The role of electronic management in developing the electoral process E-voting (template)
An applied study on the electoral process in the Hashemite Kingdom of Jordan

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ABSTRACT

This study is summarized in showing the role of modern means of technology and communication and their effect on developing the electoral process where through it we dealt a new concept which is the digital democracy as a major entry to the electronic voting. We realized that the modern means of technology and communication will perform a serious role in forming a new and modern election law that keeps pace with the informational and technical leap that the world witnesses and led to a radical change in many common concepts such as democracy, digital citizenship and replacing paper and ballot boxeswith the idea of electronic voting providing to surround it with insurances that some of them related to legal texts which strengthen it and others related to informational security and culture to reinforce trust of all in the new image of the traditional voting.

A General Introduction

The entry of modern technology and means of communication in the electoral process is an inevitable result of application of the comprehensive concept of the electronic management , where it became the new criteria of the new civilization and modernity of the country. At present most of the elective administrations all over the world tend to recruitment of modern means of technology and communication to improve the electoral process where those administrations started to use the simple means of technological techniques and communication such as the texts processor program and data schedules to the more complex tools of data processor such as systems of managing data rules , scanning and geographical information systems. It is time to use those means in facilitating the electoral process particularly in the stage of voting and conduct it electronically as a new form for the common traditional voting. Although the modern means of technology and communication will give the electoral administration new choices of the voting process, but they probably have dangers derived their features from the technical nature of those means or reasons related to the level of the practical process and acceptance of electors to the modern style of administration of the electoral process.

Second: The study problem

Public administration resort to modern means of technology and communication became an urgent need, and since the electoral process is one of the most important feature, it became essential that this process should keep up with what means of communication witness of development and variety. From here the important of the study emerges through addressing to a matter which is : what is the extent of fitness of modern means of technology and communication to recruit them in order serve and develop the electoral process and efficacy of the related legislations to understand the new concepts of modern means of communication used in expressing the electors will such as e-mail or different electronic cards and what are the

challenges that will face the idea of electronic voting and the procedures to overcome them.

Third :The study difficulty

1. Scarcity of specialist juristic and legal references dealt with the issue of using modern means of technology and communications particularly the field of electronic voting.
2. Scarcity of scientific thesis and legal studies dealt with this subject.
3.There are no legal judgments dealt with the subject of this study.
4. There is no legal system organizes the electronic voting process especially in the Hashemite Kingdom of Jordan.

Fourth: Related studies

Regarding the related studies that dealt with the subject of this study, we found some studies as follows:

1. The electronic voting and security of electoral process, a published study by the researcher Saddam Kokaz Al-Mohammadi.
2. The electronic voting in elections and possibility of its application in Iraq, a published study, by the researcher Hamid Qasim Al-Mousawi.
3. The role of information technology in creating a new practice of democracy: the electronic democracy, by researcher Nawal Maghzili, a published study.
4. Suha Zaki Noury, Wahj Khudair Abbas, The mechanism of electronic voting in the parliament elections: a study to develop the electoral experience in Iraq, a published study. It is worth noting that most these studies dealt with the subject of the study and applied them in Arabcountries like Iraq. What this study will add is the possibility of applying and experiencing the idea of electronic voting under the applied law in the Hashemite Kingdom of Jordan.

Fifth: Methodology of the study

We will use in our study the analytical, descriptive and applied comparative methods within the legal texts range featured with modernity that the comparative legislations have

which imposes on us to divide this study into two requirements as follows:

The first requirement: The core of electronic public administration

The second requirement: The electronic voting

The first requirement

The core of electronic public administration

Preface

Most of administrations seek to use the modern means of technology and communication in all of their administrative businesses so that they keep pace with the tremendous technical development which affected the modern concept of administration of the public facilities of country [1], and the application of the electronic public administration requires issuing private legislations to be ruled through a clear legal organization [2] in addition to handling all of the administrative policies which create atmosphere of contradiction with the requirements of the electronic administrative transformation in order to strengthen the concept of the public administration without paper[3] .It is worth noting that the virtual world with its all elements finds a fertile field and promotion to integrate in the public administration systems as it is considered to be a reflection to the nature of the administrative law principles which all are featured with their ability to develop and amend continuously [4] . In this requirement, we will

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(1) Hamza Dhahi   Alhamada, The electronic government and its role in offering facility services, 1st ed. , University Thought House, Alexandria, 2016, p 26.
(2) Prof. Amal Lutfi Hasan Jaballah, The effect of electronic means on the legality of legal administration behaviors, a comparative study, 1st ed. , University Thought House, Alexandria, Is. 1, 2010, p 546.
(3) Dr. Mousa Shahada, The electronic administration and possibility of its application filing a case before the administrative judiciary by e-mail, a published study, Journal of Law for Legal and Economic Research, Faculty of law, Alexandria University, Is. 1, 2010, p 546.
(4) Prof. Hamdi Suleiman Al-Qbailat, The legal system to hold the electronic administrative contracts, a published study, Journal of Law and Sharia'

show the concept of the electronic public administration then the extent of its legality as follows:

The first section
The concept of electronic public administration

There were many terms that indicate the modern method in managing the public facilities; there were administrative systems called the name of electronic government on that method, and others called electronic administration ([1]). From our point of view, we think the most appropriate is to use the verbalism the electronic public administration to indicate the electronic transformation in the businesses of public administrations. A part of jurisprudence pointed to a difference between the electronic administration and electronic businesses where the latter includes an extensive meaning of the electronic administration as the electronic businesses are varied; some of them are administrative , commercial and others are civil ([2]). Jurisprudence faced the issue of defining the concept of the electronic administration to achieve public interest ([3]). Another part said that the electronic

administration is "Using all of administrative methods that work on a success of administrative operations plan ([4]), and others said that the electronic administration is "Transform all paper administrative operations into electronic ones using modern technical development (electronic operation) or administration without paper ([5]). From the above we think that jurisprudence concerned much on defining the concept of electronic administration to indicate the public administration's desire to transfer from the paper space into the electronic one through adaptation the modern means of technology and communication and using mechanization in all of the administrative businesses and express it by wetting it within electronic digital templates to bring it into existence. We can say that the electronic public administration is **"Transfer all of the administrative work features from the traditional form into the electronic one", or it is "A new vision of the concept of public administration in the information age which works on enabling all of institutions, ministries and public bodies to practice all of their works and contractions and provide better services to audience with best exploiting of available modern means of technology and communication through employing the available moral, human and material within the modern electronic field for the best exploitation of time, effort and money to achieve public interest".** The electronic public administration is considered to be a unique model and can be developed to be a fertile field for those interested in developing the administrative work which aims to function public facilities to reach modernity that targets administrative activity and behavior from one hand , and on the other hand the public services; the administration tries to get rid of bureaucracy and government routine which is the merit of public administration at present

