

Implementation Of An Electronic Voting System (E-Voting) In Village Head Elections In Maburai Village, Tabalong District, South Kalimantan Province

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Article Info

Received
01 September 2022

Accepted
22 September 2022

Published
30 October 2022

Keywords:

Implementation
Electronic Voting System
E-Voting
Village Head Elections

ABSTRACT

The purpose of this study was to determine the implementation of the electronic voting system in village head elections in Maburai Village, Murung Pudak District, Tabalong Regency, and to determine the factors that hindered the implementation of the electronic voting system in village head elections in Maburai Village, Murung Pudak District, Tabalong Regency, South Kalimantan, Indonesia. This study uses in-depth qualitative research methods. The location of this research is at the Community and Village Empowerment Service of Tabalong Regency, which is the focus of this research is How is the Implementation of the Electronic Voting System in the Village Head Election in Maburai Village, Murung Pudak District and what are the factors that hinder the Implementation of the Electronic Voting System in the Head Election Village in Maburai Village, Murung Pudak District. Based on the results of the research and discussion analysis that has been described related to the Implementation of the Electronic Voting (E-Voting) System in the Election of Village Heads in Maburai Village, Murung Pudak District, Tabalong Regency, it has been successfully implemented properly, where the implementation of e-voting in village head elections has fulfilled the principles in the implementation of e-voting namely eligibility and authentication, uniqueness, accuracy, integrity, reliability, confidentiality, flexibility, convenience, certification, and transparency, even though the indicators of cost-effectiveness have not been met but this does not affect the effective quality of the e-voting system. The inhibiting factors in the implementation of the e-voting system in the election of village heads in Maburai Village were the lack of socialization carried out by the election committee so that many people did not know at all what e-voting was and how to use it and their was intervention from parties who wanted to hinder or thwart the implementation of the system, e-voting in village head elections because it is considered that the results can be manipulated.

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1. INTRODUCTION

The government faces a formidable challenge in resolving the numerous problems associated with implementing village head elections; it requires encouragement and a willingness to adopt innovations in the form of technology that will enable village head elections to be conducted in a transparent, effective, efficient, and professional manner, as has been aspired. Then, a concept evolved for implementing village head elections by leveraging current technology and being able to provide solutions to existing election concerns, particularly by employing the Electronic Voting method, also known as e-voting.

The introduction of e-voting as a new method in general elections is anticipated to be able to address all of the obstacles and flaws in the old method's implementation. As the most recent general election procedure, e-voting has been accepted and utilised in elections in several countries throughout the world. According to data from the ACE Project processed by Darmawan et al. (2014: 17): As of January 2010, the total number of countries that have been in contact with the *e-voting method* reached 43 countries, divided into 4 categories, namely: countries that practice *e-voting* with electoral machines (12 countries), countries that practice internet voting (7 countries), countries that have just arrived at the planning and trial stages of *e-voting* (24 countries), and countries that have stopped implementing *e-voting* (4 countries). The above data is summarized in the table below:

Table 1.1
Countries Implementing And Planning *E-Voting*

<i>E-VOTING</i> CATEGORY	COUNTRY
1	2
<i>e-voting</i> with a voting machine	Australia, Brazil, Canada, France, India, Japan, Kazakhstan, Peru, Russia, United States, United Arab Emirates, Venezuela
<i>e-voting</i> with <i>internet voting</i>	Austria, Australia, Canada, Estonia, France, Japan, Switzerland
<i>E-voting</i> planning and piloting	Argentina, Azerbaijan, Belarus, Bulgaria, Chile, Czech Republic, Finland, Greece, Italy, Latvia,
	Lithuania, Mexico, Nepal, Nigeria, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, South Africa, Spain, South Korea, Sweden
Implementation of <i>e-voting</i> Stopped	Germany, Ireland, Holland, England

Source : Darmawan et al. (2014)

In Indonesia, the first district to conduct simultaneous village head elections using e-voting is Tabalong Regency in South Kalimantan Province. It is anticipated that the existence of e-voting in Tabalong Regency will be able to solve all existing election concerns, despite the village head election being a relatively minor election.

Tabalong Regency is one of the regencies in South Kalimantan Province which is carrying out simultaneous village head elections in 2021, where the implementation of the second wave of village head elections (Pilkades) was held simultaneously on November 6 2021 which was held or held in 64 villages out of 121 villages spread across 12 sub-districts in Tabalong Regency with a total of 184 TPS and a total of 73,450 DPT (source DPMD Tabalong Regency).

