Co-creation and co-design in Public Service Innovation:
A review of how to encourage employee engagement

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Abstract

The public service sector in Norway needs to innovate itself to meet challenges and structural changes such as globalization, automation of work tasks, demographic change, the sharing economy and pressure to deliver more for less. At the same time, attempts at creating change face resistance. Approaches proposed to address the challenges and foster innovation, such as co-creation and co-design, may also challenge attitudes towards creativity, process management and decision-making. As knowledge is limited on how to stimulate participants to reach their full potential as co-creators and keep them from stepping down, we conducted a literature review to identify what motivates and engages employees of public services to participate in co-creation. In addition, interviews were conducted to learn how employees of a specific public service experienced being part of a co-creation design project. The review revealed opportunity, ownership, good collaboration, autonomy and experienced meaningfulness as important for participants to reach their potential as co-creators, and time and resource constraints as potentially hindering this. How to actually succeed in practice is a topic worth further exploration. The interviews largely confirmed the literature findings, but highlighted an additional, understudied issue: that of being aware of and catering to the many different roles in and around a co-creation project. Employees and other stakeholders who are peripheral to a co-creation project may be important to its implementation and to service delivery, and negative experiences may lead to scepticism. To lessen resistance to change and successfully foster and implement innovations, taking care of those with more peripheral roles in a co-creation project is important. Further research should be done on the issue, but some preliminary suggestions include that communication should be emphasised and everyone kept informed about what decisions have been made and how, and about the effectiveness of what is to be or has been implemented.

Keywords: Service design, co-creation, co-design, motivation, public sector

1 Introduction

The public service sector in Norway needs to innovate in order to tackle challenges and structural changes like globalization, automation of work tasks, and the sharing economy (NOU, 2016:3). There is however resistance to innovation and change in public services, both in organizational structures and culture (Nilsen, Dugstad, Eide, Gullslett & Eide, 2016). User, stakeholder, and employee involvement has increasingly become important to designers and innovators (Hansen, Amundsen, Aasen & Gressgård, 2017; Stickdorn & Schneider, 2011). In this paper, the term 'employee' refers to any co-worker from front-line workers of the service to leaders and managers, whereas 'stakeholder' refers to anyone affected by the product or service.

Co-creation and co-design is relevant for innovation in public services because it implies that stakeholders (including employees) are involved in the process as equals (Visser, Stappers, van der Lugt & Sanders, 2005). This creates an opportunity for institutions to accomplish change by fostering a political force for organisational and cultural change (Bowen, Dearden, Wolstenholme & Cobb, 2011). Indeed, one of the reported long term organisational benefits of co-creation and co-design is more support and enthusiasm for innovation and change among employees (Steen, Manschot & Koning, 2011). Still, little is written on people's incentives to join in co-creative endeavours, and their experiences and well-being as learners (Hasu, Saari & Mattelmäki, 2011). By looking into what motivates people to be innovative, we may get closer to more engaging and lasting stakeholder involvement in co-creation processes in public services. This may in turn increase the willingness to improve public services from within. Therefore, the goal of this article is to investigate what motivates and engages employees in co-creation and co-design processes, and what implications this may have for the co-design approach. We do that by reviewing relevant literature on co-creation and co-design on the topics of employee-driven innovation, motivation, change and collaboration. The literature review is in turn supported by interviews with participants in a co-creation project in a public welfare service. Based on this, we finally discuss possible implications for a co-creative service innovation process.

2 Background

2.1 Co-creation and co-design

Sanders and Stappers (2008, p. 6) explain co-creation as "any act of collective creativity". They suggest that co-design is a subcategory of co-creation and refer to "the creativity of designers and people not trained in design working together in the design development process" Sanders and Stappers (2008, p. 6). Moreover, Sanders and Stappers (2008) distinguish co-design from the user-centred approach in the sense that in a user-centred mind set the user tends to be seen as a subject, while in co-design the user is rather seen as a partner. Designers invite stakeholders or potential future users as *experts of their own experiences* (Visser et al., 2005). Still, in order for participants to take this role, they must be given the right tools to express themselves and they will need a high level of passion and knowledge in a certain domain Sanders and Stappers (2008). As opposed to the classical user-centred design process, where the designer is the sole creator, the designer's role is now to provide tools that facilitates ideation and expression Sanders and Stappers (2008).