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Sciences, Deanship of scientific research, University of Jordan, Vol.34 , appendix, 2007, p 658.

(1) For more details about that controversy, see Dr. Mohammad Suleiman Shbair, The enforcement of the electronic administrative decision, a comparative applied study, PhD Thesis, Faculty of law, Ain Shams University, Cairo, 2015, p 326 and beyond, Dr. Suhaib Ahmad Al-Manaseer, towards a legal organization of the electronic administrative contracts, a comparative study, PhD Thesis, , Ain Shams University, Cairo, 2019, p 73 and beyond, Hamza Dhahi Alhamada, previous reference, pp. 29 – 30.

(2) Dr. Mohammad Suleiman Shbair, The enforcement of the electronic administrative decision, previous reference, p 311.

(3) Dr. Mohammad Suleiman Shbair, The enforcement of the electronic administrative decision, previous reference, p 311, and a part of Jurisprudence supported the saying that adopted the concept of government by excluding description of electronic process which became the center of the administrative work, for more details see Dr. Suhaib Ahmad Al-Manaseer, previous reference, p 75 and beyond.

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(4) Dr. Mohammad Sameer Ahmad, The electronic administration, March House for Publishing and Distribution, 1st ed. , Amman, 2009, p 25.

(5) Prof. Amal Lutfi Hasan Jaballah, previous reference, p 33.

through adapting modern means of technology and communication in functioning public facilities and providing public services to citizens. It also enables us to find and exploit choices of economic growth and achieve administrative reform; the electronic public administration will offer the merit of entry of companies and institutions of the private sectors to the electronic platforms prepared by the public administration to obtain public services without the materialistic attendance to those administration, and thus offering the essential space to develop public administration to enable them to achieve higher levels of transparency and quality in providing public services. From the above, we can define another concept of electronic public administration as "The specialized body in providing electronic public services through modern means of technology and communications to the target category of audience who are able to achieve electronic communication with it".From our point of view, we think that this concept is one of the most important criteria to measure the improvement and development of public administrations and its order in achieving administrative transparency and to measure extent of the audience satisfaction about quality of the provided services by them. We think that this idea is a result of a continuous controversy among all interested juristswhere this controversy wasn't resolved until the moment, and this due to flexibility and ability of the concept of electronic public administration to change continuously and its ability to understand all of new concepts occurred to modern means of technology and communication.

The second section

Legality of the electronic public administration

In the light of many recent votes that call for the necessity of transform towards electronic in practicing the public administration of their activities and behavior and providing electronic public services to audience, a question arose about the effect of this transform and extent of its legality particularly its signs became inevitable reality under a lot of challenges which put an

obligatory road map to all public administrations towards that transform. The importance of this study lies in the issue of legality of applying the concept of electronic public administration since it is a new environment that will practice their activities and express behaviors through the public administrations [1]. We can say that the public administration seeking for legalityrequires offering legal and legislative texts that facilitate the work of electronic administrations and strengthen credibility in all resulted legal effects [2]; where all of what the administration will do under the electronic public administration would be imaginary electronic support in that about paper documents and support, and this what addresses legal questions about safety and legality of these works and extent of legality of resulted effects and their evidence [3]; where some jurists think that offering legal and legislative texts is one of the requirements of applying the concept of electronic public administration because of their role in legitimizing all of what the administration does within the virtual range [4]. Whereas another part of jurisprudence thinks tat the system of electronic public administration is completely rejected particularly in the area of concluding the

(1) Dr. Mohammad Suleiman Shbair, The effect of electronic development on the electronic administration behaviors in Palestine, a published study, Al-Azhar University Journal - Gaza, Humanities Series,Vol.17, Is. 2 (B), 2015, pp. 343-344.
(2) Dr. Mustafa Yusuf Kafi, The electronic administration , 1st ed. , Raslan House and Institution for printing publishing and distribution, Damascus, 2011, p68. Sharif Abdulla Al-Hamawi, The modern trends in managing office sand secretaryship, 1st ed. , Yafa House for publishing and distribution, Amman, Jordan, 2011, p 23.
(3) Prof. Hamdi Suleiman Qbailat, The signature as a formality in the electronic administrative decision, a published study, Journal of Sharia' and Law- Studies, Vol.34, appendix, Deanship of scientific research, University of Jordan, 2007, p 681.
(4)Dr. Mustafa Yusuf Kafi, The electronic administration, previous reference, p 67. Sharif Abdulla Al-Hamawi, previous reference, p 22. Fatima Hilal, The electronic administration and how to apply it, a published article via the internet, available online: (http:www.rqiim.com).

administration's behaviors, where this trend led to a proof which stated that the system of electronic public administration constitutes a violation to rules of administrative law. It is inconceivable for modern means of technology and communication to replace the administration and the rules of the administrative law were to organize the legal nature of what the administration does including behaviors and activities not to organize the administration relationship with modern means of technology and communication([1]). Regarding analysis and critic of previous opinion, we can say this opinion didn't consider the prominent feature of the administrative law rules where it is constant that those rules can be changed continuously that guarantees to accommodate all developments and variables that affect the method of managing public facilities and what the administration does of behaviors and activities. Therefore , it is true to say that the electronic public administration can't be practiced without the principle of legality particularly there is fear of abuse to use authority will remain under the new method of the administration which makes legality in this state deterministic necessity to fix the features of that method. We think that the justifications of applying the electronic public administration can be summed up as follows:

1. The use modern means of technology and communication are only tools that the administration will use in all of its works and activities and won't replace the administration but it is the opposite, where they will help the administration to integrate within complete electronic system that meets the administration and audience needs.

