulate students to give their voting rights, they include to the people who always up to date with the technology era so the response and participation of students is increasing. This activity is directed as a media developer of talent, personality and independence, so as to be able to initiate as an independent person who in turn is able to show his excellence in the community, especially as an agent of reform and development mobilizer. This pattern needs to be supported by reliable media, both formal media (such as schools) and informal (courses or training) [20].

This research provides recommendations as follows: (1) School should provide wider digital democratic spaces for students, not only limited to the election of student organization chairman through the e-voting method. This is important as a public space that will make it easier for students to take part in several schools decision-making and to support the democratic process; Students need to be strengthened with a fundamental democratic awareness, (2) The e-voting method as a media for students' political participation needs to be promoted to other schools, this can be done either by the subject teacher deliberations *MGMP* or the local government thus there is an expected that students' civic participation can be improved in the digital era, especially in the election of student organization chairman.

REFERENCES

[1] Purwanti, Nani, *"Perancangan Sistem E-Voting Untuk Pemilihan Kepala Daerah (Pilkada),"* Jurnal Bianglala Informatika, vol. 3, pp. 18-27, Maret 2015

[2] Alwajih, Ahmad, "Dilema E-Democracy di Indonesia: Menganalisis Relasi Internet, Negara, dan Masyarakat," Jurnal Komunikasi, Yogyakarta, vol. 08, pp 139-152, April 2014.

[3] Dick, W, "*Generasi Muda Kurang Tertarik Berpolitik,*" [Online]. available: http://www.dw.de/generasi-muda-kurang-tertarik-berpolitik/a-17340070, 2014

[4] Kominfo, "*Jumlah Pengguna Internet 2017 Meningkat, Kominfo Terus Lakukan Percepatan Pembangunan Broadband,*" available: https://kominfo.go.id/index.php/content/detail/12640/siaran-pers-no-53hmkominfo022018-tentang-jumlah-pengguna-internet-2017-meningkat-kominfo-terus-lakukan-percepatan-pembangunan-broadband/0/siaran_pers

[5] Monggilo, Zainuddin Muda Z, "Kajian Literatur Tipologi Perilaku Berinternet Generasi Muda Indonesia". Jurnal Ilmu Komunikasi, vol. 13, pp. 31-48 Juni 2016

[6] Priyono, E., dan Dihan, F. N, "E-Voting: Urgensi Transparansi dan Akuntabilitas," Seminar Nasional Informatika (semnasIF 2010) ISSN: 1979-2328 UPN "Veteran" Yogyakarta, Mei 2010

[7] Darmawan, Ikhsan, "Why Adopt E-voting? Study on Village Leader Elections in Musi Rawas, South Sumatera," Jurnal Politik, fisip UI, vol. 1, pp. 5-29, Februari 2016

[8] Schaupp, L. Christian, "E-voting: from apathy to adoption," The Journal of Enterprise Information Management, USA, vol. 18, pp. 586-601,

[9] Latief, M, "Desain Interaksi dalam Pengembangan Aplikasi E-Voting Studi Kasus: Pemilihan Umum Raya KM-ITB," Jurnal Sarjana Institut Teknologi Bandung Bidang Teknik Elektro dan Informatika, vol. 1, pp. 1-9, 2012

[10] Wuryan, Sri dan Syaifullah, "*Ilmu Kewarganegaraan (Civic),*" Bandung: Laboratorium PKn FPIPS UPI, 2013

[11] Wardhani, Primandha Sukma Nur, "Partisipasi Politik Pemilih Pemula dalam Pemilihan Umum," Yogyakarta: Jurnal Pendidikan Ilmu-ilmu Sosial, vol. 10, pp. Juni 2018

[12] Sarwono, Jonathan, "*Psikologi Remaja,*" Jakarta: Raja Grafindo, 2007

[13] Yusuf, dkk, "Digital Citizen Participation within Schools in the United Kingdom and Indonesia: An Actor–Network Theory (ANT) Perspective,". Information, vol. 7, pp. 1-27, November 2016

[14] Ikhwani, Yusril, "*Analisis dan Rancangan Sistem E-Voting Pemilihan Ketua Osis,*" Technologia. vol. 9, pp. 138-143, September 2018

[15] Aji, Rustam, "*Digitalisasi, Era Tantangan Media (Analisis Kritis Kesiapan Fakultas Dakwah dan Komunikasi Menyongsong Era Digital),*" Islamic Communication Journal, vol. 1, pp. 43-54, Mei-Oktober 2016

[16] Muhasim, "*Pengaruh Teknologi Digital terhadap Motivasi Belajar Peserta Didik,*" Palapa: Jurnal Studi Keislaman dan Ilmu Pendidikan, vol. 5, pp. 53-77, November 2017

[17] Creswell, John W, "*Research Design Pendekatan Kualitatif, Kuantitatif dan Mixed,*"Yogyakarta: Pustaka Pelajar, 2012

[18] Yulianto, Jony Eko, "Studi Komparatif Identitas Nasional pada Remaja Generasi Z Ditinjau dari Intensitas Penggunaan Internet, Humanitas, vol. 13, pp. 149-159, 2016

[19] Zaen, Mohammad Taufan Asri & Putra, Ryadi. (2018). *Aplikasi Voting Pemilihan Ketua Organisasi Siswa Intra Sekolah (Osis) pada MA Nurul Ihsan NW Tilawah Berbasis Web*. Jurnal Manajemen Informatika & Sistem Informasi, *1*, (2), 43-48

[20] Affandi, Idrus, "*Pendidikan Politik: Mengefektifkan Organisasi Pemuda Melaksanakan Politik Pancasila dan UUD 1945,*" Bandung: Mutiara Press, 2011