
ePoll Platform: the citizen's first step towards legislative participation

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Abstract: Public participation is an important initiative to improve the law-making process and enhance democracy. Nonetheless, it is also a strenuous task, mainly in non-developed countries, due to citizens' low literacy combined with the use of a complex language in propositions, full of formal and unknown terms to the ordinary people. The Brazilian Chamber of Deputies, after launching an interactive tool called eDemocracia in 2009 and undergoing difficulties for the Brazilian citizens to participate, decided to start a new and simpler platform to engage citizens. The new platform, called ePoll, was expected to demand few minutes to participate, to be easily shared on social media, and to allow contributions in plain language, hoping to bring more people into the legislative realm. This paper describes the experience of the Brazilian Chamber of Deputies in this new and somehow obscure trail of citizen engagement.

INTRODUCTION

Digital democracy is a type of government in which all eligible citizens are allowed to participate in the decision-making process by means of digital technology. This includes the use of electronic voting machines, the internet, and other forms of communication. Digital democracy is presumably a more efficient and effective way of governing: as more voices are heard, decisions are expected to be better suited to the society.

With this in mind, the Brazilian Chamber of Deputies launched its first popular participation platform in 2009, called eDemocracia. The focus of this platform is to allow citizens to contribute by suggesting changes to the text of a given proposition. Using this tool, parliamentarians choose to make their proposals available to receive contributions from the society. However, difficulties associated with understanding the complex language of the propositions, combined with the low quality of education in Brazil, formed a strong barrier to the success of this solution.

To get around this problem, the Brazilian Chamber of Deputies sought a new solution that could attract greater participation from the society and, at the same time,

generate information that could help parliamentarians in the development of their proposals.

Electronic polls are surveys carried out over the Internet that offer ease both for the researcher, in terms of logistics and capture of responses, and for the respondent, who can choose the most appropriate moment to participate due to the convenience provided by technology. Moreover, democratic societies have been showing the interest to participate, as suggested by Weiksner.¹

One of the characteristics of electronic polls is the possibility that they can reach thousands or even millions of citizens by being shared on social media (such as Facebook, Tiktok, and others) or messaging applications (such as WhatsApp, Telegram, and others), easily going viral when there is interest from the public. In addition, citizens who use the polls may feel increasingly attracted to using eDemocracia, the more advanced tool already available to them.

In order to get more than just a simple poll, the user should also be able to comment on the propositions. This would allow us to apply information technology to collect public opinion on the Internet about matters in the legislative agenda, thus reaching the 'second degree' (out of 5 degrees) in the digital democracy proposed by Gomes.²

Driven by the desire of having more people engaging with the Parliament, the ePoll was launched in 2017.

E-POLL: ELECTRONIC POLL

The use of electronic surveys presents several challenges, to the point that Rosenblatt says that:

¹ Weiksner, apud Sampaio, R. C. Participação e deliberação na internet: um estudo de caso do orçamento participativo digital de Belo Horizonte. UFMG. 2005. Accessed at: <<http://www.bibliotecadigital.ufmg.br/dspace/handle/1843/FAFI-84GJUX>>, pp.167.

² Gomes, 2004, apud Silva, S. P. Graus de participação democrática no uso da internet pelos governos das capitais brasileiras. *Opinião Pública*, 11(2), pp. 450-468, 2005, pp.455.

*future efforts to overcome these obstacles are likely to be problematic, not just technically, but also with respect to its effect on the political debate and the possibility of an electronic democracy.*³

But with the view that participation is a gradual process of mutual learning for both society and parliament, the Brazilian Chamber of Deputies considered viable the use of electronic polls with the possibility of choosing options and sending suggestions, regarding voting results and messages from the citizens as a source of opinions for parliamentarians. The ePoll team also believes that such a platform would also contribute to the 'Education' component of participation predicted by Connor.⁴

There is no expectation that the result of the votes will reflect the will of the Brazilian society. As described by Freitas,⁵ obtaining a statistically representative sample of the Brazilian population via electronic polls would be very difficult.

In the case of the solution developed by the Brazilian Chamber of Deputies, each proposal in progress automatically receives an electronic poll (ie, regardless of the author's or any other person's will), allowing citizens to express their opinion on all proposals.