2. The electronic public administrationis only a clear application of the administrative law goal represented in achieving public interest.

3. The electronic public administration and electronic systems that follow is the effective tool to eliminate bureaucracy and governmental routine.

4. Recruiting modern means of technology and communication and making them dominant feature on the public administration method will strengthen the role of regulations and supervising bodies on the administration performance and its employees in addition to offer statistical information and service quality scales.

5. The administrative development at present is measured by the extent of the public administration development and keep pace with latest developments of technical development in light of the information technology revolution

It is worth noting that the Jordanian legislator alerted to this matter through deciding the electronic transactions law permanently after it was temporary for a long time([2]) , where the legislator fixed several principles related to approving messaging and electronic transactions ([3]). **We can saythat this law constituted the major pillar by which the legislator revealed his desire to approve the legality of messaging and electronic transactions in addition to determine the related concepts such as the situation of electronic transactions, data messages, electronic signature and others which constituted later the public administration system.**

And based on our absolute belief in the necessity of comprehensiveness when issuing electronic legislation, we find the legislator has not succeeded when setting the definitions based on the text of the Article 2 of Electronic Transactions Law ([4]), where their definitions are restricted to

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(1)Dr. Mohammad Suleiman Shbair, The effect of electronic development on the electronic administration behaviors in Palestine, previous reference, p344.

(2) Jordanian Electronic Law, No.15 of 2015, issued in the official newspaper Is. No. 5341 on 17/5/2015 on the page 5292.

(3) For more details about these concepts see the Article 2 of Jordanian Transactions Law, mentioned previously.

(4)The Article 2 of Jordanian Electronic Transactions Law defined electronic transactions, mentioned previously as "Any procedure occurred between a part or more to create a commitment on one part or reciprocal commitment between two parts whether

any procedure conducted between two people or more to arrange reciprocal commitment regardless the nature of the commitment as a restriction on the public administration where its activity is characterized with diversity and multiplicity. Here, we would like to attract the legislator's attention to the need of conducting a comprehensive revision of all electronic legislations particularly those considered to be within the range of public administration work, checking their vocabulary and inserting amendments whenever needed to reach complete legislations free from shortcomings in a way that separates the administration from criticismand provide legitimacy to all that these administrations perform in the light of the method of electronic public administration and what accompanied that method of continuous development derived from the nature of modern means of technology and communication.

In the light of continuity of the legislator efforts that guarantees the legitimacy of electronic public administration behavior, the Government Procurement System was revealed which included texts of fixing what the public administration conducted of contractions through electronic means [1] ; where this system provides a standard legislations which organizes the contractions of administration through modern means of technology and communication [2].

In the interest of the legislator to complete the legitimacy system to hold the administrative contracts electronically, the legislator issued a lot of related information such as instructions of

conducting government procurement [3],organizing and using electronic procurement[4]. Related to this study, we didn't find what indicates any legal texts whether in the election law related to parliament or municipal councils or even governorate councils [5] which allow the electronic public administration to use modern means of technology and communicationsin conducting the election operation particularly the electronic voting stage. Therefore, we appeal the legislator the need to conduct a legal amendment on the election law which allows to conduct the lection process through the assistance with modern means of technology and communication in a way that the complete electronic transform legitimacy in managing and conducting the election process particularly the electronic voting stage.

The second requirement
The electronic voting
Preface

It is expected that modern means of technology and communication will contribute in occurring a noticeable change in the public sector operations and quality shift in the administration works; as what will result from using these techniques of change in the style of administrative work and raise its effectiveness and performance [6]. The election process wasn't far away from influencing of modern means and techniques of communication which their features merged through the demands of local and international

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related to a commercial or civil business or with a governmental department.

(1)The Government Procurement SystemNo. 28 of 2019, published in the official newspaper Is. No. 5572 on page 2440, on 1/5/2019.
(2) The Government Procurement System No. 28 of 2019 to create a developed system that keeps pace with developments and reforms in the Government Procurement System and separates the role of planning supervision role from the executive role assigned to the three central procurement departments (Government tenders, general supplies, and standardized procurement).

(3) Instructions of organizing conducting of government procurement of 2019 in the official newspaper Is. 5608 on page 6751 on 12/11/2019.
(4) Instructions of organizing and using electronic procurement published in the official newspaper Is. 5496 on pager 1442 on 15/3/2016.
(5)The election law for the Jordanian Parliament and its amendmentspublished in the official newspaper Is. 1442, on 15/3/2016.
(6)Kaltham Mohammad Al-Kubaisi, Requirements of applying electronic administration in information systems center belongs to the electronic government in Qatar, MA Thesis, Faculty of Business administration, Britain, 2008, p 7.

community institutions to speed up to get rid of the traditional style and replacement of concepts of digital democracy as a feature of the modernization of the state and its components particularly as the modern techniques role in solving the problem of distant directorates, committees and councils of country from the capital where its agencies are concentrated in, and thus going out of the deadlock of geographical distance ([1]).

We can say that the factual application of the concept of electronic public administration on the ground will be in its best images in case it is recruited to serve political life in general and employed in the best form to develop the election process privately.

