# Assignment 1: Empowerment and Participation

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## Introduction

Participatory design (PD) is a design approach that seeks to actively involve all stakeholders (e.g. users, designers, researchers, developers, employees, customers or citizens) in the design process [7]. Its design practices aim to create working environments that are more responsive to the cultural, emotional, political, and social needs of the participants in the design process [7]. Correia and Yusop (2008) defined participatory design as "a design technique of technical products, having users' democratic participation and empowerment at its core" [6]. In the following, these core principles are defined and their limits are pointed out. Afterwards, methods to overcome those limitations are explained as well as how PD differentiates from other user-oriented design approaches.

## Discussion

*Definition of Empowerment*

Empowerment describes strategies and measures that are intended to increase the degree of autonomy and self-determination in the lives of people or communities and enables them to represent their interests in an autonomous, self-responsible and self-determined way [8]. In its early days during the civil rights movements in the 1960s and 70s, PD was about worker empowerment. It came to attention in Europe, particularly in Scandinavia, through the so-called workplace democracy movement [1]. Primarily it was a reaction to the transformation of workplaces driven by technological innovation. Workers were afraid of being replaced by technology and feared for their jobs. Authorities exercised power over workers by introducing new technologies to control users' work practice [2]. The goal of PD was to empower industry workers and to help people develop better tools for their jobs, expanding their skills while automating the repetitive parts of the job. The new tools should complement the existing practice rather than substituting it [1]. Hence, PD enables users to use and develop their experience-based knowledge. This means that users can make use of their experience in the environment the technology will be used for, to develop new tools and work practices that facilitate their work. With the help of designers they can realize the ideas they have and therefore see their active participation in front of their eyes. Nowadays, due to a changed historical context, empowerment is understood as strengthening the positions of the various participants on behalf of other dominating actors in the PD process. The goal of empowering users is to involve users to participate equally to designers, even though there are factors like the power imbalance inherited in the positions of user and designer, which give designers an advantage in terms of influence on design and the design process [3].

Bjerknes et al. (1987) stress that empowerment is not only achieved by involving users in the development of technologies [7]. Instead, mutual learning has the possibility to empower the user and to admit access as an equal partner in the design process. Mutual learning implies that the participants learn from each other as they have different knowledge and background. On the one hand, designers can get important information and can experience problems of the product application through the users. On the other hand, users are given the ability to learn about technology from the professional designers as they may not be able to define what they expect from a design product, without knowing the possibilities that can be realized with today's technology [1]. Consequently, users can be empowered by gaining insights into the

design of the technology, the design decisions and solutions, and obtaining access to the decision-making process [7]. Therefore, mutual learning and empowerment allows users to have a say in the design without having to speak the language of professional technology designers.

*Definition of Participation*

Participation can be defined as "the fundamental transcendence of the users' role from being merely informants to being legitimate and acknowledged participants in the design process" [13]. The user is not only asked for his or her opinion (for example with the help of an interview or questionnaire), but is intentionally invited as an equal contributor together with colleagues and designers to the PD activity. This emancipated position cannot always be ensured, but endorsed through empowerment. In practice there are opinions that question the feasibility of equal participation which will be discussed in the following. In order for the user to participate it requires the recognition of the user's interests as fully legitimate elements of the design process [1].

Bratteteig and Wagner (2016) defined three different dimensions of participation [2]. These three dimensions describe the way participants can partake in the PD activity and are shown in Figure 1. They stress that the dimensions are not to be interpreted as stages in a design process, although they indicate a certain sequence. They can rather be seen as different sets of practices. The first dimension is described by the question "What shapes participation?". On the one hand, participation is shaped by the context of PD. The age of the participants, the group size or the session length all have an impact on the motivation to participate. On the other hand, it is shaped by power and influence. Hierarchical relations between the participants may lead to dominating actors in the PD process with a stronger influence in the design making. Participation can also be formed by decision linkages which means that one decision will affect upcoming decisions.

