

Leveraging Empathy in Community-based Policymaking

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ABSTRACT

Over the last decade, policymakers have begun to understand the importance of involving citizens in designing policies. Such an aspect is even more critical in the local context. Therefore, governmental institutions have started designing and implementing tools to collect feedback from citizens to enhance their decision-making process. Although empathy has seldomly been applied within such a context, various researchers demonstrated it promotes collaborative mindsets and drives people to consider others' points of view. Therefore, we propose an empathy-driven engagement cycle to collect insights on the thoughts, feelings and stances of citizens to empower the decision-making process of policymakers. While policymakers propose topics to be discussed, citizens interact and participate in gamified activities to share their thoughts and emotions about the presented issues. Such content is then provided to policymakers to enhance the decisional process. This design is employed in a web-based platform alongside other data collection features to enhance the data provided to policymakers. Preliminary validations have been carried out through workshops and events. Future works will focus on engaging policymakers in using the tool in local contexts to evaluate the actual effectiveness of the described methodology.

CCS CONCEPTS

• **Human-centered computing** → **Collaborative and social computing; Interaction design process and methods**; • **Information systems** → **Web applications**.

KEYWORDS

Crowdsourcing, Engagement, Policymaking, Co-creation, Empathy-based Methods, Gamification

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1 INTRODUCTION

In the current complex policymaking scenario, decision-makers may find it difficult to shape solutions aligned with citizens' expectations. Bridging such a gap is essential for effective decision-making, especially in the local context where citizens are directly affected by such decisions. In the last decade, the need to engage citizens caused a paradigm shift towards digital technologies, allowing decision-makers to reach an even broader audience. The employment of such technologies partially contributed to overcoming several disadvantages that once hindered the efficacy of public engagement,

like the high costs in terms of time and money [6]. Despite being able to reach such a crowd, the existing approaches mainly focus on leveraging rational thoughts of people, aiming to collect quantitative input on different aspects of the considered issue. In this context, crowdsourcing can effectively collect citizens' opinions, perceptions, and behaviours. Even more so if other engagement mechanisms, like gamification, are integrated. Our goal is to support the decision-making process with data about citizens' feelings, perceptions, and sentiments while prompting them to consider the possible reasons why other individuals may think differently.

We define a method for collecting people's emotional reactions concerning possible choices taken by decision-makers and policymakers. To attain this, we propose an innovative perspective that leverages the empathy and feelings of citizens, their familiarity with online social media, and their general attitude towards sharing photos and text online. We engage citizens on societal or political challenges - also referred to as scenarios hereafter - and possible decisions taken by policymaking authorities. We ask them to share their "vision" on the matter (i.e., a combination of images, text, and tags) with their peers, thus declaring their stance, perspective, and expectation. We also ask participants to share their feelings towards the scenario explicitly. Visions are then employed in a gamified activity. Citizens are shown another person's vision and are challenged to empathise by understanding the feelings behind the photo collage and text. Thanks to the proposed method, we devise a long-term empathy-based engagement cycle in which citizens share their thoughts and empathise with each other. Therefore, they contribute to a rich discussion on the proposed topics, possibly achieving a shared vision and perception of the impact of complex choices. When defining complex, long-term policies, decision-makers can duly take data about this process into account, thus allowing policymakers to work alongside citizens to achieve concrete decisions about the proposed topics. Furthermore, policymakers can employ such wisdom to derive starting points to develop advanced scenarios, allowing a more detailed refinement of the citizens' thoughts.

The paper is organised as follows. Chapter 2 provides an overview of the background of decision-making, crowdsourcing, gamification, and empathy in the field of interest. Chapter 3 details the design of the methodology quickly overviewed in the introduction, detailing the advantages of such an approach. Chapter 4 describes the actual implementation of the platform, providing a concrete representation of the different sections and activities implemented. Chapter 5 concludes by summarising the discussed methodology and future works.