Furthermore, a professional employed by the Chamber of Deputies prepares an explanatory summary of the proposition using simple language, so that citizens will be more likely to understand the reasoning, the purpose and the impacts expected by the author.

Finally, polls were chosen for demanding a short period of time to participate, and for the high potential to go viral on social media, contributing to increase the participation of citizens.

Citizens participate by choosing 1 out of 5 voting options, in addition to being able to leave comments indicating what they consider positive or negative in the proposition.

³ A. J. Rosenblatt, A. J. On-Line Polling: Methodological Limitations and Implications for Electronic Democracy. *Harvard International Journal of Press/Politics*, 4(2), 1999, pp.32.

⁴ Desmond Connor. A new ladder of citizen participation. *National Civic Review*, 77(3), 1988, pp.250.

⁵ Henrique Freitas *et al.* Pesquisa via internet: características, processo e interface. Revista Eletrônica GIANTI, Porto Alegre. 2004. Accessed at: <https://www.academia.edu/21080920/Pesquisa_via_internet_caracter%C3%ADsticas_processo_e_interface>, pp.3.

These comments left by the citizens are the source of suggestions for authors and other parliamentarians. As citizens can post many comments, especially on propositions that are covered by the mass media or that go viral on social media, a clustering Machine Learning algorithm is applied to reduce hundreds or thousands of comments to a few dozen groups of similar ideas.

This algorithm, currently in operation, uses Natural Language Processing techniques and was developed, and continues to be improved, by the University of São Paulo, and serves as a study case for post-graduation students who use Machine Learning techniques.

With this solution, the authors of the proposals and other parliamentarians can, in a short time frame, read the main ideas and promote changes in the text or explain the intention of a certain article questioned by the citizens, using the official communication network of the parliament or their own social media platform.

OPERATION

To maximize the chances of having the polls shared on social networks, and reach as many citizens as possible, the poll was designed to be simple to use, to work on any device with Internet access (through responsive pages) and to facilitate the understanding of the proposition.

Figure 1. First screen of the ePoll platform⁶

[2] Ir ao conteúdo A DOS ADOS ENTRAR >

ENQUETE DO PL 1774/2019

O Projeto de Lei 1774/19 autoriza os supermercados e estabelecimentos similares a vender medicamentos que dispensam receita médica. Autor do projeto, o deputado Glaustin Fokus (PSC-GO) argumenta que o objetivo é facilitar o acesso da população a esses medicamentos. Fokus explica que os medicamentos isentos de prescrição são destinados ao tratamento de sintomas e condições de baixa gravidade. [Tendo em vista a sua Entenda a proposta →](#)

[Veja a tramitação](#)

QUAL SUA OPINIÃO SOBRE O PL 1774/2019?

Concordo totalmente Concordo na maior parte Estou indeciso Discordo na maior parte Discordo totalmente

VOTAR

[Veja os resultados](#) [Política de uso](#)

Figure 1 represents the main page for participating in the ePoll. In it, item ‘1’ presents the official identification of the proposition in which the citizen can participate.

