Abstract: The aim of the article is to present the preliminary results of a survey conducted among Lithuanian students on their opinion about i-voting and the possibility of implementing this alternative voting method in Lithuania. The main aim of the research was to answer the following research questions: What is the attitude of young Lithuanians towards voting via the Internet? What threats, benefits and challenges related to the potential implementation of i-voting in Lithuania are perceived by the surveyed group. The research showed that the respondents believe that the greatest barriers to the introduction of i-voting in Lithuania are: the threat of cybercrime, the possibility of violating the principle of secret voting, the lack of political will, the need to change the law; young voters would be willing to vote via the Internet and this could have a positive impact on the turnout among this group of voters; the complexity of the challenges related to implementing i-voting means that there is no chance of its quick introduction.

Key words: i-voting, digital state, electronic voting, young voters

Introduction

In the public and academic debate today, it is widely claimed that democracy is facing a crisis. Researchers believe that it may be attributed primarily to the following factors: citizens’ dissatisfaction with politics; lack of political skills; low satisfaction with state policies; lack of trust in politicians and government; declining membership in political parties; the increasing importance and power of supranational organisations, regulatory bodies and central banks; the ineffective representation of citizens’ interests by their elected politicians; lack of transparency and evasion of political accountability (Ercan, Gagon, 2014, p. 1). The range of conclusions is wide since there is no single form of democracy, as evidenced by more than 500 adjectives that go with its name, including liberal, deliberative, agonistic, illiberal, representative, feminist and radical. As a result, researchers often come to divergent conclusions; after all, they may refer to completely different foundations of democracy depending on the mechanisms considered and their evaluations of the facts. Populism itself and related social movements can be perceived
as the result of political alienation arising from the crisis of democracy, as well as the revival of participatory democracy (*Ibidem*, p. 5).

As noted by Mariusz Baranowski, “the [t]ensions between state and society, especially with progressive globalisation processes in place, are not disappearing at all; they are only changing their form, although societies in some countries or regions are characterised by decreasing civic activity (as reflected, for example, by the number of strikes, demonstrations, legislative civic initiatives)” (*Baranowski, 2014*, p. 12). The signs of a crisis of democracy also include declining voter turnout, translating into a lower social legitimacy of those in power and inspiring a sense of alienation of the authorities from the people. In order to prevent the ever more acute effects of the crisis of representative democracy, many countries are taking measures to enable citizens to participate more actively in political life, not least by increasing their ability to participate in elections. Governments assume that by, for example, increasing the methods of participation in voting they will manage to increase the level of voter turnout, thereby also improving the legitimacy of their decisions (*Malužinas, 2021b*, p. 94; *Musiał-Karg, 2015*, p. 87).

This paper discusses one of the alternative voting methods, which in recent years, especially during the COVID-19 pandemic (with a view to protecting voters’ health), has gained popularity in many countries across Europe and around the world. Lithuania is just one example of a country where online voting has been hotly debated among politicians. Its government intends to introduce online voting as an additional option to participate in state elections, apart from the methods already available. There are plans to give eligible voters abroad the possibility to cast their votes online in the next elections. It appears that the group of voters who are most interested in e-voting, seeing many benefits in this solution, are young people. Therefore, the authors of this text have decided to focus their analysis precisely on young voters aged 18–29 years from Lithuania. As rightly pointed out by Radosław Marzęcki and Łukasz Stach, “the attitudes of ‘today’s youth’ will shape the ‘democracy of tomorrow’” (*Marzęcki, Stach, 2016*, p. 42). For this reason, more and more attention is being paid to the topic of political participation of young people. In most European countries, this group sees a steady decline in participation in political parties, level of interest in politics and voter turnout (*Weiss, 2020*). Lithuania, which is the subject of the authors’ interest, faces similar problems.

However, it is worth noting that in the 2020 elections to the Seimas of the Republic of Lithuania, despite an expected decrease in voter turnout compared to the 2016 elections, the percentage of the youngest voters (up to 24 years of age) was steady, i.e. 38.6%, while the group aged 25–34 years saw an increase of 2 p.p. from 38.4% to 40.3% (*Giedrius, 2020*). For this reason, the authors decided to conduct a pilot study among Lithuanian students of political science, public administration and related disciplines with a view to establishing how they perceive the functioning electoral system, with particular emphasis on the evaluation of e-voting as a possible remedy for the decline in voter turnout. An additional motivation for this research was provided by the discussion about Internet voting in the time of the pandemic and the ongoing legislative work to implement this alternative voting method. The research methodology will be discussed in detail in the next subsection.