Since we committed to deal with the issue of electronic voting in this study, we should explain the concept of digital democracy as a base of the electronic voting, then the essence of electronic voting as a new image of traditional voting and what surrounded of details, and this what we will deal with in this requirement as follows:

The first section

Digital democracy as a base of the electronic voting process

The modern means of technology and communication played a major and serious role in the political and democratic reform, as there is an environment featured with institutional weakness represented in shortage of political parties, civil society, representatives of the legal authority as traditional institutions to manage the election process and sight and non-agreement between changes in public opinion and setting policies operation, the modern means of technology and communication came to offer new tools rather than political parties and legal authority to become the master of the situation in managing the

election process in preparation for fixing the concept of digital democracy as a new image where digital technology plays a serious role in changing democratic practices and creating new forms not found before or extended its area and work even reshape its rules.

The digital democracy means " Integration of communication and information technology in the political work as new tools and methods in practicing democracy; in other words an attempt to practice democracy by exceeding the limits of time and place and other material conditions through using communication and information technology " practicing democracy technologically" ([2]). Others defined it as "Employment of tools of digital communication and information technology in generating, collecting, classification, analyzing and dealing all of information, data and knowledge related to practicing different values and techniques of democracy regardless democracy and its intellectual template, extent of its spread, safety of its intentions and its effective in achieving its goals ([3]). It is worth noting that modern means of technology and communication found a fertile field in strengthening techniques of practicing the digital democracy which allowed to citizens the ability to express their opinions and conduct opinions polls electronically . Some think that political participation in the light of digital democracy became not restricted to a season or definite period of time, as citizens can participate in the social and political process through modern

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(1) Shawqi Nagy Jawad, Mohammad Khair Saleem Abu Zaid, The future dimension of the electronic government in University of Jordan: requirements of success, a published study in Journal of University of Jordan , faculty of business administrations , Vol. 3, 2007, p 278.

(2) Dr. Faraj Mohammad Lamah, The digital democracy: chances and challenges, a scientific paper introduced to the new media conference and temporary: society issues: chances and challenges, faculty of social and human sciences, Mohammad Khaider University, Baskara, Algeria, held between 25-26 of 2014.
(3) For more details about the concept of digital democracy, review : The digital democracy: Technology and digitation of policy, Center of Hydro publications for supporting digital expression, Cairo, 2017, p 8.

means of technology and communications ([1]). From the above, we can conclude the following:

1. Digital democracy is a mixture of tools of practicing the citizens their political rights and what the digital revolution has reached took different and varied forms.

2. Application of the digital democracy needs to offer the proper technical structure which is the pillar of digital democratic transform.

3. Because of the concept digital democracy is new, its practices will have some negatives which we think refer to purely technical reasons related to the nature and modern means of communications.

4. Seeking towards applying the concept of digital democracy needs to set a comprehensive study related to information security and protection of electronic platforms because of change in the concept of protecting security and public discipline which transferred from the materialistic fact into the virtual world as a new image of the administrative control goals.

5. Application of digital democracy needs to set the proper legal environment to be practiced in addition to spread informational and technical awareness among citizens ([2]). **From our point of view, we think that practicing the digital democracy will increase the citizens' feelings of trust in the performance of official institutions and departments since the digital democracy offers transparency and credibility resulted from the possibility of allowing information and datathrough the social media and electronic sites. The result of that is easiness of citizens reviewing or regulating bodies whether they are official or civil society institutions on the performance of public administration. The increasing of digital democratic practicing indicators participates in the international**

order of the country where its order is directly proportional to theextent of its practice at the level of the country region. It can be said that the digital democracy takes various and different images , we mention from them the followings ([3]) :

- **Electronic parliaments** : The modern means of technology and communication give a feature of continuous contact with citizens and know everything inside the parliament sessions and form a tool to follow up the parliament members' performance.

- **Electronic transparency**: The modern means of technology and communication allow to citizenseasiness of seeing decisions and procedures of the administration in addition to allow space for them to introduce their objections and notices on the electronic public administration.

- **Institutions and organizations of civil community**: Many institutions and organizations of civil communitycontinued to create their entities in the virtual society through electronic and platformslike professional unions where they employed those sites to ensure communication among their members in addition to posting their message, goals and enable the target group to see them without any restriction anytime and any place.

- **Political parties** : The modern means of technology and communication form an effective tool through enable their members sharing to set their policies and goals through their electronic platforms and sites which shape an electronic

(1) Dr. Faraj Mohammad Lamah, previous reference , p 7.

(2) Prof. Jamal Ali Al-Dahshan, The role of informational technology in supporting democratic transformations: the digital democracy as a model, a published study, International Journal of Researches in Educational Sciences, vol.1, Is. 2. 2018, p148.

(3) For more details about the images of digital democracy, see Dr. Nawal Maghzili, The role of communication and media technology in fixing a new practice of democracy: The electronic democracy, a published study, Journal of Political Science and Law, Is. 3, one of the Arab Democratic Center publications, July, 2016, p 8 and beyond.

template where the party set its thoughts, trends and policies in it.

- Electronic election campaigns: The Electronic election campaigns started to come into being where it is expected that those means will support the electioneering of a candidate through the assistance of electronic communication, copying and saving services in a way that offering an electronic environment which helps the candidate to access the records and tables of voters and know their names, election circles and place of their living.

- **Electronic protest and demonstrate**: The modern means of technology and communication allow the possibility of digital protest as an alternative to the traditional protest that always requires the gathering of citizens in the streets and public squares where the citizens who gather them shared goals and one interest can express their refusal and protest against any direction or a decision issued by public administration that aims their interest or harm them through expressing that electronically by registering objections and protests through electronic platforms belong to the related administration or institution, the complaints and suggestions box designated for that goal or the approved e-mail. **We can say that the decrease of costs of modern means of technology and communication comparing with the financial burden on the administrationmade the modern means of technology of information and communicationthe preferable direction of the public administration at present whether in preparing lists of electors , counting votes, conduct public statistics or organizing the work of supervised bodies on the election process which requires that the decision taken in adopting the use of modern means of technology and communication should**

receive the country technological and economic consideration, and selecting the best use of modern means of technology and communication that best fit the country needs; in other words we think that there will be a positive reflection related to saving public money designated for strengthening practice of democracy where the digital democracy willbe very popular among various public administration agencies at the time where most of countries suffer from financial hardship that threatens supporting of provided efforts in strengthening democracy. Some experts think that public administration's resort to use means of technology and communication will cost it huge sums of money which will be spent on facing the technical problems and challenges in the long or short term, so all of technical and legal aspects related to adopting use of modern means of technology and communication should be explained to strengthen the digital democratic transform ([1]).

