Young People’s Participation in Decision-Making Using Information and Communication Technology

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Abstract—By giving personal opinions, suggestions and criticism through e-democracy, young people can reinforce the adoption of decisions which they have an impact on. The purpose of this research was to examine the opinion of university students about the possibility of their decision-making by using information and communication technology (ICT). The questionnaire examined young people's values and behaviour associated with e-democracy and the related decision-making. Students are most active online when it comes to finding information connected with their academic responsibilities, but less frequently take part in democratic processes in society, both at the national and local level. E-democracy as a tool can be learned in programmes of Human Rights Education and Citizenship Education.

Keywords—Active citizens, e-democracy, information and communication technology, university students.

I. INTRODUCTION

In various areas of modern society, there are many benefits of young people's democratic participation. Young people can strengthen the approval of political decisions which they influence by providing personal views and criticism through e-democracy. In this way, young people can understand social activity and protect their human rights. Lately, the most apparent problem in our society is the increasing democratic deficit. In order to strengthen democracy, democratic institutions and democratic processes as well as to enable young people to become more involved in them, e-democracy might be one of the tools to achieve it.

Coleman and Blumler claim that the Internet possesses a vulnerable potential to revitalise our flagging political communication [7]. For those authors, relations between the public and the holders of political authority are undergoing a period of transformative flux. They describe e-democracy as a support to the democracy system which facilitates communication between citizens and political institutions.

II. ICT AND E-DEMOCRACY

Utilising ICTs in decision-making processes refers to certain initiatives which are grouped in the literature under the umbrella of 'electronic democracy', 'teledemocracy' and 'cyberdemocracy' [14].

Many authors believe that contemporary digital ICTs facilitate new forms of e-government, allowing the public sector to use policies which include some of the most important norms and practices of e-democracy [6], [27]. New technologies provide new channels of access to political information and participation in decision-making processes [1]. The rapid development of the Internet in particular changes the conditions for communication and co-ordination and increases the interest in technology support for participation in political processes [31]. ICT applications, whether directed at enhancing democracy or not, emerge out of the 'dialectical interaction between technology and society', they are subject to 'social shaping' and, as such, they will be influenced by such factors as technological precedent, culture (political or otherwise), legal frameworks, etc., and will emerge through the activities of human agents, constrained as they are by existing power relations [14]. Many authors elaborated e-democracy through the IT aspect and argue that increased citizen participation is a core element of both applications and the concept(s) of e-democracy [4].

Macintosh [24] claims that e-democracy and e-participation are multi-disciplinary research activities that comprise democratic, political, communication and information science and practice. Other authors describe that e-participation has benefits for the citizens, the enterprises, the public administration and the society [40]. Growing involvement should, on the one hand, improve policy, but on the other, it will escalate the resources and time needed to create policy [23].

The field of e-democracy has addressed the problem of improving democratic decision-making by encouraging broad participation [13]. Kersten [19] claims that 'e-Democracy' takes place at different levels, ranging from local through regional to state governments. He mentions different forms of 'e-Democracy': voting, consultation and participation in the construction of an alternative course of actions. New technologies make it increasingly possible for each citizen to participate in actual decision-making (this is the model of Direct Democracy as highlighted by [31]).

Some authors believe that the known problems of representative democracy and direct democracy might be solved thanks to e-government [18]. However, a lot of problems in both representational and direct democracies remain unsolved and e-government could even create new problems.

Some authors identify negative examples of e-government implementation [20], but it is important to emphasize that many civil society reforms have progressed thanks to e-democracy [11], [13], [34]. There are four main areas of norms and practices of e-democracy: (a) online consultations comprising civil society groups and non-governmental organizations with bureaucracies and legislatures; (b) the interior democratization of the public sector; (c) the...
participation of users in both the design and diffusion of public services; and (d) the distribution of open-source collaboration in various public organizations [6]. For Macintosh [23], e-democracy is the use of ICT to support the democratic decision-making processes. E-democracy refers to the use of ICT to create channels for public consultation and participation (for example, e-parliament, e-initiatives, e-voting, e-petitions, e-consultations), complementing or contrasting traditional means of communication such as face-to-face interaction or one-way mass media [31]. Macintosh [23, p. 19] identified "5 main challenges for e-engagement, those of: scale; building capacity and active citizenship; ensuring coherence; evaluating e-engagement; and ensuring commitment". Those key dimensions can be implemented in the isolated e-democracy pilots and research studies.