The main aim of the research was to establish what young Lithuanians think about e-voting and whether they are willing to use this way of voting, if available (in addition to the currently available methods of participation in voting).
Partial results of the survey and the resulting analyses, summaries and conclusions will be of help in constructing and implementing further, more advanced, research, with a view to exploring the level of support for Internet voting in Lithuanian society in a more comprehensive way.

Research methodology

As part of the research, a survey was conducted among a group of Lithuanian students, aged 19–29. When justifying their selection of the research sample, the authors refer to the participation of young people in local and state politics and policymaking, which may indirectly affect the quality of modern democracy. As young voters are much more interested in innovative technologies than representatives of the older generation, this group appears to be a good “starting point” for research in this area. Moreover, the sample was selected on purpose, considering it represents a group of people with the following characteristics: high digital competence, allowing to understand how modern technologies work; studying fields which provide knowledge about the Lithuanian electoral system; studying fields which provide knowledge about alternative voting methods and strengths as well as weaknesses of e-voting as one of those methods.

This choice was also determined by the intention to compare the obtained results about the process of implementing e-voting, benefits of using this method, risks, challenges and declarations of willingness to use this voting procedure. The research considered selected demographic and political variables.

An important element of the students’ awareness is the knowledge and skills to freely use information and communication technologies. This group of respondents stands out from the entire Lithuanian population not only in terms of age, but also in terms of greater ICT skills and extent of Internet use. An opinion poll conducted in spring 2021 showed that the Internet was most often used by young people aged 18–25 (65.5%) (Laurinavičienė, 2021). For the students surveyed, knowledge of ICT, e-government, e-public services in Lithuania, new forms of participation (e.g. e-voting) and understanding of such terms as e-voting plays an important role. Considering the pace of development of ICT in Lithuania and worldwide, the widespread access to the Internet, as well as the modernisation of almost every sphere of life, e.g. e-banking, e-government, e-citizen, etc., it is reasonable to assume that, with the pandemic around, voters (young people, among others) will be on the lookout for more modern and convenient voting methods, ones that could guarantee health safety in emergency, in addition to the traditional ones.

As intended by the authors, the research will answer the question of how young people, specifically students aged 19–29 studying political science and public administration, as well as related disciplines, evaluate the possibility of introducing Internet voting in general elections. In order to achieve the aim of the research, the following research hypotheses have been adopted for verification:
1) The introduction of Internet voting would increase voter turnout.
2) The introduction of e-voting would not increase the transparency of voting.

The following research questions will be also helpful in formulating conclusions:
1) What are the main reasons for voter absenteeism among young voters?
2) How should the e-voting system be constructed in order to inspire confidence among young people?
3) What are the reasons why the e-voting system does not work in Lithuania today?

An anonymous survey questionnaire was sent to the respondents via the Internet, containing eighteen extended questions and a personal information table for the respondents to specify their current occupational status, education, field of study, as well as gender, year of birth and place of origin.

Research sample

The survey was conducted between December 2021 and January 2022 on a group of 167 students from five different Lithuanian universities: Vilnius University (Institute of International Relations and Political Science), Klaipeda University (Department of Public Administration and Political Science), Mykolo Romerio University (Institute of Political Science), Vytautas Magnus University (Department of Political Science), Vilnius University Siauliai Academy (Department: Regional Development Institute).

The analysis of the distribution of the respondents by age distinguishes four main age categories. People representing the following age groups took part in the survey: 27–29 years (36.5%) and 19–21 years (26.9%). Respondents aged 22–24 (19.8%) and 25–26 (12%) accounted for a smaller proportion. The average age of the respondents was 24 years. It should be noted that 95.2% of the respondents were aged 19–29. When analysing the answers according to the respondents’ gender, it should be noted that significantly more women (72.5%) than men (22.2%) took part in the survey.