On the other hand, some interested people think that the electronic transform made practicing of democracy very easy in all its images ([2]) through encouraging citizens to participate in the political work, and it also worked to extend the range of freedom of expression where it became an easy area to communicate with decision making circle and that led to create a control atmosphere on the governmental performance and an effective aid to

(1) Prof. Raphael Lopez-Pintor, Agencies of election management – institutions of managing judgments, a published study, International Foundation for ElectoralSystems (IFES), Office of development of policies publications-United Nations Development Program, translated by the support of program of ruling management in Arab countries belongs to United Nations Development Program, September , 2000, pp. 104-105.
(2) Prof. Jamal Ali Al-Dahshan, previous reference, p 134.

influence the direction of public opinion. It is worth noting that modern means of technology and communication contributed much in affecting the concept of digital citizenship as a major pillar in strengthen digital democracy and talking about the electronic citizen became acceptable in reinforcing digital democracy, and talking about the electronic citizen became acceptable inarea of political work through the electronic space [1] , and this will strengthen the political participation towards the better[2] , as the virtual space changed all of the traditional concepts in the area of work and political participation exceeding in that all of the geographical obstacles [3].

The second section

The role of electronic voting in the election process

Electronic voting became a constitutional entitlement for all various constitutional systems in the light of technology information revolution, and this coincides with what the specialists think of in managing election process which considered to be the success to develop and facilitate the election process; it is most accurate, least expensive and suits the present technical development. To explain the role of electronic voting and its influence on the election process, we should explain its concept, the surrounded aspects and the possibility of its application on the election processin the light of Jordanian election law as follows:

First: The concept of electronic voting

The election process wasn't far from informational and technical development which affected the different aspects of life, since it is the pillar of democratic country and its most

important features where it became irrational It has become unacceptable that it lags behind from technological development , and from here the possibility of conducting the election process and implementing the voting stage electronically emerged [4] through applying a complete electronic system started from preparing electors records, constituencies distribution, conducting voting and counting votes within a new legal system called **electronic election** based on kept data on electronic supporting which can be called the **electronic election data.** A partof jurisprudencedefined the **electronic voting** as **"**Starting the political right in elections and choosing candidates through using information techniques instead of traditional methods like paper and ballot boxes (time and place), then storing the results in the computers according to definite security and technical methods to achieve Maximum transparency , accuracy and safety which ensures the integrity of election process in its electronic image" [5]. Others defined it as "All of electronic means that can be used for voting and classifying votes and this includes all of means and electronic systems which are employed to achieve the election process [6]. **Another part defined it as** "Using technical means including

(1) Faraj Mohammad Lamah, previous reference, p 10.
(2) See the same meaning in : Yahia Al-Yahyawi, The problematic of electronic democracy, a published article, Moroccan Science Newspaper, 2016, available online: (http: www. E- joussour.net).
(3) Dr. NoureddineMini, Prof. Aisha Laslij, Digital citizenship : When social media become a space for public debate. A published study, Journal of Human resources Improvement, Is. 11, December, 2015, pp. 330-329.

(4) The electronic voting means " The mechanism by which the elector goes to ballot boxes and put the paper which through he can practice his democratic choice by election ". For more details about voting by the traditional method , see Dr. Esam Nima' Ismail " Election systems – A study about relation between political system and elective system, a comparative study, 3rd edition, Zain Human Rights Publications, Beirut, 2011. See the text of Article 26 of Jordanian election law No. , of 2016 published in the official newspaper Is. No. 5368 on 15/3/2016 on page 1442 and the text 28 of the same law.
(5) Dr. Khedr AbbasAtwan, Hamad Jassim Mohammad, Security and electronic administration in Iraq – a strategic vision to manage the voting process, a published study, Rights Message Journal, faculty of law, Karbala University. 1st. Is., Vol. 4, 4th year, 2012, p 63.
(6) Dr. Saddam Faisal Kokaz Al-Mohammadi, The electronic voting and security of election process, a published study via the internet, available online: (http:www.ihec.iq.com).

devices, computers and digital programs by which the electoral data is tabulated, setting votes and processed and show the election results ([1]).

Other trend said that the electronic voting is the distant voting itselfwhich means "Voting that enables an elector to vote through a home device, portable or a phone connected to a central data base by the internet ([2]). In the light of above, we can say that the electronic voting is "Enable electors to vote in electronic templates and containers using modern means of technology and communication provided that the voting process should fixed on electronic supporting which can be read electronically ". Therefore, we should answer the following question "What is the extent of possibility to approve the audio recordings or recorded videos in the electronic voting process?", and through answering this question we think that there is no possibility to conduct electronic voting process but only through modern techniques that provide electronic writing fixed on electronic supporting because of the following evidence:

1. The recorded audio don't allow the committees of election, count and control to ensure the personality of a voter when only hearing his voice; it is impossible to ensure the identity of any elector through his voice since it is sensitive to be affected by external surroundings, and it is possible to expose to affects which lead to change its nature by disease, vocal effects or programs of changing voice.

2. It is easy to delete or erase vocal recordings for technical reasons or even by a human intervention which makes it difficult to turn to.

3. It is possible that the elector will exposed to a moral or material compulsion by definite candidate supporters to oblige him to vote for him through recorded audios, whichaffected negatively on the elector's free will.

4. The recorded videos can't be an electronic voting image since they are easy to be made, dubbing, or sound and image synthesis on different people.

5. The place and time of voting by audio or video recording can't be located which makes it difficult to impose election control committees on that process.