2 RELATED WORKS

In many cases, policymaking is conducted without engaging with the public and asking the public voice to assert an influence in the agenda-setting phase. Rather than any official public consultation, political and economic measures often inform policy without involving those most affected by the problems and their consequences – the citizens themselves [12–15]. Effective policy ideas aren't always leading to better practice. Indeed, when used as part of policy-making processes, empathy can support policymakers to explore different ideas, revise assumptions, and find more responsive and sensitive solutions to address complex and multifaced issues [6, 9]. Many academics are trying to lay the foundations for behavioural science approaches in policymaking, and movements based on “deliberative democracy” are spreading worldwide. These are seeking to introduce public discussion and deliberation into the policymaking process, leveraging on the spontaneous data produced by citizens through opinion collection and surveys [2, 4].

Our methodology combines design principles and crowd-oriented techniques to engage citizens in an empathy-based cycle to collect their thoughts, feelings, and stances. Given their broad application and proven effectiveness, the following principles and methodologies have been applied.

- **Crowdsourcing** - Crowdsourcing can be defined as a participative activity in which a heterogeneous group of individuals with varying features and knowledge is engaged in undertaking a task as part of a process mutually benefiting participants and crowdsourcers [3]. The main benefits are not strictly associated with monetary or concrete rewards in the policymaking context. Indeed, while policymakers collect data about the citizen's thoughts and expectations, citizens are willing to take part in the debate to shape the policies of their cities and countries. Such behaviour is promoted even more when citizens are able to witness the actual effects of their choices. Aitamurto et al. [1] describe some examples of the application of crowdsourcing in policymaking. For example, Iceland's government engaged the citizens in the constitution reform process in 2011. In the US, crowdsourcing empowered various initiatives, like the “Open Government Initiative” and participatory budget initiatives in different cities. Furthermore, the European Union owns two websites on which its citizens can share their opinions on laws and proceedings, namely “Futurium” and “European's Citizens Initiative”. The first is a platform on which European citizens discuss EU policies. In contrast, the second one is dedicated to proposing laws that the European Commission could consider if enough approval is achieved.
- **Engagement & Gamification** - When addressing people's commitment towards crowd-oriented activities, the fundamental aspect to consider is the motivations that drive their behaviour. Legault [8] outlines intrinsic and extrinsic motivation's main differences and characteristics. The first refers to engaging in an inherently satisfying or enjoyable behaviour, not because of an outcome separable from the behaviour itself. The other relates to behaviours fundamentally contingent upon attaining a separable outcome. Gamification

promotes people's intrinsic motivations towards different activities by exploiting game elements and design techniques. Some gamified elements still rely on people's extrinsic motivation. Consequently, they are only helpful to create an initial engagement, while intrinsic motivation is essential to achieve a long-lasting commitment [11]. Other than engaging each citizen individually, we aim at creating a community of people whose interaction would contribute to the policy-making process. Moreover, building a community committed to the same goals and enabling users to get exposed to others' perspectives positively influence the attitude towards using a gamification service, the quality of the collected data, and their commitment towards shared goals [5].

- **Empathy** - As our design leverages people's interactions and opinion exchange, we argue empathy can strengthen citizens' bonds and discussions. Indeed, empathy is “*the greatest contributor in strengthening social interaction through its ability to motivate individuals to cooperate, to share resources and to help others*” [10]. Additionally, empathy moves people towards a cooperative mindset and drives them to consider other points of view [7]. Driving such collaborative and reflexive behaviour is essential within the proposed design as building a constructive discussion around topics of interest motivates engagement and participation.

3 METHODOLOGY

Our methodology engages policymakers and citizens (or communities of citizens) in a structured discussion around topics of interest. The main design elements employed in the process (as represented in Figure 1) are

- **Scenario** - A scenario describes an actual or hypothesised event on which the policymaker would like to collect citizens' thoughts and feelings to achieve a consensual decision. It is necessary to make the narration as clear, simple, and concise as possible since citizens may not have the required understanding of complex policy-related terminology and dynamics. As soon as the scenario is shared within the community, citizens may begin the structured debate on the described matter. Policymakers can gather different insights depending on the shape and topic of the scenario. For example, a policymaker may be interested in the reaction of the citizens on the potential application of a policy in a local context. At the same time, another may be interested in their response to a possible future event. Furthermore, our methodology could enable citizens to interact with policymakers to design scenarios interesting for both sides.
- **Visions** - A vision is the concretisation of the thoughts and feelings of a citizen. It comprises four elements: a picture, representative keywords, a textual description, and a sentiment. The image is a direct representation of the opinion of the citizens. It can be shaped by combining different pictures, thus representing complex thoughts. The keywords enhance and explicit the message conveyed from the image while summarising the textual description that defines citizens' beliefs. The sentiment directly represents the feelings expressed by the citizen through the vision. Citizens pick their