<table>
<thead>
<tr>
<th>Your age:</th>
<th>I don’t want to specify</th>
<th>Number</th>
<th>% out of total</th>
<th>Female</th>
<th>Male</th>
<th>I don’t want to specify</th>
<th>In total</th>
</tr>
</thead>
<tbody>
<tr>
<td>19–21 years</td>
<td></td>
<td>33</td>
<td>1.8%</td>
<td>2</td>
<td>7</td>
<td>1.8%</td>
<td>4.8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>33</td>
<td>19.8%</td>
<td>10</td>
<td>5</td>
<td>3.0%</td>
<td>26.9%</td>
</tr>
<tr>
<td>22–24 years</td>
<td></td>
<td>23</td>
<td>13.8%</td>
<td>10</td>
<td>0</td>
<td>0.0%</td>
<td>19.8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12</td>
<td>7.2%</td>
<td>8</td>
<td>0</td>
<td>0.0%</td>
<td>12.0%</td>
</tr>
<tr>
<td>25–26 years</td>
<td></td>
<td>50</td>
<td>29.9%</td>
<td>10</td>
<td>1</td>
<td>0.6%</td>
<td>36.5%</td>
</tr>
<tr>
<td>27–29 years</td>
<td></td>
<td>121</td>
<td>72.5%</td>
<td>37</td>
<td>9</td>
<td>5.4%</td>
<td>100%</td>
</tr>
<tr>
<td>In total</td>
<td></td>
<td>121</td>
<td>72.5%</td>
<td>37</td>
<td>9</td>
<td>5.4%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Own study.

2 The survey was in electronic form.
3 It should be mentioned that 4.8% of the respondents did not indicate their age group.
4 5.4% of the respondents did not indicate their gender in the questionnaires.
As far as the place of residence of the respondents is concerned, the majority were inhabitants of big cities and medium-sized towns – 48.5% and 36.5% respectively. Residents of small towns and villages accounted for 7.8% and 5.4% respectively.

Electoral participation of young Lithuanians – results of own research

In order to establish whether the participants of the study are involved in public life, the first question was whether they regularly participate in local or parliamentary elections. The analysis of the results shows that most of the respondents (67.1%) declared that they “always” participate in elections. 15% of the respondents declared that they vote from time to time, while 12.6% – quite rarely or occasionally. It should be added that, due to their age, the persons surveyed have not had much opportunity to vote in general elections.\(^5\) It is worth mentioning that since the time the oldest respondents turned 18 (thereby obtaining active voting rights), four general elections have been held in Lithuania in which the respondents could vote. Among the respondents, 5.4% declared that they do not participate in elections.

Chart 1. How often have you voted in elections so far?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>always</td>
<td>67.10%</td>
</tr>
<tr>
<td>from time to time</td>
<td>15.00%</td>
</tr>
<tr>
<td>rarely</td>
<td>12.60%</td>
</tr>
<tr>
<td>never</td>
<td>5.40%</td>
</tr>
</tbody>
</table>

Source: Own study.

The results of the survey indicate that although Lithuanian experts argue that the group of the youngest citizens has the lowest level of participation in elections, the surveyed sample of students taking the university courses mentioned earlier in this paper declares different attitudes.

It is quite interesting to note the answers to the question asked about which of the alternative voting methods is the most convenient for those who want to participate in elections. It is worth adding that this question provided for one more option of electronic

\(^5\) Since 2000, Lithuania has held a total of six parliamentary elections.
voting: voting by means of voting machines. The survey results show that almost every fourth respondent (73.1%) declared that the most convenient way of participating in elections is voting via the Internet. Slightly more than 19.2% indicated the most convenient way of voting is traditionally at a polling station, while 6.6% mentioned voting using electronic voting machines at polling stations (see Chart 2).

Chart 2. Which voting method is the most convenient?

- In person at the polling station: 73.10%
- Electronically (via the Internet): 19.20%
- Electronically (in person at polling station on specialized election computers): 6.60%
- No answer: 1.20%

Source: Own study.