Second: Styles of electronic recording

The countries that applied electronic voting have adopted many various styles and this due to variety of modern means of technology and communication featured with accelerated spread as a result of decrease of costs of connecting on the internet and decrease of required of effort and time. It is worth noting that the beginning of using electronic voting styles was at the beginning of sixties of the present century ([3]), and their data are as follows:

1. Voting style by punched car

This style depends on what electors do by making punches in the cards prepared previously as models for voting through using drilling tools they were provided with to indicate that they selected a definite candidate, and thus feed the counting device through this card to read it electronically and record the voicebefore the candidate who was selected by an elector, or putting the card in the designated ballot box provided to transfer the box to committees or counting centers then score the results ([4]), and this style is featured with the following:

A-It is possible to count votes and cards manually and thus, any damage or technical cut may happen during the running of electronic election process.

B-Strengthening informational and technological awareness among audience of electors and thus,

(1) Suha Zaki Nouri, Wahj Khudair Abbas, Mechanism of electronic voting in Parliament elections: a study to develop the election experiment in Iraq, a published study, Investigator Journal of Legal and Political Sciences, Vol.7, Is. 4, December, 2015, 453.

(2) Yusuf ibn Yazah, Wahiba Sughairi, Contribution of the digital environment in supporting participated democracy –distant participation as a model, a published study, Journal of Human and Social Sciences, Vol. 20, Is.1 , University of Batna, Algeria, 2019, p265.

(3) Ma'mar ibn Iqah, previous reference, p 15.

(4)Suha Zaki Nouri, Wahj Khudair Abbas, previous reference, p 460 and 461, Ma'mar ibn Iqah, previous reference, p 12.

eliminate the informational illiteracy of that category.

C- Avoiding problems related to the difficulty of reading electors line when writing the name of a candidate himself and therefore, counting the biggest number of votes.

The negative side of electronic voting style by punched cards can be summed up as follows:

A-The incorrect punch in the electronic card is considered to be a cause in excluding that voting from the number of votes counted for a specific candidate.

B- It is probably that a damage occurs in the device of counting cards which leads to spoilage the card itself and thus, excluding that voting.

C- It is possible thatthe device of cards counting is exposed to cut of electricity and therefore stopping counting processes which exposes the counting process to delay and thus expose the whole process to doubt.

From our point of view we think this system became outdated that doesn't serve the electronic voting since continuous variety development in modern means of communication revealed new and modern styles have the ability to absorb the accelerated tremendous in the number of electors which ensure running of election processwith transparency and impartiality.

2.Style of voting using scanner devices

Voting through this style by using scanner devices by exploiting what these devices provide of equipment and electronic specialized softwareand have various sorts (¹), where these devices take

clear images then they were processed electronically by special software that change an image to data which can be read by a computer where electors were provided previously with cards which can be read electronically; they are cards which have names of candidates by using electronic writing and next to every candidate there is a printed code, and the elector pointed to the candidate he wishes to vote to by marking that code inside the box designated for that, then the elector is allowed to connect the card directly to a computed device in the same place of voting or putting it in the ballot box directly which is transferred after the voting process to the central office to be counted where the computing counting device identifies the marks that electors have put on cards by scanning them then scored the votes a box by box individually then transfer them to the main central counting so that the results of boxes were scored and count what every candidate gained totally for all of boxes.

3. Style of direct electronic register

This style is characterized by being the closest to what we strive to reach in the light of our seek to reveal the role of modern means of technology and communication in developing to run the election process particularly in the electronic voting stage where electronic equipment were recruited which are characterized by visual

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(1) There are four major of scanner techniques :

A- **Reading devices**: they are technology used by most of voting systems which can be read automatically by scanner and they are used in many aspects particularly in the seventeenths of the twentieth century where they were used in schools and universities exams and Barcode bar used in retail trade and store inventory and libraries.

B-**Scanners devices by identifying letters**: Scanned images are dealt by this method and computer programs are used to identify printed or written letters by handwriting and stored on the form of data which

can be read by the computer which is a possible method that can be used in election.

C-**Scanners systems to identify the letter**: It is an advanced step through using programs of applying tests of logic on the scanned letters to be transformed into data that can be read through a computer accurately.

D- **Technology of images**: It is a method for taking images and changing them into data and can be stored as images which can be read by a computer, and photographs and drawings can be stored and reused like providing electronic sites with photographs. For more details of those types see : Ma'mar ibn Iqah, previous reference, 12, Suha Zaki Nouri, Wahj Khudair Abbas, previous reference , p 461 and 462. Hmaid Qasim Al-Mousawi, Electronic voting in elections and the possibility of applying it in Iraq, a published article, available on the internet on the (following electronic link: (http:alnoor.set.com)

reading as the elector installs that technique by himself whether by touching the screen, pressing the buttonor using optical films on an electronic screen after the device recognized it by a scanner which can recognize the identity of elector by some vital indicators such as a finger or eye print ; so these features are used together, the secret number of the smart card or the DNA fingerprint. In most cases, those devices use more than one feature to make sure of the personality, and the device may be used in recognizing the identity of reading a new personality card includes the elector's information. As soon as recognizing the elector's identity, the election screen is opened in front of him to choose the candidate he wants by using means and tools of technical input where this technique allows a chance to dispense with paper or punched election cads as voting data were stored and what is completed of processes of selecting candidates by using techniques of storing and keeping which facilitates revision of the results for goals of electronic sorting or checking the results in the case of appeals.We can say that the style of direct register is afulcrum through which the electronic election process will start from where the core of this style is to get rid of common election papers and transfer them into electronic supporting through communication tools and input such as touch screens, optical pens or any electronic input equipment. This style will also contribute to get rid of common wood or plastic election boxes and replace them by the storing and input techniques such as hardware, portable CDs, or storing and revision units. In our point of view, we think this style is the best if it is compared with the style of punched cards or using scanners devices as it is acceptable to apply the style of direct register in order to be a distant election process i.e. outside the election centers, and this what we aimed at in our study as mentioned before.