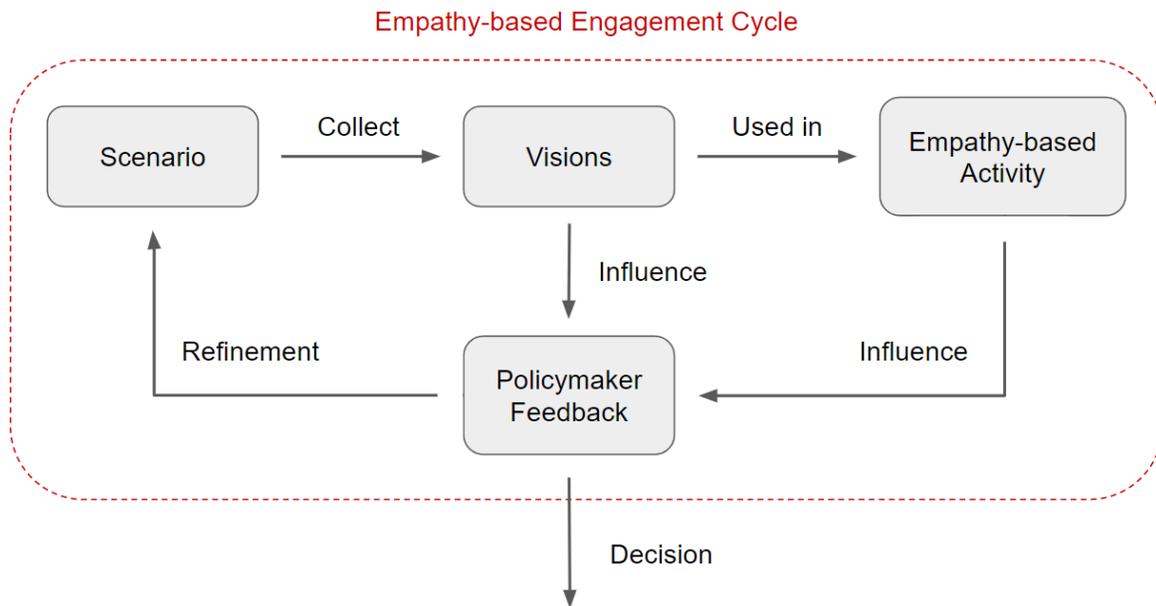


Figure 1: A graphical representation of the empathy-based engagement cycle. People are engaged in various scenarios in which they share their visions. Such visions are then used to engage citizens in a gamified empathy-based activity. The visions and the activity’s outcomes contribute to shaping the feedback for policymakers, enhancing the decision-making process and the refinement of the scenario.

emotions according to a simplified version of the emotional spectrum model proposed by Plutchik, considering only the primary feelings in the middle circle (as shown in Figure 2). Visions are shared with the community and employed in the Empathy-based Activity. They are also essential to build the feedback provided to the policymaker. This approach structures and extends how citizens organise their thoughts, ensuring a higher degree of completeness of the content shared with the community and the policymaker.

- Empathy-based Activity** - Citizens are engaged in a gamified activity, allowing exchanging and confrontation of opinions and thoughts. The playing citizen is shown another person’s vision, and they are asked to empathise with it by stating the feelings they believe are conveyed and providing their thoughts about it. They can explore the outcomes of such an activity, getting an overview of the community’s perception of their point of view (i.e., vision). Through this approach, policymakers can evaluate the level of empathy of the citizens and collect the perceptions on which citizens agree and empathise the most. On the other side, citizens can explore the community’s thoughts and mature their point of view when exposed to others’. When citizens demonstrate stand-out, empathising capabilities, they are awarded gamified elements to provide status and recognition within the community.