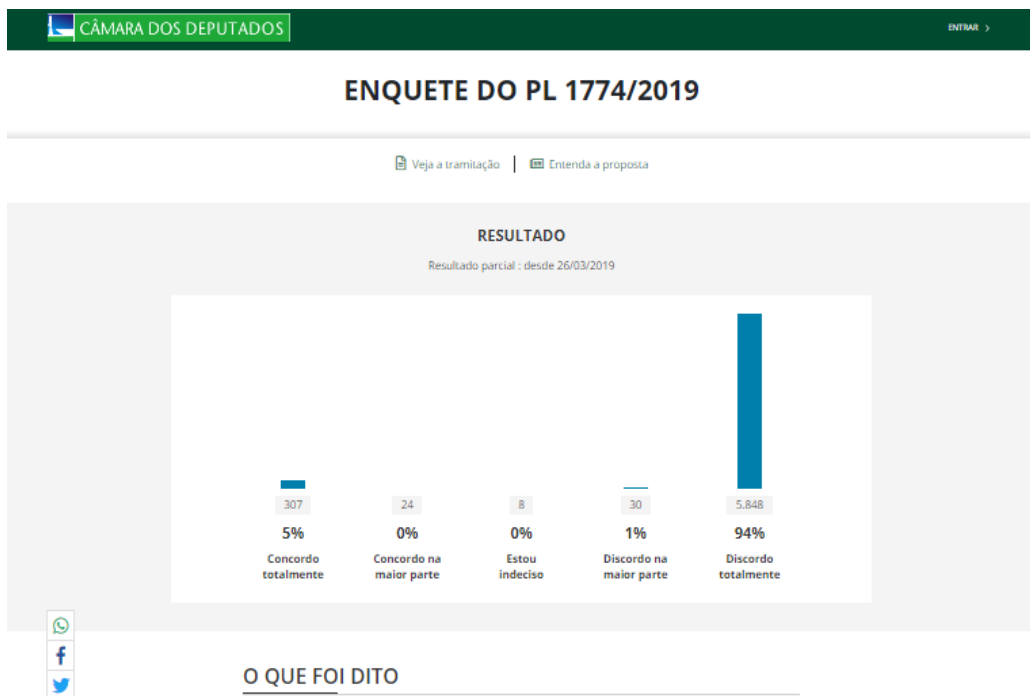
Item ‘2’ presents a summary of the proposition. Every proposition in the Brazilian Chamber of Deputies has a summary. In addition, a professional employed by the Chamber of Deputies prepares an explanatory summary of the proposition using simple language for some types of propositions, using more accessible language than that used in the proposition. So, when this explanation exists, it is automatically presented in this area of the poll.

⁶ Directorate of Information Technology, Brazilian Chamber of Deputies, ‘ePoll system’. Accessed at: <<https://forms.camara.leg.br/ex/enquetes/2195517>>.

Item 3 shows the citizen which committees the proposition has already passed through. Item 4 presents the options that citizens have for their vote: 'Fully agree', 'Mostly agree', 'Neutral', 'Mostly disagree', and 'Fully disagree'. Item 5 is the button to cast the vote. Item 6 allows the citizen to see the results of the votes so far. Item 7 allows citizens to consult the terms of use of the Chamber's website.

When clicking 'Vote' or 'See the results', the citizen will see **Figure 2**.

Figure 2. Result screen of the ePoll platform⁷



⁷ Directorate of Information Technology, Brazilian Chamber of Deputies, ePoll system, Accessed at <<https://forms.camara.leg.br/ex/enquetes/2195517/resultado>>.

Additionally, other users' comments are shown and the citizens will be able to make their own comments as seen in **Figure 3**.

Figure 3. Comment screen of the ePoll platform⁸

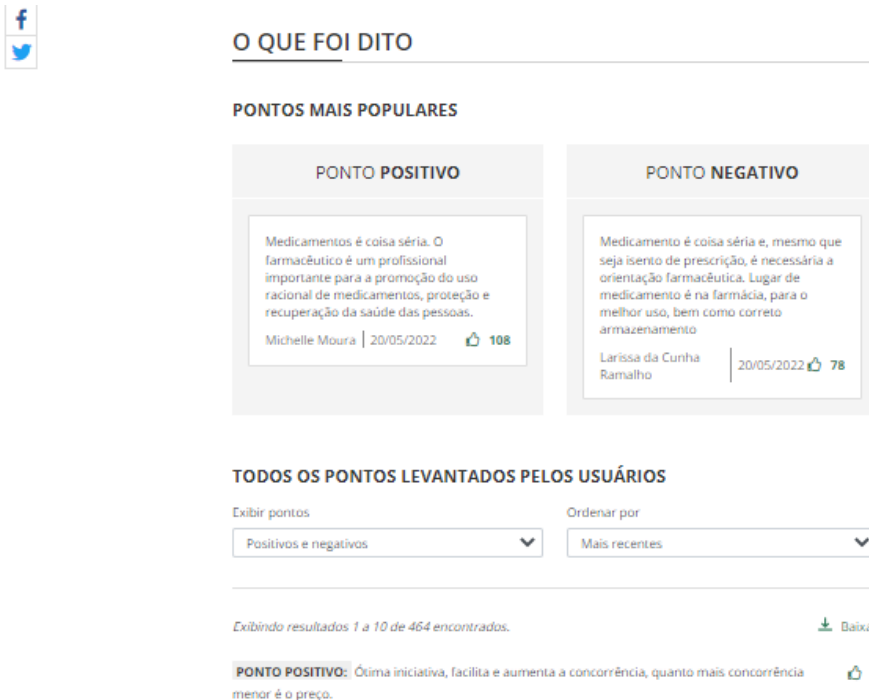


Figure 4 (below) contains an example of the comments that the Natural Language Processing Machine Learning algorithm processes and groups. Each group represents the central idea of a set of comments for a proposition.