Murung Pudak District, Tabalong Regency is a sub-district in the middle of an urban area, which is also Murung Pudak District, which is one of the sub-districts that is carrying out simultaneous village head elections with the *e-voting method* in 2021, where the village head elections in Murung Pudak sub-district, Tabalong Regency are as many as 3 villages that held village head elections. As for village names, the number of TPS and DPT in Murung Pudak District can be seen in the following table:

Table 1.2
Number of Villages, TPS, and DPT in Murung Puduk District

No	Subdistrict	Village	Selection Method	Number of TPS	Number of DPT based on Gender	Total DPT
1	2	3	4	5	6	7
1.	Moody Puduk	Maburai	<i>e-voting</i>	5	L 903 P 953	1855
2.	Moody Puduk	Enter	Direct election	3	L 548 P 585	1133
3.	Moody Puduk	Flotsam	Live Selection	7	L 1447 P 1509	2956

Source: DPMD Kab. Tabalong

From the table above, in Murung Puduk District, of the 3 (three) villages that held Pilkades, there was 1 (one) village that carried out village head elections using the *e-voting method*, namely Maburai Village.

Maburai Village is a village located in Murung Puduk District where the village head election was carried out using the *e-voting method* for the first time in the history of the election for the head of Maburai village (source from the Head of PMD Office of Tabalong Regency)

Simultaneous election of village heads through the *e-voting method* in Maburai Village, Murung Puduk District, found various problems in practice. Even though this is the first policy to be implemented, of course, there are many obstacles outside the planning. So the selection of *e-voting* in these activities is still not optimal in the implementation process.

Based on the results of interviews with the Head of the Community and Village Empowerment Office of Tabalong Regency, he said that in general, the Pilkades took place in a safe and orderly manner, but it did not seem smooth due to disturbances in the *e-voting device*, and there were still many people who did not understand about *e-voting* itself, especially The Pilkades implementation was carried out during the Covid 19 pandemic which certainly added to the difficulties in carrying out the Pilkades in Tabalong Regency. From the results of these interviews, it can be seen that at the time of its implementation, *e-voting* did not seem smooth due to interference with the election system. In dealing with this event, the committee seemed slow to normalize the *e-voting device*, which resulted in the slow completion of the *e-voting process* and the lack of socialization regarding elections using the *e-voting method*.

2. METHOD

The research approach used is a qualitative approach, namely to know and understand the facts or reality of the object under study to make it easier for the writer to obtain objective data to know and understand in depth the implementation of the *e-voting system* in the election of village heads in Maburai Village, Murung Puduk District, Regency Tabalong. The type of research used is descriptive research in which research is directed at analyzing the implementation of the *e-voting system* in the implementation of village head elections in Maburai Village, Murung Puduk District, Tabalong Regency at the implementation stage and also analyzing the factors that hinder the implementation of the *e-voting system* in the implementation of elections. Head of Village in Maburai, Murung Puduk District, Tabalong Regency.

The selection of informants in this study was carried out utilizing purposive sampling, namely a subjective sampling technique with specific aims and objectives, in which the selected informants had the necessary information for the research being conducted. The informants in this study consisted of:

1. Head of Empowerment and Village Office of Tabalong Regency
2. Head of Communication and Informatics Office of Tabalong Regency
3. Sub-District Head of Murung Puduk, Tabalong Regency

4. Pilkades Organizing Committee for Tabalong Regency

5. Villagers Maburai, Tabalong Regency

This research was conducted in Tabalong Regency, South Kalimantan Province at the Community and Village Empowerment Service of Tabalong Regency with the object of research being to analyze the implementation of the *E-Voting system* in the election of village heads in Maburai Village, Murung Pudak District, Tabalong Regency in 2021, which in this study focuses on the factors hindering the implementation of the *e-voting system* in the Village Head Election in Maburai Village, Murung Pudak District, Tabalong Regency.

3. FINDINGS AND DISCUSSION

E-voting is a general election process that allows voters to record their choices that are confidential electronically and securely. The purpose of e-voting is to organize cost-effective voting and fast vote counting using a safe and easy-to-audit system. With e-voting, vote counting will be faster, you can save costs for printing ballots, voting is simpler, and equipment can be used repeatedly for elections and local elections. According to the Agency for the Assessment and Development of Technology (BPPT), (2012), the e-voting system is a system that utilizes electronic devices and manages digital information to create ballots, cast votes, calculate vote acquisition, display vote acquisition, maintain and produce audit trails.