4. Electronic voting through the internet
According to this style, the elector uses the internet whether in the election center, his home, work or any other distant place inside or outside his country as the electronic voting process takes place through using the computer which can send data to the electronic site designated to the committee or ministry supervising the election process[1], which means that the elector resorts to use the electronic site designated to voting process through distant communicating electronically with that site then access the electronic portal using a username and password and after ensuring of elector identity, election options were allowed to choose his candidate.

In our point of view, we think that electronic voting through the internet is the real model of the electronic voting concept since what we want of the study is showing the positive effect of the modern means of technology and communication in fixing a new concept to practice democracy and political participation which is evident in its highest form particularly he electronic voting stage. We can say that the electronic voting through the internet achieves many benefits, some of them are:

1. Allows space to all electors whether inside or outside to participate in the election and select their representatives without the need to go from place to another or travelling from a country to another. The largest rate of participation is also achieved in the election since of what it ensures of easiness and offering effort and time.

2. Electronic voting allows through the internet the possibility of rapid counting of votes.

3. Electronic voting through the internet (virtual space) decreases the bribery and political corruption, and minimizes the use of political

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(1)The Independent Election Commission was established in Jordan based on the law No. 11 of 2012 issued in the official newspaper Is. 5152 on 9/4/2012. See the text of the Article 4 of The Independent Election Commission Law No. 11 issued in the official newspaper No. 5152 on 9/4/2012 on page 1588. For more details about the role of The Independent Commission in managing parliament election of 2013 see Dr. Saleh Abdul Razzaq Faleh Khawaldeh, The Independent Election Commission and its role in managing parliament election of 2013, a published study, Journal of law and political sciences, Is.10, Abbas Lighrour, Khanshala, Algeria, 2018, p 41 and beyond.

money in attracting electors desire in favor of particular candidate.

4. Facilitating of a vote will be easy anywhere except the election center where the elector can vote from his place of work and there is no need to stop his work particularly if he is a businessman or employees of the private sector.

5. Encourage the youth electors to participate because of the modernity of the style since this group appreciate what is new to manage democratic life and strengthen their participation in the democratic life by a style featured by development and modernity.

Third: The possibility of applying electronic voting in the Hashemite Kingdom of Jordan

The Hashemite Kingdom of Jordan made great steps towards a real comprehensive democracy aimed to develop the process of selecting legal authority where the issue of law No. 11 of 2012 concerning the establishment of the independent election commission to be the restricted authority in organizing, implementing and supervising on all parliament or municipality elections eve the election of governorate councils emerged from the new decentralization law which is the turning point in the democracy work and political participation ([1]). Through establishment of the independent election commission, the correct and clear path was put in organizing and conducting free and fair elections featured with a high degree of transparency. These elections started from the paper method in preparing the record of electors and use the voting paper put by elector in the voting boxafter he signed in the record of electors

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(1)Decentralization law No.49 of 2015 issued in the official newspaper No. 5375 on 31/12/2015 on page 9719. For more detailed about decentralization system based on Law No. 49 of 2015 see Dr. Saleh Abdul Razaq Faleh Khawaldeh, Local rule in Jordan, Governorates councils based on decentralization law No. 45 of 2015-analytical study. A published study, Journal of Law and Political Sciences, Vol.9, Is. 3., University of the martyr Hama Lakhdar, Wadi, Algeria, 2018, pp. 468-491. Dr. Nidal Ayub Abu Orabi, Reading about decentralization , a published article on the internet on 18/2/2020, available online: http:www.ammonnews.net).

next to his name, then the votes are counted in the voting committees and the results are written in special forms designated for this purpose manually. After that, they are sent to the central committee that supervises t on the public elections in the Kingdom where these results are entered incomputers through private programs for this process and after finishing of that, the results are declared. It is fixed that all of these stages are completed manually through the tremendous human cadres selected to organize the election process and the help of traditional tools as common voting boxes and paper. The use of paper remained the public feature in the voting process although of the great development in the modern means of technology and communication, input software and analysis which can be used to run the election process in a new form responding to the requirements of technology revolution which affected all of the sectors, administrations and institutions of the country. **We can say that the idea of applying electronic elections and making it the feature of the coming election process became anurgent necessity and needs a deep studyand factual steps on earth. It is worth noting from our point view that infrastructure which that idea requires became ready and available to the extent that we can say theelection process is ready to be transformed electronically completely starting from introducing of candidates their applications until preparing records of electors and revising them through creating electronic election boxes used through platforms and smart applications and ending with the process of counting and declaration of results via electronic site designated for that previously**. For the above and from our positive vision to apply such an idea, we think that it necessary to face some challenges which should appear in facing electronic voting process, so there will be many kinds of challenges that face applying of electronic government that can be summed up as follows: **administrative challenges, technical challenges, informational security challenges and electronic audience challenges**.

A- Administrative challenges

These challenges are concentrated although there are no strategic plans fit the different needs of administration, in addition to non-existence of balance among those policies where this shortcoming is attributed to the multiplicity of government departments and there is no complete comprehensive political plan accompanied by the absence of governmental coordination in this area. **From our point of view, we think that this challenge has vanished after establishing the independent commission which became the only body permitted to supervise on the election process and organize it in all of its stages.**

B- Technical challenges

One of the major pillars to apply electronic voting is offering proper infrastructure; the barrier related to offer that structure is considered to be an obstacle that faces applying electronic voting particularly in countries that don't have technical industries or for developing countries where their interests are concentrated on offering the main needs such as electricity, water, health and others as these countries face the challenge of shortage of financial resources or investments that can create informational technique, in addition to the shortcoming of essential experiences in modern techniques [1]. Efforts must be done to narrow the digital gap between developed countries and developing ones throughseveral meansand setting reform programs as programs of United Nations and World Bank in this area; to create proper infrastructure that meet the needs of those countries and their requirements which help them in applying the electronic government programs [2].