⁸ Directorate of Information Technology, Brazilian Chamber of Deputies, 'ePoll system'. Accessed at <<https://forms.camara.leg.br/ex/enquetes/2195517/resultado>>.

Figure 4. Consolidation of comments in groups using Natural Language Processing algorithm⁹

CÂMARA DOS DEPUTADOS

Notificações Temas

Ulysses | Analisador de enquetes

Enquete - PEC 32/2020

Argumentos favoráveis (4538)

Quantidade máxima de argumentos agrupados 4

| Data | Argumento agrupador | Relevância | Ações |
|------------|---|------------|-------|
| 02/03/2021 | Redução da máquina administrativa, eliminar regalias (deveria tirar todos os extras), o agente político deveria ser avaliado com frequência...Enfim, a PEC deveria comparar a ADM Pública com o mercado de trabalho CLT e aí ficaria bem claro tudo que é excesso...o povo brasileiro paga uma conta muito alta para manter especialmente o Congresso Nacional funcionando. | 0,4 | |
| 09/04/2020 | Não, porque já há formas de demitir servidor público. | 0,26 | |
| 09/04/2020 | Fim da aposentadoria compulsória como punição. | 0,199 | |
| 09/05/2020 | Nenhum, outro ataque ao funcionário público. | 0,142 | |

De 1 até 4 de 4 itens

Argumentos contrários (23340)

Quantidade máxima de argumentos agrupados 4

| Data | Argumento agrupador | Relevância | Ações |
|------------|---|------------|-------|
| 09/05/2020 | A retirada da estabilidade do servidor viola a Impessoalidade, pois os servidores vão ficar a mercê de políticos, chefes, isso vai ocasionar assédio no serviço público e uma desigualdade enorme, já que os demais têm estabilidade. | 0,432 | |
| 14/10/2021 | Aliás, o único interesse nisso é aumentar a corrupção no país, retirar a autonomia do servidor público. | 0,32 | |
| 09/06/2020 | Falta de estabilidade para servidores públicos. | 0,166 | |
| 09/04/2020 | É um absurdo. | 0,082 | |

De 1 até 4 de 4 itens

Semid - Secretaria de Participação, Interação e Mídias Digitais
v0.0.1

Produzido por

⁹ Directorate of Information Technology, Brazilian Chamber of Deputies, ePoll system, Poll Analyser Screen Accessed at <<https://forms.camara.leg.br/ex/enquetes/2195517/resultado>>.

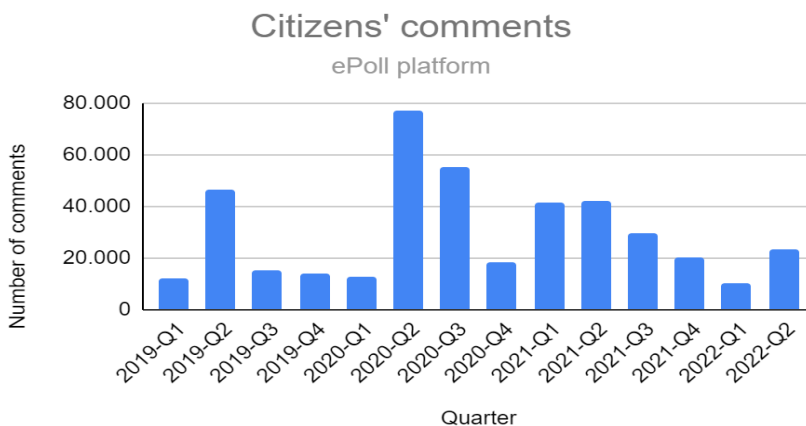
Critics of digital democracy argue that it can lead to a form of cyber-bullying, as people are able to make negative comments anonymously about others without consequence. Because of this, identification is mandatory to use the ePoll platform.