This section will discuss the results of research or findings in the field related to the Implementation of the *E-voting System* in the Election of Village Heads in Maburai Village, Murung Pudak District, Tabalong Regency in 2021. This research is guided by the framework that has been made, in which this research focuses on 2 stages important in the implementation of the e-voting system in Maburai Village, namely the preparation stage for the election and the voting implementation stage which at that stage will be linked to the principles of *e-voting*. Apart from focusing on these 2 stages, here we will also discuss the factors that hinder the implementation of the E-voting system in the election of village heads in Maburai Village, Murung Pudak District, Tabalong Regency. The research results are as follows:

Election Preparation

The election of the village head in Maburai Village, Murung Pudak District with the e-voting system is of course a new thing held by the government, of course, the preparations or stages related to the implementation of the e-voting system are a very important activity to be carried out to make the village head election process successful. . The stages of implementing the *e-voting system* in Pilkades are as follows:

1). Workshops

In the early stages of implementing the *e-voting system* in village head elections, knowledge is certainly needed regarding the use of the *e-voting* system. The workshop is a very important stage in the implementation of the e-voting system in village head elections where the workshop activities provide an understanding regarding the use of the system so that when voting can run smoothly.

In this regard, the Chairperson of the Village Head Election Committee in Maburai Village explained as follows:

"With the workshop organized by the district government, helps us to understand the use of the e-voting system"

Based on the explanation above, the workshop activities conducted by the district government related to the explanation of e-voting technology were very helpful for the election committee in the village and the technical team so that in field implementation any existing obstacles could be handled quickly.

2). Village Head Selection Committee Certification

In implementing the e-voting system in the village head election, of course, it must be supported by a village head election committee that already has special skills or knowledge in carrying out this task. The Head of the Empowerment and Village Office of Tabalong Regency, explained as follows:

"In the implementation of the e-voting system in the village head election, all village head election organizers, all committees are certified because they already have the skills or knowledge related to the e-voting system"

From the explanation above, the certification of the village head election committee needs to be done so that there are no doubts about holding village head elections using the e-voting system. The village head election committee is a committee that has been formed by the BPD.

This was also conveyed by the Head of the Information Communication and Statistics Office of the Regency. Tabalong explains as follows:

"The selection committee certification is for those who have been given knowledge regarding the e-voting system so that there is no longer any doubt about the ability of the committee to carry out its duties."

Based on the explanation above, the village head election executive committee in Maburai Village with the e-voting system already has the ability or knowledge regarding the operation of the e-voting system itself, so that the implementation of tasks in the field can take place properly.

3). Certification of *e-voting Technical Team*

At the time of voting using the e-voting system in village head elections, of course, there must be a technical team tasked with accompanying the voting process which aims to be able to resolve quickly if an error occurs in the system. according to the Head of Information Communication and Statistics Kab. Tabalong, explains as follows:

"The technical team in charge of carrying out village head elections using the e-voting system are those who work at the Information Communications and Statistics Office of Kab. Tabalong. Which is where the technical team is certified in handling the e-voting system."

The technical team is the most important tool in the success of the e-voting system in village head elections because they can solve quickly and understand every problem if at any time the system goes wrong.

Execution of Voting

The implementation stage of voting with the e-voting system, of course, is different from manual voting, some mechanisms or stages must be carried out by voters. The voting mechanism using the *e-voting voting tool* is as follows :

1). Voters bring invitations and e-KTPs, then carry out e-Verification assisted by officers, according to the Head of the Election Committee Head of Maburai Village explaining as follows:

" Verification of e-KTP is the initial stage in voting, in which e-KTP verification uses an e-verification device."

Based on the explanation above, each voter will first verify their e-KTP using an e-verification device, which is the initial stage of the election. By verifying the e-KTP to avoid multiple voters in village head elections.

2). Verification uses fingerprints as proof that the e-KTP belongs to the voter. The Chairperson of the Maburai Village Head Election Committee explained as follows:

" After verifying the e-KTP, the committee also verifies using fingerprints"

Fingerprint verification is carried out to ensure that the e-KTP brought by the voter is genuine and not fake, this is done to avoid illegal voters or multiple voters.

3). Voters receive smart cards. The Chairperson of the Maburai Village Head Election Committee explained as follows:

"After verification, voters will be given a Smart Card to be able to vote for a village head candidate"

After being verified by the voting committee, a Smart card will be given to be able to elect a candidate for village head in Maburai village.

4). Insert the smart card into the smart card reader, then select a candidate that will appear on the screen

5). Choose a candidate on the screen, press YES if correct and NO if you want to choose another candidate

6). Physical evidence will be automatically recorded via a thermal printer

7). Voters return the smart card and enter the physical evidence of the audit paper into the ballot box

8). Voters dip their fingers in ink as a sign that they have voted and exit through the exit

9). Election complete

10). For voters who use a certificate, the difference is only in the e-verification process, that is, it is enough to show the certificate to the officer and the next process is the same as for voters using an e-KTP.