As noted by Konstantin Agafonov, a crucial factor that hinders voters’ participation in elections is the distance between their place of residence and the polling station (Konstantinas, 2007). Moreover, it should be mentioned that social mobility is higher than before, as a result of which citizens are often away from their place of residence on the election day. Moreover, many young Lithuanians live abroad on a permanent or temporary basis, a situation that influences voter turnout. Currently, the only way to cast a vote in elections is by postal voting. The results of this study may suggest that young Lithuanians show a considerable interest in online voting, which, in the era of dynamic development of ICT, may be an attractive and convenient way of participating in elections.

Students’ attitude towards the possibility of introducing e-voting

The analysis of the percentage distribution of answers to the question about whether the respondents positively assess the possibility of introducing e-voting in Lithuania shows that most of the respondents answered “Fully possible” and “Possible” – 44.1% in total, while 32.4% answered “Only partly possible”. A contrary opinion was voiced by 20.1% of the respondents (negative answers in total) (see Chart 3). 3.5% of the respondents do not have any opinion on this issue.
Chart 3. How do you assess the possibility of introducing Internet voting in Lithuania?

- 32.40% Fully possible
- 26.50% Possible
- 11.20% Only partly possible
- 7.10% I have no opinion
- 1.80% It is impossible for the moment
- 1.80% Impossible
- 17.60% Fully impossible

Source: Own study.

As can be seen from the analysis of this question, most of the respondents believe that it would be possible to introduce e-voting (to varying degrees). However, every fifth respondent voiced an opinion to the contrary. Therefore, further in this analysis, it is worth considering the factors that have impeded the introduction of electronic voting in Lithuania (see Chart 3).

In the next question, respondents were asked about whether they would support the introduction of Internet voting for all eligible voters, both at home and abroad. Almost every sixth respondent (58.1%) answered “I agree” and every second respondent – “I strongly agree” (19.8%), a total of 77.9%. By contrast, 6% of the respondents answered “only partially”. The neutral answer “I have no opinion” was given by 2.4% of the respondents and the negative answers “I rather disagree”, “I disagree” and, “I strongly disagree” – by a total of 13.2% (see Chart 4).

In light of the above results, it is reasonable to state that the respondents see the possibility of introducing e-voting in state elections as an alternative voting method in addition to the existing ones. The answers to the question are almost unanimous. The data presented in Chart 5 confirm the previous thesis that young voters in Lithuania support the implementation of e-voting as one of the voting methods in state elections. It is worth mentioning that comparable results were obtained in opinion polls conducted in 2011, 2015 and 2021 on a sample reflecting the entire Lithuanian society. The results of these surveys indicate several interesting regularities. First, similar preferences for online voting are expressed by the majority of Lithuanians, who support electronic tools of electoral participation in addition to the traditional forms of voting. Thus, one can assume that the problem concerns the whole Lithuanian society, not only the groups of young citizens. Second, the percentage of people declaring their support for electronic tools in elections is quite high (above 50%); citizens more and more often declare their willingness to use e-voting (see the opinions of Lithua-
nians on the possibility of implementing e-voting in state elections). Third, it is necessary to pay attention to the factors that have an impact on the negative assessment of the organisation of elections among people staying abroad. They reveal numerous difficulties connected, inter alia, with the delivery of the election packages, the timely delivery of the election mail by the postal service and the assumed high costs of postal voting as well as the small number of polling stations (most often located at the embassies or consulates). It should be noted that, according to the data of the Statistics Department of the Republic of Lithuania (as of 2021), 1,052,241 Lithuanian citizens live abroad, about 35% of those with the right to vote (Emigracija..., 2021). Therefore, it should be argued that support for the use of electronic tools in Lithuanian elections may be related to the need for a more effective and less problematic (compared to postal voting) method of voting. Undoubtedly, however, support for the use of electronic tools in elections among such a high share of respondents may be caused not only by the dynamic development of innovative technologies and the global trend towards e-participation, but also by the spread of the COVID-19 pandemic, making it necessary to introduce voter-safe forms of political participation (Musiał-Karg, Kapsa, 2021). The visible evidence for such a state of affairs may be the fact that, in the epicentre of the pandemic and with the number of COVID-19 infections and victims increasing day by day, Lithuanian politicians decided to hold parliamentary elections on the originally planned date, a decision that had an impact on the electoral process.