On the other hand, with identification being mandatory, some argue that digital democracy is simply a way for the government to collect data on its citizens. To avoid that, ePoll records sensible data in a way that makes it almost impossible to determine if a specific citizen has voted for or against a proposition (unless there's only one vote for a proposition).

RESULTS

Citizen participation depends on the legislative agenda: propositions that deal with matters reported by the mass media or that are of interest to some groups in the society become more easily shared on social media and bring more people to participate. Collecting the statistics from 2019 to 2022 (up to July, Q2), we have a quarterly average of 30,000 comments submitted by Brazilian citizens.

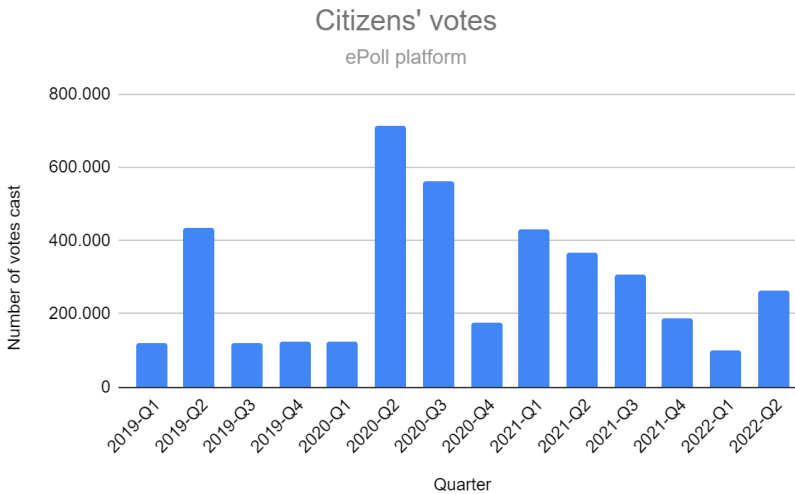
Figure 5. Citizens' comments¹⁰



¹⁰ Directorate of Information Technology, Brazilian Chamber of Deputies, 'Data collected from the ePoll system database on 22 July 2022'. Accessed at: <<https://forms.camara.leg.br/ex/enquetes/2195517/resultado>>.

As for the number of votes, we have a quarterly average of 288,000 votes cast by citizens (**Figure 6**). This means that approximately 10% of the citizens who vote have sent suggestions or comments about the proposition.

Figure 6. Citizens' votes¹¹



The team expected this result, considering that voting is faster to participate than making comments, especially when using mobile devices, the main platform used by the Brazilian citizens nowadays to access the Chamber's website (**Figure 7**).

¹¹ Directorate of Information Technology, Brazilian Chamber of Deputies, Data collected from the ePoll system database on 22 July 2022. Accessed at <<https://forms.camara.leg.br/ex/enquetes/2195517/resultado>>.

Figure 7. E-Poll's Google Analytics Audience View¹²

| Device Category ? | Acquisition |
|-------------------|--|
| | Users ? ↓ |
| | 140,227,847 % of Total: ∞% (0) |
| 1. mobile | 94,221,131 (67.29%) |
| 2. desktop | 44,866,608 (32.04%) |
| 3. tablet | 939,458 (0.67%) |

Comparing the citizens' use of eDemocracia and ePoll platforms, it is possible to see a big difference in participation. With the data obtained from the eDemocracia platform, we have the following result for comments and votes:

Table 1. Number of comments per year for ePoll and eDemocracia platforms¹³

| Year | ePoll comments | eDemocracia comments |
|------|----------------|----------------------|
| 2019 | 87,881 | 114 |
| 2020 | 163,387 | 633 |
| 2021 | 134,206 | 35 |

¹² Directorate of Information Technology, Brazilian Chamber of Deputies, 'Data from the Google Analytics database for the Chamber's website from 1 January 2022 to 4 October 2022', collected on 5 October 2022. Accessed at: <www.camara.leg.br>.

¹³ Directorate of Information Technology, Brazilian Chamber of Deputies, 'Data collected from the ePoll and the eDemocracia systems databases on 22 July 2022'.