C- Achieving informational security

It is worth noting that there is a connection between technological development and security of information as both of them are two faces for the same coin; where the technological revolution and great developments in the communication and information pushed many variables relating security of information to come into being which made it a pressure tool that alerts decision makers and responsible in departments of the country in order to offer that security to create a type of tranquility and trust in heart of dealers or the received service which strengthens trust between them and the administration. The information security is "Those visions designed and implemented on various levels by following up the effective policies and procedures to achieve the elements of security which ensures the privacy and trust for information [3].The informational security included several aspects that the administration bears in order not to fall victim to viruses, spoiled r-mail, crimes of digital fraud or cheating or attempts of piracy of electronic sites belong to the independent election commission. We think that the Hashemite Kingdom of Jordan is too careful to smooth out challenges related to informational security in the light of its continuous efforts in building a base according to a royal vision lies in making use of globalization on the largest scale. From our point of view, the Jordanian legislator succeeded in decided Cyber Security Law that offers complete security to the borders of the Hashemite Kingdom of Jordan in the light of the virtual world [4] as a new kind of Jordanian borders uncommon before.

D- Challenges of electronic audience

These challenges mean the possibility of finding an audience featured with cognitive awareness in

(1) Faris Nfai'i, The challenges and obstacles that face applying electronic government, a published article, Arab forum for managing human resources, department of administration sciences, available online: (http:www.hrdiscssion.com.)

(2) Prof. Yahia Al-Failani, Esam ibn Yahia Al-Failani. The electronic government, towards the cognitive society, series issued by Institute of researches and studies, King Abdul Aziz University, Agency of

University for high studies and scientific research, ninth issue, No. 3018/1427, p 5.

(3)Jamal Mohammad Ghitas, Information security and electronic crimes, a published article on the internet, Al-Jazeera Center for studies, 2012, available online :(http://www.studies.Aljazira.net

(4) Cyber Security LawNo. 16 of 2019 issued in the official newspaper Is. 5595 on 16/9/ 2019 on page 5143.

information technology and the ways of its usage. This challenge stems when applying the electronic government from the modernity of these techniques concerning many countries classified in the developing countries and suffer from digital illiteracy, and this due to these countries lateness in using modern means of technology and communication which created a digital gap between those countries and the developed ones. The informational awareness depends mainly on the cognitive environment of the recipient as it is considered to be skills through which the informational problems are solved represented in queries or asking for information or data about a subject ([1]).**In this aspect, we think that the challenges of electronic audience exceed to reach the level of audience trust in electronic systems which form a great challenge to any electronic experience done by the country, and this requires raising the scale of citizens or audience trust with what the country address of experiences concerning the electronic administration in general and reinforcing the role of political participation and practicing democracy electronically, since entry of modern means of technology and communication in the area of election process needs to strengthen the electors feeling with those means because they are new and need to persuade the audience with it and smooth out greed of some candidates who doubt about the ability of those means in developing election process for personal reasons and gains exploited with that the informational illiteracy for some electors.**

E- Challenges related to legislations

These challenges mean the extent of availability of laws, systems and instructions with what fit the technological development that will affect the election process as a result of seeking towards recruiting modern means of technology and communication and its usage in electronic voting.

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(1)Marwa Assayed Hassan Amasha, Informational awareness among high studies students, empirical study on faculty of arts students, PhD Thesis, faculty of arts, Helwan University, 2016, p 1.

We can say that finding the essential constitutional and legal environment to fit the technical development input and integrate it in the election process to constitute a complete legal structure, as a future vision called "electronic elections" will give the feature of legitimacy.

Conclusion

We dealt with this study a very important matter in the light of what life witnesses of huge developments as a result of information revolution and the extent of influence of modern means of technology and communication on the election systemand how to make use of them to serve the election process particularly the voting stage in the light of many high voices demanding to modernize the country and digitizing democracy. We find that the modern means of technology and communication have a positive impact in developing and supporting the election process for many reasons mentioned in the study with our complete faith that there are challenges which can obstruct applying the idea of electronic voting, but it is possible to recruit them in order to develop the election process, and therefore, we end this study in mentioning the most important concluded results through what came in the study as follows:

First: The results

1. Electronic voting is a new image of the traditional voting where the difference between them only relates to used means in its conducting, as modern means of technology and communication and what branches out of smart applications replaced the common paper and election box.

2. Electronic voting is the inevitable result and one of the most important of technical revolution that affected all of country sectors, and it is a new tool for the country to fix the concept of digital democracy and strengthen political participation in its new concept.

3. Electronic voting will lead to extend the political participation base and increase numbers of electors since it has features related to saving time, effort and costs.

4. It will decrease the size of human cadres that work to organize the election process because of

the solutions of modern means of technology as an alternative of the human element.

5. It will achieve the highest standard of accuracy, transparency and integrity where modern means of technology and communication and what emerges from of smart application supported easiness of knowing electors audience, control bodies, civil community institutions, control counting processes and issue the results.

6. Electronic voting is surrounded with several guarantees which are originally challenges that should be offered to protect that process such as overcome the administrative challenges, informational security and audience.

Second: Recommendations

1. Revision of all constitutional and legal texts particularly Jordanian Election Law, independent election law and all instructions emerged from, inserting legal texts and conducting essential legal amendments that fit application of the electronic voting idea in order to reach complete electronic voting that agrees with the principle of legitimacy.

2. Starting a national campaign for identifying modern means of technology and communication and reveal their importance and role in developing the election process and deliver the message to electors.

3. Functioning on holding training sessions aiming those who work to organize the election process including employees of the independent election commission to make sure of their ability in managing and applying electronic voting.

4. Issuing electronic card for each elector that stores all information of an elector and distinguished with vital sign refer to the personality of the elector It belongs to the person of the elector to ensure the security of its handling and non-penetration.

5. Reinforcing the concept of informational security and offering protection for all of computer systems which can be used in the electronic voting stage.

6. Reinforcing the concept of digital democracy and show its role in facilitating practicing and shared politicalwork for all spectra of society.

7. Offering essential electronic platforms to create electronic democratic atmosphere featured with accuracy and quality in a way ensures continuity of their work safely and ensuring non- penetrating or stealing their data which reinforces audience trust with such means.

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