Implementation of e-voting

The implementation of village head elections in Maburai village with the e-voting system was the first time in the history of village head elections in Maburai village, where village head elections with e-voting have many advantages compared to manual elections. This was explained by the chairman of the Maburai village head election committee as follows:

"The election for the Head of Maburai Village, Murung Pudak District, Tabalong Regency is now electronic or e-voting based. Where villagers don't have to stand in line for up to an hour to wait for their turn to vote."

Based on the explanation above, it can be concluded that the election of village heads using the e-voting system held in Maburai Village gave a very good impression and the system was very efficient in terms of time, during which the community was no longer queued because the process of using the system was very fast and easy. Things like this will have an impact on the level of community participation in selecting candidates for village heads.

This was also conveyed by Mr. Ayat, the community of Maburai Village, explaining as follows:

" This election for the village head using the e-voting system is very interesting because the entire implementation process is very fast and that makes the people happy about it "

Based on the explanation above, it is the same as what was conveyed by the chairman of the election committee that the election of village heads with the e-voting system is very fast in all stages of the process of distributing voting rights and this is highly appreciated by people who do not want to linger at voting locations or TPS.

It can be concluded that all stages of the village head election process in Maburai Village started when the villagers did not need to stand in line for up to three hours to wait for their turn to vote, which we know for ourselves that manual voting takes time but now it takes several minutes in its implementation, as previously stated. It can be seen that after residents registered themselves, they were asked to sit down to wait for their turn to be called upon to exercise their voting rights. This time the Maburai Village election was attended by 3 (three) village head candidates. After residents waited a few minutes, where residents who were at the front to enter the TPS, and residents who exercised their right to vote only needed a few steps from the TPS entrance to approach the first table. There, he will verify the E-KTP that he has held since he started standing in line outside.

Residents who are ready to exercise their right to vote to appear on the committee's verification laptop screen. The mark of the community is registered as a voter. The residents then headed to the voting booth to exercise their voting rights. Because for the first time, when they were in the voting booth, the residents recalled how to vote that had been socialized by the previous Pilkades committee. Where residents just have to press the candidate's photo, then vote, it's done, so that the implementation of village head elections by *e-voting* in the village will be very effective and efficient both in terms of budget, implementation time as well as transparency and accountability.

The implementation of village head elections following applicable regulations is held every 6 years. The process for selecting village heads is very similar to post-conflict local elections, but the difference is in the organizers, where village head elections are held by a committee formed by the BPD (Village Consultative Body) from each village which is a derivative of the SK establishing the Village Head Selection Committee by the Regent.

In the context of realizing people's sovereignty to choose leaders, one of which is held through general elections mandated in government regulations, namely the election of the Village Head, has been proven to suck up a very large budget, even though the mandate for holding elections is the most important according to law to be efficient and effective. For this reason, electronic elections (*e-voting*) are currently an innovative choice and are very important in carrying out one of the pillars of quality democracy.

From the results of observations in the field of village head elections which were held for the first time in Tabalong Regency in Maburai Village, Murung Pudak District, the research was carried out by researchers by traveling around the research environment, besides that interviews were also conducted with various parties related to the implementation of the *Electronic System Voting* in the Village Head Election in Maburai Village, Murung District in 2021.

4. CONCLUSION

The implementation of the Electronic Voting System in the Election of Village Heads in Maburai Village, Murung Pudak District, Tabalong Regency has been successfully carried out properly where the application of e-voting in village head elections has fulfilled the principles in implementing e-voting, namely eligibility and authentication, uniqueness, accuracy, integrity, reliability, confidentiality, flexibility, comfort, certification, and transparency, even though the cost-effectiveness indicators have not been met but this does not affect the implementation of village head elections with the e-voting system. Implementation of the E-voting System in the Election of Village Heads in Maburai Village, Murung Pudak District, Tabalong Regency, there were several obstacles in the implementation of the village head election, namely the lack of socialization delivered to the community regarding the e-voting system so that many people did not know at all how to use e-voting the voting itself and the presence of intervention from outsiders who want the implementation of village head elections with the e-voting system not to be carried out because the results can be manipulated.

There is a need for a socialization stage that clearly explains the advantages of the e-voting system used as well as the public being taught directly how to use the e-voting tool to increase voter trust and participation. In addition, collaboration with all parties involved is also required by making a joint commitment to support and succeed in the election of village heads with the *e-voting system* so that in the future it can be implemented in all villages in Tabalong Regency.

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