Table 2. Number of votes per year for ePoll and eDemocracia platforms¹⁴

| Year | ePoll votes | eDemocracia votes |
|------|-------------|-------------------|
| 2019 | 802,798 | 1,235 |
| 2020 | 1,576,653 | 5,579 |
| 2021 | 1,296,997 | 277 |

Several reasons may explain these big differences:

1. participation in a poll is simpler than in eDemocracia, which requires more user knowledge;
2. the eDemocracia platform shows only the propositions that parliamentarians explicitly make available, while on the ePoll platform all propositions are automatically configured to have a poll;
3. the ePoll requires a very short time to participate, compared to that needed for eDemocracia;
4. the ease of sharing a poll on social media.

CONCLUSION

The polls are presented as a way to allure citizens to get to know the legislative process, and draw attention to the discussions that are taking place in the parliament. It is a quick and simple way to participate, promoting education, and contributing to a better understanding of democracy by the citizens.

The use of the gathered information can contribute to improving the outcomes of democratic debates in parliaments, taking the opinion of the citizens (at least of those who participate) more and more into account. The use of Natural Language Processing technology is essential to allow parliamentarians to become aware, in a timely manner, of the large amount of citizens' comments. This is especially important in a country like

¹⁴ Directorate of Information Technology, Brazilian Chamber of Deputies, 'Data collected from the ePoll and the eDemocracia systems databases on 22 July 2022'.

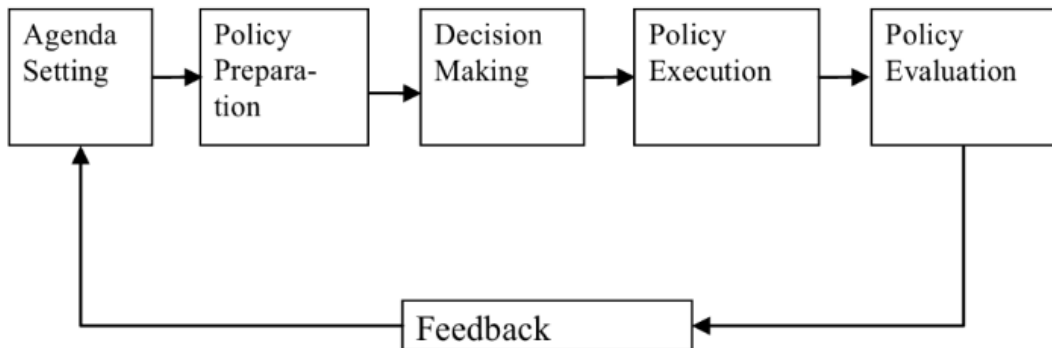
Brazil, with more than 210,000,000 inhabitants, which generate, on average, 30,000 comments per quarter, a number that tends to increase as the solution becomes better known and issues of public interest enter the legislative agenda.

NEXT STEPS

Reviewing the phase diagram (**Figure 8**) proposed by Van Dijk¹⁵, ePoll contributes mainly to ‘Policy Preparation’, while having a minor impact on ‘Decision Making’.

As next steps, we understand that the ‘Feedback’ phase is very important to foster citizen participation: when they figure out that their contributions have in fact been considered by parliamentarians, it is believed that citizens will be prone to participate more and more, as well as promote family and friends to engage, thus creating a virtuous circle.

Figure 8. Phases in the Policy Process¹⁶



Therefore, the goal is to allow the parliamentarian to tag that a certain group of comments was taken into consideration, either for voting or for proposing amendments to the original text.

¹⁵ Jan Van Dijk, ‘Digital Democracy: Vision and Reality’, in I. Th. M. Snellen et al. (eds), *Public Administration in the Information Age: Revisited*. IOS Press, 2012, pp.49-62.

¹⁶ Van Dijk, *Vision and Reality*, 2012.

This indication, made by the parliamentarian, will automatically forward a message to each of the citizens whose comments were in that cluster created by the Machine Learning algorithm. The citizens will then understand the power of their contributions.

As a consequence, it is expected not only greater participation in other surveys, but also greater interest in the legislative process, information seeking and education on the subject, hence gradually increasing the participation in the more complex and complete eDemocracia platform.

Hopefully, this will lead Brazilian democracy to a new level of commitment and stability.