Freschi [12] describes e-democracy through the necessary participation in society. E-democracy aims at the production of functional democratic processes like communication, information providing and decision-making after electronic public dialogue and voting [40].

Democracy among citizens and government can be described as a two-way communication. Citizens need successful online participation in decision-making and require satisfaction with e-governance in their everyday lives. With regard to these guidelines, some authors have explored the impacts of governments that have engaged their citizens online, discussed issues and challenges in adopting and implementing online civic engagement initiatives globally, and helped guide practitioners in their transition to e-governance [26].

Giving an essential guide to what will happen with e-democracy in the near future, De Blasio [8] supports e-democracy and proposes the redefinition of this term. The author describes the concept of e-democracy and claims that the term is often substituted with the term e-participation. E-democracy (or digital democracy) concerns the area of possibilities offered to citizenship in order to influence decision-making processes.

Päivärinta and Sæbø, after an analysis of theories of e-democracy versus implementations reported in the related literature, address the need for a model generally absent from contemporary theoretical literature [31]. They aim to simplify the current "jungle" of e-democracy models into four idealised models: the Liberal, the Deliberative, the Partisan, and the Direct, and discuss how contemporary theories may be explained by these models. The value of these four models is presented in implementations of communication technology for e-democracy. Parts of all four models can be elements of any aspect of e-democracy and so remain dynamic in the course of time [31]. The summary of the review of e-democracy provides a list of authors who have been involved in e-democracy models in their works [31].

Understanding of the dialectical relationship between technology and society is essential for a critical understanding of 'digital democracy' initiatives [14]. The term digital democracy can refer to a broad spectrum of technological applications [14], e.g. participation in forum groups or searching for information. Apart from this, digital democracy intends to provide detailed accounts of competing models of democracy, their relative merits and the underlying conditions required for their realisation. It is very important to note that some models of democracy can be strengthened by the types of digital democracy.

Other authors emphasise that it is necessary to develop educational material for lay people to take part in e-democratic processes [11], [19]. E-democracy can be learned in programmes of education for human rights and citizenship education. Through those programmes, young people can become active citizens.’

**How can civic education keep pace with the changing political identifications and practices of new generations of citizens?** The aim of the research on school-based citizenship education in different post-industrial democracies was to produce basic learning categories about inducing the change in citizen identity styles and learning opportunities in different online and offline settings [3].

In modern society, young people use ICT in their everyday work and leisure time. However, the possibility for connecting e-democracy in society with e-government is not easy and simple, but it can be reached [6]. Since some societies have more traditional forms of political activity, is there any reason to expect that public participation in newer, online forms of political activity will be any greater? [29].

The analyses of some research show that the traditional predictors of offline participation also have an impact on online participation. However, young people prefer the use of the Internet much more. Secondly, the same digital divides are generally found within the local political elite as well as among the citizens [38].

Other studies show that technology functions as an enabler within pre-existing social and political structures [42]. According to this study, the Internet is not yet running as an effective medium facilitating democratic inputs into the policymaking processes in European Union cities. There are opportunities for ICTs to enhance governance in local governments, but ICT applications focus technologies on the management and delivery of services rather than on other areas.

**Is it possible to manage online political discussions effectively?** One of the key challenges with digital democracy is that large, online spaces are very good for gathering information, but not good for prioritising it or deliberating on what it means. It is still difficult to channel the incredible volume of discussion and communication into any kind of collective decision-making process, let alone a consensual outcome [2].