- Policymaker Feedback** - The content provided by the citizens is organised, analysed and structured as a set of visualisations that allow policymakers to collect feedback to enhance and drive their decisions. In particular, they can tweak such elements to obtain custom overviews of the community, depending on their needs. Furthermore, as the decision-making process can sometimes be challenging, policymakers may employ such knowledge to refine the initial scenario, thus driving the flow of discussion carried out within the community to achieve even more detailed insights on the scenario. Such a refinement does not reduce the relevance of the original debate since interesting insights can still be derived with time, possibly leading to multiple advanced scenarios.

The system’s design improves multiple aspects associated with public engagement and debate. It reduces the costs, time and organisation effort while enhancing the completeness and significance of the data collected. Moreover, when the data is not (detailed) enough to reach a consensus, it can still contribute to refining the scenario, gradually driving the community’s discussion towards convergence. The system employs empathy and motivations as relevant factors to engage the crowd personally, enhancing the engagement process and eventually achieving a long-lasting engagement. Empathy also becomes fundamental to accomplish an all-rounded understanding of the content shared by citizens.

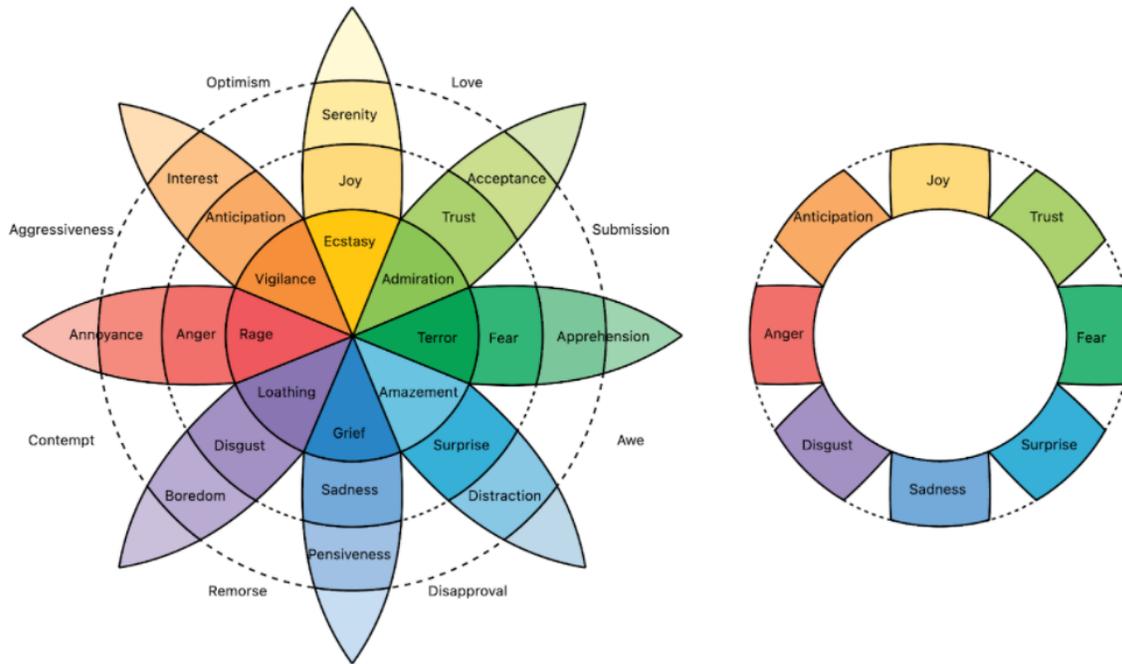


Figure 2: The complete version of Plutchik’s wheels of emotions (on the left) and the simplified version applied within our design (on the right).

4 IMPLEMENTATION

The different elements described in the system’s design have been implemented within an open-source web-based platform. As citizens join it, they are presented with a list of scenarios. Each scenario is described by a picture, a textual description and a title. A citizen joining a scenario is then enabled to share content and interact with the other members of the community following the described modalities.