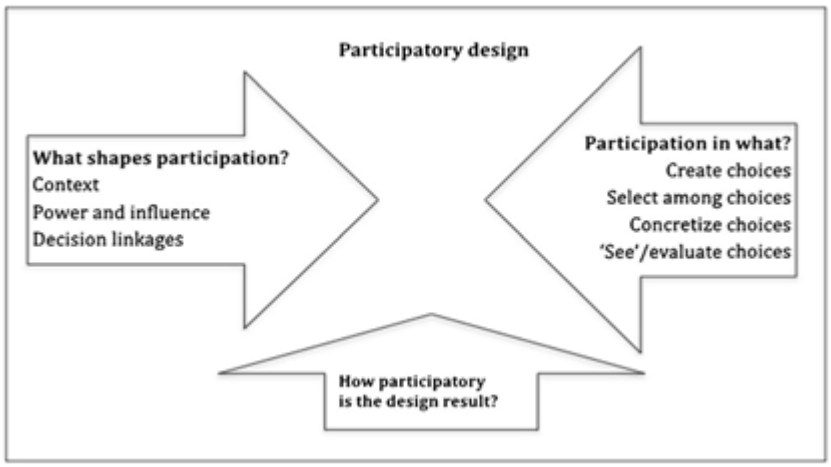


Figure 1: Dimensions of participation [2].

The second dimension is described by the question "Participation in what?". This dimension covers how all participants should be enabled to participate. Firstly, participants create choices, which means that every participant is enabled to come up with his or her own ideas and his or her voice is taken into consideration. Furthermore, they are empowered to select among the upcoming choices and to concretize them. After the decision is made the participants are

typically involved when the choices are tested for example in field trials or product testing, in order for participants to be able to see and evaluate their decisions. [2]

The third dimension is described by the question “How participatory is the design result?”. This dimension is assessing the depth of participation. It includes reflecting on how the space for possible choices can be widened and which of the upcoming choices were selected, which were not and the reason why. It also reflects if the choices participants made were respected as valid for the decision-making [2]. In summary, Bratteteig and Wagner point out that participation is not only about user involvement, but has many different dimensions. They describe these dimensions as sets of practices that can be used for planning successful participation and the evaluation of the degree of participation in a PD project. Despite the helpful mentioned methods that can enable participation, there are also factors that make participation challenging. Therefore, the limits of empowerment and participation will be discussed in the following.

*Limits of Empowerment and Participation*

Factors like contrary opinions in one project group, different knowledge background and language barriers can challenge empowerment and participation of users in the design process.

One challenge in PD is that users are not always a heterogeneous group. They often are a diverse set of individuals with different needs, interests and presuppositions, which constitute different conditions for participation. Therefore, the position and representation of less dominant users may be threatened by other dominant users. It is not always possible to give every voice the same weight and to involve every voice equally in the design result, especially when the opinions are contrary [2]. Hess et al. [4] carried out a PD project and multiple participants had contrary opinions that could not all be taken into account equally in form of a compromise, which had reasons of technical feasibility. Not all ideas are realizable with the current state of technology. Consequently they mentioned that some participants were disappointed in the end. They have complained about wasting their time when their opinion is not implemented in the design result.

Furthermore some authors question the potential to empower users if their position and opportunity for having influence isn't aligned with that of the designers. They query whether the knowledge background has an impact on the influence someone has for decision making. Bratteteig and Wagner (2016) [2] for example noticed that “within one and the same project there may be different depths of participation, depending on the role and particular expertise of participants.” Hess et al. (2008) [4] has carried out a PD project together with a German software company. Developers and users worked together to create a functional description and different prototypes of a target product in order to develop a new Media Center software. Their study shows that “especially the structures of professionalization lead to a power imbalance towards the designers' side even if that is not intended. [...] The user got a voice in these design processes, but it is not clear who listens to it.” They did a literature research and remain critical towards the fact that PD can be able to involve users to participate equally to designers: “None of the known studies treat users [...] with equal importance. Users can utter wishes and take part in the development process, but they do not have any influence on the decisions that are finally made.” This critique concerns the type and level of user participation, which is seen as inferior to that of the designers. The users are seen as actors with a weak position in the design collaboration because they don’t have the same theoretical background and are therefore not included in the decision-making process.