Empirically analysed factors provide very important results associated with the relative level of development of e-government and e-democracy across 131 countries and draw on four explanations of policy change: learning, political norms, competition, and citizen pressures. All of them are significantly related to nations where e-government policy is more advanced. However, a country’s e-democracy development is linked to dynamic interior factors [22], e.g.
Some research examines action to address young people’s apathy to the democratic process and politics in general, by considering possibilities for using ICTs to engage them [25]. In Scotland there are two e-democracy systems which are designed to allow young people to deliberate issues of importance for democratic societies. In Iceland, e-democracy was implemented as a way to regain the trust of citizens in the country’s government. In Finland, which is technologically very advanced and where high-speed Internet access is a legal right, the government adopted the New Citizens Initiative Act and established an e-participation platform. Hoff et al. [16] describe e-democracy in Denmark, and Seaton [39] describes the initiatives of the Scottish Parliament in the field of e-democracy, assessing the prospects for future developments. On the other side, Estonia is a step closer to the holistic model of e-government and hence boasts the most successful e-government implementation [20].

III. NORMATIVE BASIS FOR INTRODUCING E-DEMOCRACY

The Council of Europe adopted Recommendation CM/Rec (2009)1 of the Committee of Ministers of the Council of Europe to member states on electronic democracy (e-democracy) [36]. At the level the European Union, European citizens are increasingly seeking to influence decision-making by mostly employing online methods (i.e. filling online forms, signing online petitions or using social networks). The European Union has a great opportunity to use Web 2.0 applications to strengthen digital democracy in the EU, given the fact that over 72% of the total European population and 85% of the European youth use the Internet on a daily basis [5]. At the European level, citizens learn about e-democracy through e-participation projects in the field of Human Rights Education and Citizenship Education (HRE and CE).

One of the suggestions of the Report on e-democracy in the European Union: potential and challenges (2016/2008(INI)) is: “Notes that an increasing number of citizens use ICT tools and new media and technologies to obtain an ever-wider variety of information, to exchange viewpoints, and to make their voices heard, engaging and participating in political life and collective decision-making, at the local, national and EU level; considers, therefore, that it is crucial to increase digital inclusion and literacy, thus eradicating the existing digital divide which is a major obstacle for the exercise of active citizenship”. That means that the new communication technologies have enormous potential for fostering citizen participation in the democratic system, as a way of building a more transparent and participatory democracy. Based on this document, the EU and its Member States should, particularly at regional and local levels, promote ICT-based lifelong learning programmes on digital literacy and inclusion and civic engagement and participation, developing actions and policies.

IV. E-DEMOCRACY IN CROATIA

In the Republic of Croatia, the right to access and acquire public information from any public authority and legal entity with public authority that holds such information is a constitutional and legal right. The Law on the Right to Access Information governs which information must be available, not only upon an individual user’s request, but also published in an appropriate manner, in the official gazettes or in electronic media. The Code of Practice on consultation with the interested public in procedures of adopting laws, other regulations and acts, also gives clear instructions on how to engage in better interaction with citizens and how to encourage their role in public deliberation. Aware of the public-service value of the Internet, the public authorities use the Internet as a tool for accomplishing their legal obligation to provide information, but also to involve citizens in other kinds of democratic processes.

All counties publish information websites. This information was selected and presented in different ways, although it was necessary to precisely specify which information public authorities should publish, as well as the unique organization of such information [17]. All this should be more easily accessible to citizens.

In the Croatian democratic system there is no e-voting, and only a small number of Croatian people participate in the local and presidential elections. The most frequent response is that people do not know who to vote for and do not trust the government. One of the assumptions may be that young people are not sufficiently educated in the area of protecting their human rights.

V. HRE AND CE IN UNIVERSITY EDUCATION

In the Republic of Croatia, topics related to Human Rights Education and Citizenship Education for primary and secondary schools are implemented within the Programme of Intercurricular and Interdisciplinary Citizenship Education for Primary and Secondary Schools as a compulsory interdisciplinary theme. Since the academic year 2014/2015, the Programme has been implemented in all primary and secondary schools as a compulsory subject, and teachers have been offered units and themes, contents and correlations regarding dimensions: human and legal – knowing and exercising rights and responsibilities; political – participating in decision- and rule-making; social – development of interpersonal relations; intercultural – respecting differences and values, dedication to pluralism; economic – promoting the economic interdependence and solidarity; ecological – promoting the global interdependence in an ecological context. This document is also based on the time frame for each level of education.