- **Sharing a Vision** - Users can create their visions, modelled as two-sided cards (Figure 3), to share within the community. When creating the picture, they choose one of the available structures to combine one or more images (e.g., three vertical, four squared, single, etc.). Then, they fill the spots by picking photos from a pre-defined set or searching them on Unsplash through a dedicated interface that queries the API. When a picture is chosen, they can outline the part they want to put in the final image. The vision is shared within a feed-like section as soon as all the required elements are provided. Within such a page, other citizens can overview the main parts (i.e., picture and keywords) of all the visions shared, play with the one they want and visit other’s profiles.
- **Playing the Empathy-based Activity** - Citizens can either pick a vision from the feed or let the system choose a random one for them. Each activity round has the player overview the vision they are provided with and express their thoughts as text and feelings by picking it from the simplified wheels of emotions, demonstrating their empathy.

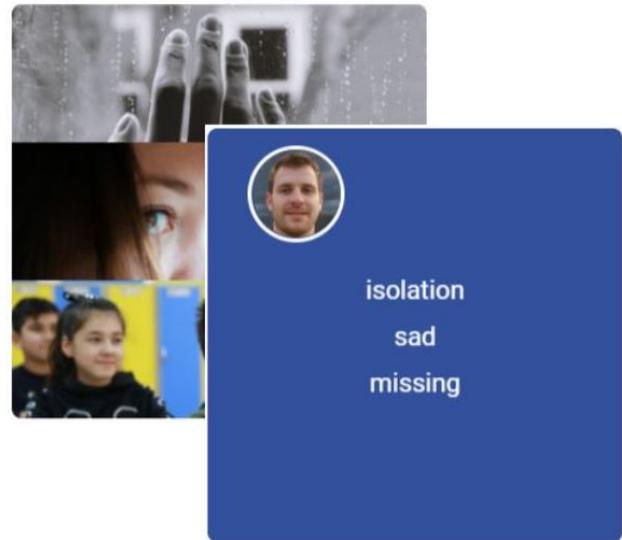


Figure 3: An example of a simple vision created by a citizen. The user interface shows it as a card, which features a flipping behaviour when the mouse scrolls over it. The figure displays both sides of the vision card, showing the picture, the keywords, the profile preview and a button to play the gamified activity.

The platform also allows citizens to react to statements made by policymakers about the scenario by expressing their agreement (or disagreement) in a Likert scale fashion. An upgrade to include the citizens' feelings concerning such affirmations can also be considered as they can help achieve a complete understanding of their perspective. Therefore, policymakers can collect reactions to specific assertions to gather insights into citizens' stances. The system includes gamification elements to provide status-as-a-reward to citizens for their effort on the platform (e.g., achievements, etc.). Such incentives are then displayed on their profiles to encourage other community members to engage with the proposed activities.

Policymakers can create, manage, and maintain their scenarios from their personal area within the platform. They can also visualise the feedback and the level of activity of the citizens. Such content is provided through explorable dashboards involving diagrams whose interpretation by the policymaker will provide valuable insights. The implementation includes user profiling mechanisms to collect data about the citizens to offer customisable feedback depending on such information. Depending on their needs, policymakers can customise citizens' experiences on the platform by creating invites to scenarios built for targeted citizens' groups. Through this mechanism, policymakers can collect specific insights on empathy and the thoughts of particular populations' categories. Moreover, while citizens can access the platform freely, policymakers or policy-oriented organisations must provide proof of their identity to be enabled to share content on the platform.

Preliminary internal experiments have been carried out by engaging pilot users, communities and organisations. The current implementation of the tool has also been validated by engaging participants of policymaking events, including citizens, experts and researchers. Furthermore, external EU associations in healthcare and similar fields tested the application within the context of their projects. Other than validating the tool itself, workshops have been held to validate the capability of citizens in creating scenarios as they may be engaged in such a process in future iterations of the tool.

5 CONCLUSIONS

We presented the design and implementation of a crowdsourcing, gamified platform that leverages the empathy of citizens to engage them in a long-term engagement cycle in which they contribute to shaping the decisions taken by the political authorities within their community. The various activities performed by policymakers to create and manage scenarios and citizens to engage with their peers have been detailed. Future works involve improving the described design by expanding and validating the application of empathy-based mechanisms to other parts of the implementation. Moreover, directly engaging policymakers to apply the proposed tool in local contexts would provide evidence of its effectiveness and highlight the aspects that may require upgrades in an actual scenario.

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