It is significant that 71% of Lithuanians support the possibility of electronic voting in Lithuania, according to a poll commissioned by Devbridge, an American service company, and conducted by Spinter Research in 2021. Further, a 2011 and 2015 poll by “Baltijos tyrimai”, an opinion polling company, shows that almost two thirds of the Lithuanian population (56% and 65%) support online voting (Malužinas, 2021c).
itself, the election campaign and the turnout, which was 48.7% (Malužinas, 2021a, p. 230). According to experts, the reasons for the low voter turnout in the 2020 parliamentary elections could be attributed to, inter alia, the public’s fear of contracting the coronavirus (Malužinas, 2021b, p. 227). The above assumptions are reflected in the data in Chart 5, which also suggest that young people expect new forms of voting to increase voter health security.

**Chart 5. Would you agree with the statement that Internet voting is a tool improving the health security of voters during the pandemic?**

![Chart 5](chart.png)

Source: Own study.

Therefore, the next step analyses the answers to question 6, where young people were asked to indicate whether they agreed with the statement that online voting is a tool that contributes to the health security of voters during the COVID-19 pandemic. As can be noted, the majority of the respondents answered “I strongly Agree” and “I agree” – a total of 61.7%, while “I partially agree” was indicated by only 15% of the respondents. Only 5.4% answered “I disagree”, 7.8% – “I rather disagree” and 3% – “I strongly disagree” – a total of 16.2%.

As mentioned earlier, the survey examined also opinions on the factors due to which electronic voting has not yet been implemented in Lithuania. Respondents rated individual factors (statements) using a 7-point Likert scale (see Chart 6). As can be seen in the chart, the majority, i.e. 48.8% of the respondents, indicated that the most important factor affecting the implementation of e-voting is digital security risks. Furthermore, 44.8% of the respondents answered “It is difficult to ensure that a given voter will actually vote online.”

As part of the above data, the threats and concerns related to the implementation of online elections in Lithuania can be divided into two groups. First, political concerns. Some political parties fear cyber threats from Russia, considering that Lithuania, just like the rest of the Baltic States, is very vulnerable to such threats due to
its harsh criticism of the Kremlin, the presence of a Russian-speaking minority in the country and its links to secret criminal organisations originating from Russia, as well as the weakness of its IT systems (Kuczyńska-Zonik, 2019). Second, the threat to the transparency and legitimacy of voting. According to experts, it is impossible to control the transparency of voting outside the electoral district, i.e. it is impossible to monitor the electoral process and control vote buying in a traditional way. Moreover, the results of electronic voting can be verified neither by those who blindly trust the technology, software and hardware of the electronic voting system nor by those who install these electronic voting systems. The principle of secrecy of voting is based on the privacy and anonymity of voting, hence the respondents declaring their support for e-voting and their willingness to use this voting method at the same time point to the potential risks of this alternative voting method, thus echoing the opinions of experts.

**Conclusions**

According to Robert Krimmer and Alexander Prosser, the implementation of e-voting requires the state to make increased efforts at four levels: law, technology, society and politics (Krimmer, Prosser, 2004, p. 25). This view finds its extension in the model developed by Iryna Susha and Manuel J. Kripp:
Scheme 1. Classification model of challenges to the use and implementation of remote e-voting in legally binding elections

Politics & attitude
- “Democratic liturgy”
- Campaign concerns
- Stakeholders’ skepticism
- Lack of overall trust
- Dematerialization of votes

Infrastructure & technical procedures
- Voter identification
- Digital literacy
- Verification of votes
- Free and secret voting
- Security of information assets

Operations & management
- Project management
- Legal regulation
- Privatization of elections
- Benefits and cost
- Field immaturity


It takes the form of a pyramid, as the different planes are interconnected and interdependent. As pointed out by I. Susha and M. J. Kripp: “The tip of the iceberg” is the attitude of stakeholders towards remote e-voting technologies and concerns about the transformation effects it can have on democratic processes. The middle layer (...) combines the problems which occur with the «hard» aspects of the remote e-voting phenomenon, i.e. the technical infrastructure, software solutions, computer security and digital skills. Finally, the base layer is the cluster of challenges encompassing practical constraints in the management of e-voting project amongst others the relationship with vendors, project economy, and organizational nuances” (Susha, Kripp, 2011, p. 6). The complexity of the challenges faced by any state wishing to implement e-voting as a widely available, additional voting method makes it extremely difficult.