At Croatian universities, Human Rights Education and Citizenship Education are optional courses for students of teacher training studies, i.e. for future teachers. But, Citizenship Education should be incorporated in the Croatian education system as a special subject when the legal conditions for such a change are met [9], [10]. Only by including citizens in the policy-making process can we bridge the gap between Europe and its citizens, and these guidelines give us some recommendations on how to design
crowdsourcing at the EU level [5]. One of the recommendations refers to the involvement of citizens online. It is important to be aware of the digital divide and to improve ways to include as many citizens as possible by creating a user-friendly platform and linking it with social media.

Nugent [29] raises several questions about e-democracy, but the one that is the most relevant for this research is: Will e-democracy yield a higher level of participation by a better-informed citizenry? This question was the guiding idea for our research.

Active citizenship refers to people’s involvement in their communities and democracy at the local, regional and national levels. It can be a small scale action, like a concert against violence and a humanitarian event, or a big scale such as advocating for human rights education at the ministerial level. Active citizenship improves decision-making processes, especially in new democracies such as Croatia.

VI. THE PURPOSE OF THE STUDY AND OBJECTIVES

Since there were no research activities on the connection between young people and e-democracy, the purpose of this research was to explore the opinions of young people about the possibility of their decision-making by using ICT. Young people's values and behaviour associated with e-democracy and the related decision-making processes were explored.

The objectives of the research were:

(1) to examine the extent to which young people are confident about the accuracy and reliability of information in using ICT, and to which young people have an impact on the work of public servants, and the extent they would like to use e-voting, as well as use the e-citizens system;
(2) to explore to what extent they have, prior to this research, used ICT in the exercising of their rights;
(3) to examine to what extent they have participated in the e-consultation process;
(4) to check whether there is a connection between the assessment of satisfaction with seeking and receiving official information; and
(5) to check whether there are any differences in a) the confidence in accuracy and reliability of information in the media, and b) satisfaction with seeking and receiving official information among students who have been trained in HRE and CE and those who have not.

VII. METHOD

A. Research Sample

This research was conducted on a sample of 62 university students from the Juraj Dobrila University of Pula (Croatia). There were 33 students who have been trained in HRE and CE, and 29 students who have not. Their age ranged from 22 to 29. Since HRE and CE is taught at the 4th and 5th year, the sample comprised 28 4th year students, 21 5th year students, and 13 ex-students who have completed their study. This group of students represents 70.2% of the student population that has ever taken the HRE and CE course at the University of Pula. The sample is not larger because there are only a small number of students who attended the course in HRE and CE at Croatian universities, as these are optional courses. The research sample consisted of 53 female and nine male students.

B. Instrument

For this research, the Questionnaire about e-democracy was used. The questionnaire for this research was modified from the original questionnaire by authors Petr Balog, and Badurina [32]. For their research, they used the questionnaire that was originally employed in a study by Petr Balog and Siber [33].

Our questionnaire was composed of four five-point Likert-type scales varying from strongly disagree (1) to totally agree (5). Higher scores refer to more favourable attitudes. We used a scale of eight statements to examine the level of belief in accuracy and reliability of information. To examine the ICT, we used a scale composed of four levels of government. Participation in the e-consultation process was examined with regard to four levels of government (national, regional and local level, and the level of legal persons with public authority). The scale of satisfaction with seeking and receiving official information was composed of seven statements. There were three questions for each assessment (answers ranged from a) not at all to e) to a great extent). In the first one, respondents assessed the extent to which they had an impact on the work of public servants; in the second they were required to specify whether they would like to have access to e-voting; and the third one was where they had to indicate whether they are users of the e-citizen system.

VIII. RESULTS AND DISCUSSION

(1) To examine the extent to which young people are confident about the accuracy and reliability of information in using ICTs, and to which young people have an impact on the work of public servants, descriptive statistics was used. Based on the results, university students believe to a lesser extent in the information available in the media (M=23.89; SD=5.286), and they estimate that they have almost no influence on the work of public servants (M=1.26; SD=0.477). The maximum possible score was 120.