Moreover there can be a language barrier between the participants, when the designers do not speak the local language, and if there is a varying level of fluent spoken native language between the different stakeholders. This affects to a limited extent the engagement of participants and reduces the level of understanding within the group [11]. After discussing the limitations, it is important to reflect on the possibilities to overcome those barriers.

*Methods for successful user empowerment and participation*

There are different opportunities to counteract the three challenges mentioned above. To minimize the participants' disappointment when their opinion cannot be implemented in the design result requires the recognition of all interests of the participants as fully legitimate elements of the design process. To motivate participation, all opinions should be considered relevant and included in the discussion before the final design decision is made. This ensures that participants feel that their voice is heard and their input has an influence in the design process, even if not all interests may be reflected in the design outcome. To ensure that all interests are considered in the discussion the use of a facilitator can be helpful. A facilitator is a person who guides the discussion and therefore can influence the opportunities for a user group to become engaged in the design process. [12]

Another challenge is to minimize power imbalances among actors. The users should have the power to achieve influence and to have a strong position in the design process. To counteract the possibility that the knowledge background has an impact on the influence someone has for decision making, the principle of mutual learning plays an important role. When participants share their know-how, their experience and learn from each other, knowledge gaps can be narrowed and participants can meet on an equal level. It is also a challenge for the PD practitioner to guarantee that all participants feel encouraged to express their personal opinions [3]. This can be made possible by ensuring that there are no previous existing hierarchical relationships among the participants when forming groups. For example, participants who are assigned to the same work group as their superiors may not feel free to express an opposing opinion. Requirements for empowerment are a culture of trust and a willingness to delegate responsibility at all levels of the hierarchy [1]. Furthermore a relaxed and playful environment during the PD sessions can be created through role plays [11]. Another factor is the group size that can intimidate introverts from expressing their ideas in a PD session where extroverts are dominating. Thinyane (2018) noticed that participants were open to tell their ideas but were more comfortable speaking to each other. Therefore he started intentionally with smaller discussions among the participants in the beginning and let the designers join later. In this way he was able to empower the users and to prevent the designers from dominating the discussion [11].

Language barriers can be overcome by a translator or bilingual participants who can assist with translations. Additionally, the design can be virtualized through low-fidelity prototyping tools like clip-art images, post-it notes or storyboards created with pen and paper for easier understanding for participants who have difficulties verbalizing their ideas [11].

*Differentiation of PD from other design approaches*

Besides PD, different user-oriented design approaches exist that all share the value of user participation in the design process like user-centered design, contextual design, co-design and user-driven innovation. They all have in common that the designers try to understand the user's

circumstances while the users try to formulate their goals and issues [10]. While user-oriented design approaches address issues of usability, usefulness and user experience, PD includes objectives that address the gains that participants can make from engaging in the design process [7]. In user-oriented design approaches knowledge about context of use and practice is obtained by asking the user for example in user interviews, observations, surveys, and similar activities. The designer is informed by users, but it is up to the designer to make the decisions. Whereas in PD knowledge about the context of use and practice is generated through a dialogue, in which designers, users and other participants collaborate on issues. The designer behaves as a facilitator that engages the users to have an active part in decision making and sees users as an equal part of the design team. Consequently, the result is not only knowledge that designers can use to develop products, but also something that is valuable to users such as knowledge and new work practices by being able to learn from the designers [7]. Moreover, outcomes such as insights into the design of the technology, the design decisions and solutions, legitimate access to the decision-making process and access to networks with decision makers and fellow professionals are of importance for the users [7]. PD has always emphasized the right of people to participate in shaping the world in which they operate, and that design should create lasting benefits for participants [10]. PD has a political origin and is about democracy and empowerment [7]. Whereas the objective in user-oriented design approaches is product usability, the objective in PD is about user empowerment, where usability improvement is a positive side effect [9].