The main barriers include, in addition to the aspects quoted earlier, the following obstacles that, in varying degrees of intensity, are faced or have been faced by states while testing and implementing e-voting:

- low levels of public trust and confidence in government and public administration are not conducive to the introduction of e-voting. Voters should believe that the system is secure and that no party to the political dispute will manipulate or undermine the results of the vote. At the same time, one should remember that, in the era of fake news, the stability of governments and the credibility of election results can be threatened by even an unconfirmed rumour;
- the technical and infrastructural complexity and high costs of implementing e-voting. One should bear in mind that finding appropriate technological solutions is extremely
demanding and may consume high costs related to the preparation and purchase of an appropriate system;

– Internet voting requires a form of publicly accessible digital identity identification. It is thus necessary to develop an efficient and secure system for remote verification of voters;

– basic digital competences are needed – it is clear that in order for voters to understand how e-voting works and thus not to doubt the security of elections, they need to have digital skills. It is thus important for the level of digital exclusion to be as low as possible and for the system to be understandable to its users. This means that the implementation of e-voting should be preceded by educational actions.

Considering the foregoing, one can see how complicated the process of implementing e-voting is for countries where public trust and political consensus are as important as legal solutions along with technological infrastructure. More than half of the students surveyed believe that it is possible, which is a good sign for the future. Referring to the hypotheses formulated in the introduction, it should be recognised that the pilot study gives hope for them to be positively verified as part of more in-depth quantitative research, characterised by a low measurement error and a high level of confidence, to which this study is a contribution. When analysing the results of the survey against the research questions posed, the following indirect conclusions can be drawn:

1. According to the respondents, the unavailability of e-voting in Lithuania is mainly due to the real threats to digital security (48.8%) and the difficulty of ensuring that it is the voter themselves who votes and not, for example, their relatives (48%). Equal importance is accorded to the lack of political will (36.7%), the lack of agreement between political parties (34.5%) and the need to change the law (33.1%).

2. The introduction of the e-voting system in Lithuania may help to increase the voter turnout among the young generation. The results of the conducted research show that young voters would be willing to use such a solution: a dominant majority are in favour of its full or partial introduction.

3. Referring to Scheme 1, the implementation of online voting in Lithuania, apart from infrastructural and procedural measures, needs to be accompanied by political consensus, the implementation of a common electronic form of identification, public education on the system and reduction of digital exclusion, tests confirming the security of voting and the effectiveness of cybersecurity procedures, as well as the development of procedures guaranteeing the secrecy and immediacy of voting. All these elements would undoubtedly increase public confidence in e-voting, an element guaranteeing more effective implementation of the solution.

**Bibliography**


Głosowanie elektroniczne w opiniiach i deklaracjach młodych Litwinów na przykładzie sondażu wśród dorosłych w wieku 19–29 lat – raport z badań wstępnych

Streszczenie

Celem artykułu jest zaprezentowanie wstępnych wyników badań ankietowych, przeprowadzonych wśród litewskich studentów na temat ich opinii o i-votingu i możliwości wdrożenia tej alternatywnej metody głosowania na Litwie. Głównym celem badań były odpowiedzi m.in. na następujące pytania badawcze: Jaki stosunek do głosowania za pośrednictwem Internetu mają młodzi Litwini? Jakie zagrożenia, korzyści i wyzwania związane z potencjalnym wdrożeniem i-votingu na Litwie dostrzega badana grupa. Badania wykazały, iż respondenci uważają, że największe bariery we wprowadzeniu i-votingu na Litwie to: zagrożenie cyberprzestępczością, możliwość naruszeń zasady tajności głosowania, brak woli politycznej, konieczność zmian prawa; młodzi wyborcy chętnie korzystali by z głosowania za pośrednictwem Internetu i mogliby to pozytywnie wpłynąć na frekwencję wyborczą wśród tej grupy wyborców; złożoność wyzwań związanych z wdrażaniem i-votingu sprawia, że nie ma szans na jego szybkie wprowadzenie.

Słowa kluczowe: i-voting, cyfrowe państwo, głosowanie elektroniczne, młodzi wyborcy