To examine to what extent university students would like to use e-voting, and are registered users of the e-citizens system, descriptive statistic – frequencies type was used. Some 49 students would like to use the e-voting, eight students do not know, and just five of them would not use e-voting. Regarding registered users of the e-citizens system, 32 of them are members, and 29 students are not. Compared with the results, according to which about 90% of students use the Internet more than 10 times daily, and more than 70% students do online activities like sending messages through various applications (Viber, WhatsApp, Facebook messenger), finding information about studying, seeking information about hobbies or interests, the results about e-voting and e-citizens are interesting because we expected that students would be more engaged in these activities. These results can be compared with other research studies. As Petr Balog and
Badurina [32] conclude after their research, the results in this paper also demonstrate that students are most active online when it comes to finding information connected with their academic responsibilities (like sending messages through applications, finding information on scholarships, exams, theses, students’ rights, searching for information about hobbies and interests, and using social networks, etc.), but less frequently take part in democratic processes in society, both at the national and local level. The same results were detected in the research of Petr Balog, and Siber [33] with law students. They show low interest for information related to local, regional or national governing bodies.

There is evidence that practicing democracy is the best way to learn it and that many young people like to use new ICT [25]. Social networks can be used by politicians to approach young people, showing them the possibilities of connecting with the community (e.g. Twitter is being used by European citizens to communicate with Members of the European Parliament) [2].

(2) To explore to what extent they have, prior to this research, used ICT in the exercise of their rights, descriptive statistics was used. University students almost never used it on the national, regional and local level, nor on the level of legal persons with public authority (M=7.63; SD=4.506).

(3) To examine to what extent university students have participated in the e-consultation process, descriptive statistics was used again. Online public consultations, as a part of e-democracy, are a kind of practice of communication that is not agreeable but is important in providing response and explaining to participants how their contributions will be elaborated. The results show that only a small number of students participated in the e-consultation process during the decision-making process. Only 17 university students have answered this question.

(4) To check whether there is a connection between the assessment of satisfaction with seeking and receiving official information, Pearson coefficient of correlation was used.

The results show that a correlation exists: young people who are confident in the accuracy and reliability of information in using ICT are more satisfied with seeking and receiving official information (r=0.31; p<0.05). Usually confidence and satisfaction grow in parallel. In everyday life, micro-social embedding and socio-cultural integration of a person are highly relevant for happiness [15], and therefore for satisfaction. Satisfaction can be described as a consequence of the objective life situation. Young people are in such a period of life when happiness and satisfaction can be explained with satisfaction with social communication, such as satisfaction in finding information which is important for their student life. But confidence is probably also associated with knowledge. Knowledge in e-democracy (e-cognocracy), can correspond "to the patterns of behaviour, trends, opportunities, decisions, and stylized facts will be the starting point of the consensus building process suggested as the appropriate way to effectively solve problems of high complexity usually presented in the governance of society” [28, p. 163]. The society of the future must have a new procedure: e-cognocracy as a procedure which adds a new quality to the democratic system by means of network communication. This is the democratic system in the emerging knowledge society. In order to examine possible differences with confidence in the accuracy and reliability of information in the media, and satisfaction with seeking and receiving official information among the youth who have been trained in HRE and CE, and those who have not, one-way ANOVA was used. The results of ANOVA are presented in Table I.

**Examination of confidence in the accuracy and reliability of information in the media, and satisfaction with seeking and receiving official information is a test of students’ values.**

A difference between the two groups with regard to the two values was found. Those students who have been trained in HRE and CE have less confidence (t=2.31; df=60; p=0.025) in the accuracy and reliability of information in the media (M=22.48; SD=4.954) compared to young people who have not been trained in HRE and CE (M=25.48; SD=4.954). This can be interpreted as evidence that the students who were trained in HRE and CE are more critical in comparison with the students who have not. In the area of HRE and CE, students learn more how to improve critical thinking. In this case, it refers to critical participation in the communities and society young people belong to [37, 41].