## Summary

PD was defined as a design method that involves people with everyday knowledge of a particular subject in the development of technologies for that field. It was distinguished from other user-oriented design approaches as in PD users are not solely involved as informants, but as active and equal members in the design process. Participation and empowerment are, different to other design approaches, the core principles of PD. Empowerment was defined as a strengthening of the user's position on behalf of other dominating actors in the PD process. This is achieved by setting up a cooperation framework that enhances the level of participation and possibility of achieving influence. Participation was described as the fundamental transcendence of the role of the user from a simple informant to a legitimate and recognized participant in the design process. These objectives about user empowerment and participation contribute to improved usability of the designed products as a side-effect.

## Conclusion

It has been established that the beginnings of PD lie in the civil rights movements. During this time PD was about user empowerment. Nowadays PD has considerably expanded its areas of application. It became a useful method in many fields to improve products through giving their users the possibility to actively take part in the design decision making. One example is patient involvement in the developing process of healthcare solutions [14]. Another typical area of usage are public services. For example the researcher Ruiz (2020) describes a PD process in the implementation of public service delivery and use through IoT in smart cities [5]. It is interesting which fields will adapt PD processes in the future and give their end-users the possibility to have a say.

**References**


[1] Robertson, T. & Simonsen, J. (2012). Participatory Design - An Introduction. *In Routledge International Handbook of Participatory Design.* New York: Routledge, 1-18.

[2] Bratteteig, T. & Wagner, I. (2016). Unpacking the Notion of Participation in Participatory Design. *Computer Supported Cooperative Work*, *25*(6), 425-475.

[3] Ertner, M., Kragelund, A. M., & Malmborg, L. (2010). Five enunciations of empowerment in participatory design. *Proceedings of the 11th Biennial Participatory Design Conference on – PDC.*

[4] Hess, J. (2008). Community Driven Development as participation? – Involving User Communities in a Software Design Process. *Proc. PDC*, 33.

[5] Ruiz, B. E. (2020). Methodologies for a Participatory Design of IoT to Deliver Sustainable Public Services in "Smart Cities". *Beyond Smart and Connected Governments. Public Administration and Information Technology*, *30*, 49-68.

[6] Correia, A., & Yusop, F.D. (2008). I don't want to be empowered: the challenge of involving real-world clients in instructional design experiences. *PDC*.

[7] Bjerknes, G., Ehn, P., Kyng, M., & Nygaard, K. (1987). Computers and democracy: A Scandinavian challenge. Gower Pub Co.

[8] Sanoff, Henry. (2006) Multiple Views of Participatory Design. *Orta Doğu Teknik Üniversitesi Mimarlık Fakültesi Dergisi, 23*(2), 131-143.

[9] Kensing, F. & Greenbaum, J. (2012). Heritage - Having a say. *Routledge International Handbook of Participatory Design,* 21-36.

[10] Hansen N., Dindler, C., Halskov, K., Iversen, O., Bossen, C., Basballe, D. & Schouten, B. (2019). How Participatory Design Works: Mechanisms and Effects. *Australian Conference on Human-Computer Interaction.*

[11] Thinyane, M., Bhat, K., Goldkind, L., & Cannanure, V. K. (2018). Critical participatory design. *Proceedings of the 15th Participatory Design Conference on Full Papers,* 1-10.

[12] Light, A., & Akama, Y. (2012). The human touch - Participatory practice and the role of facilitation in designing with communities. *Proceedings of the 12th Participatory Design Conference on Research Papers,* 61-70.

[13] Hochwarter S. & Farshchian B. A. (2020). Scaling Participation - What Does the Concept of Managed Communities Offer for Participatory Design? *Association for Computing Machinery*, *2*, 50–54.

[14] Donetto S. (2015). Experience-based co-design and healthcare improvement: realizing participatory design in the public sector. *The Design Journal*, *18*(2), 227-248.