This research shows that those students who have been trained in HRE and CE to a lesser extent are satisfied (t=3.28; df=48; p=0.002) with the online official information they received (M=19.46; SD=4.139) in comparison with their colleagues (M=22.77; SD=4.944). Those who have been trained in HRE and CE are less satisfied, and they have less confidence probably because they know how they can work with public services using ICTs and how e-processes work. E-cognocracy refers to the process characterized by evolution of a living system, which contains the society’s knowledge about the problem which is under investigation through network communication and, especially, about the proper procedure for solving various community problems [28]. The suggested e-cognocracy will highlight the involvement of the young people interested in the solving of any problems, and also in the democratic governance of systems in society.

**Young people are discouraged from participating in community and political life because of such low**
understanding of politics [21]. Political competences and political participation among youth should be acquired by reading and studying literature related to this field, as there is a low level of understanding of roles among young people. In terms of political participation, understanding of key concepts is of primary importance, as it is a prerequisite for the acquisition of skills.

There are no differences among young people who have been trained in HRE and CE with regard to the extent to which they use ICT in order to achieve their democratic rights (t=1.05; df=58; p=0.296) and those who are registered users of the e-citizens system (t=0.80; df=15; p=0.436); they do not differ in behaviour. This is a result we did not expect, but it can be explained as a weak point of the educational programme, i.e. the programme and the teaching methods have less impact on behaviour [30]. Investing in skills helps educational policies and practices to seize the benefits of global value chains. Young people will then be more prepared for the labour market and for active involvement, as active citizens, in the everyday work of the local, regional, and national community.

Some research shows that people with higher level of education are less prejudiced towards groups which do not belong to their specific ethnic group than those with lower-level education [35]. This means that HRE can influence the behaviour of students.

The results obtained in this paper could also be used as some sort of evaluation for the HRE and CE courses. Perhaps more exercises and workshops should be introduced and lectures should be reduced in order to have some influence on the students' behaviour.

No statistically significant difference was found among students who have been trained in HRE and CE and those who have not with regard to their assessment of the degree of influence they have on the work of public servants (t=1.35; df=60; p=0.181). A possible reason for this result is that they have not participated in e-consultation, so they could not assess whether they had an impact on the work of civil servants or not. When asked whether or not they ever participated in e-consultations, only 17 students of this research replied that they had participated.

IX. CONCLUSION

New digital technology creates new opportunities to make politics and governance more democratic, transparent, accountable, inclusive and accessible to people. By means of their activities in the community, university students can show the connection between social media platforms and political and electoral decisions. It is necessary to conduct further research [2].

Young people can be an indicator of the state of a society [21]. Attitudes, values, competences and behaviour of young people are considered a sort of litmus paper that can adequately explain wider social tendencies of a given society. Inspired by the conclusion at the end of a research paper which said that it would be interesting to conduct a similar research among the young people who are active members of civil and/or political associations in Croatia and see how their views differ from the views presented in this paper [32], in our research we have included young people who have chosen HRE and CE as optional courses, which means that they are active members of the society.

Results in this research show that students, no matter how much time they spend on the Internet, are most active online to find information related to their academic obligations, and much rarer participate in democratic processes in the closer and larger community.

Considering the weak influence of young people on the society and vice versa, a lack of opportunities to participate actively in the life of the community and a reduced trust in the information available in the media regarding the work of public servants, the results of this research certainly inspire further analysis. On the other hand, young people in Croatian schools do not learn about their rights through obligatory courses (such as HRE and CE), systematically and continuously, and are thus deprived of learning how to protect their rights.

Research presented in this paper could be extended to encompass all Croatian universities. In this way, it would be possible to obtain a picture of young people and e-democracy in a broader area. One thing is certain: this research contributes to studying the relationship between youth and e-democracy, because there are no similar research activities on the national level, and wider.

A small research sample is one of the potential limitations to this research, but as we have already explained, HRE and CE are an optional course in Croatian universities. Therefore, it is necessary to make the local, regional and national level, as well as university policy makers and teachers aware of the importance of introducing HRE and CE as a mandatory course and cross-curricular topic. In this way, the connection between young people and e-democracy could be (re)described.

REFERENCES