Co-creation is usually done through different types of workshops or sessions. For example, Sanders (2000) uses 'generative tools' or toolkits, which are visual tools made to facilitate

ideation and expression, while Bowen et al. (2011) utilize story sharing and user journey maps. Common for these workshops is that several participants are being facilitated, they encourage creativity and engagement in a problem, and results are visualized.

2.2   Co-creation in service design

Service design can be defined as a "collaborative process of researching, envisaging, and then orchestrating experiences that happen over time and multiple touch points" (King & Mager, 2009, p. 23) and it involves people, infrastructure, communication as well as material components (Sangiorgi & Prendiville, 2017). The service design process can simply put be described in terms of four phases: Exploration, creation, reflection and implementation (Stickdorn & Schneider, 2011). In addition to taking a human-centred, holistic and temporal perspective, co-creativity is regarded as a core principle of a service design process (Stickdorn & Schneider, 2011).

According to Stickdorn and Schneider (2011) service design utilizes the service user's language to create a common understanding. Facilitating idea generation and evaluation in heterogeneous groups representative of the relevant stakeholders is fundamental to service design. Moreover, involving stakeholders as early as possible in the development process is considered crucial for a successful service design project. Related to that, an emerging topic brought forward by authors such as Overkamp and Holmlid (2017) and Lønvik, Pettersen and Verhulst (2016) is that implementation also needs to be considered throughout service design processes. Building on these principles, many service design methods thus depend on co-creation (Stickdorn & Schneider, 2011). Despite the positive reasoning behind collective creativity and its application in service design, different types of resistance exist as will be discussed next.

2.3   Resistance to and challenges with co-creation and co-design

Drawing on a longitudinal case study to explore resistance to welfare technology implementation in Norwegian municipalities, Nilsen et al. (2016) find resistance to co-creation and implementation in all participating stakeholder groups. They identify many different types of resistance, some of which influence an employee's motivation to participate. For example, there may be resistance in the management to participatory processes and changes, usually in the form of passiveness. Moreover, resistance against taking on the role as co-creator was also explained as caused by a lack of understanding of co-creation, which both may be perceived as something foreign and a threat to existing professional identity (Nilsen et al., 2016). Language barriers and cultural differences between the fields (developers and service providers) lead to poor communication and willingness to understand (Nilsen et al., 2016). Likewise, Hasu et al. (2011) note that including employees untrained in innovation in an intensive innovation process can represent a learning challenge and a significant well-being challenge to workers. According to Pirinen (2016), research on cross-organisational co-design corresponds well with general collaboration research in identifying organisational hierarchy and culture as main barriers to co-design.

There are many challenges in involving both users and employees, but little has been written about the outcomes of co-creation and the experiences of participants (Bowen et al., 2013). Bowen et al. (2013) report on a series of interviews after a co-design project done with the UK National Health Service. They investigate how participants experienced the process and find that in general, participants began with mostly negative attitudes and expectations. This was due to disappointing experiences with previous projects, and an uncertainty of the value vs the cost of being involved. Another issue mentioned is time. Even though funding was provided

for replacements, some employees felt like they could not justify the time spent on the co-design sessions. In public services, and especially hospitals, this can be a challenge. Culture and attitudes also affects participation. The article reports that non-participating co-workers complained about the participants' absence from their regular work, resulting in a pressure to step down from the project.

From looking at several case studies about co-design, it appears that the main reason employees participate in co-creation sessions is that they were told to do so. However, other motivations do exist, and these will be explored next.

3 What motivates and engages employees in co-creation and co-design processes?

3.1 Good collaboration

The core of co-creation and co-design is that people work together in new constellations to create something new (Sanders & Stappers, 2008). Collaboration is associated with several challenges. New relations are often fragile, not all participants feel safe, and as has been mentioned earlier, communication barriers may be present (Hasu et al., 2011; Nilsen et al., 2016). Teamwork is important because of the conversations, exchange of information, and consequently building of trust that happens when people work together (Nærings- og handelsdepartementet, International Research Institute of Stavanger & NTNU Samfunnsforskning, 2011). According to Johnson and Johnson (2014), effective groups need among other things clear, relevant goals that all members have ownership to, and positive interdependence. Positive interdependence is the belief that the success of one person is dependent on the success of the group, and cooperation does not exist without it.

Based on a large, two-year study on teams Google concluded that the 'who' mattered less than 'how' the teams worked together, and they identified five key dynamics for successful teams (Duhigg, 2016; Rozovsky, 2015).

- Psychological safety: Can the member take risks on the team without feeling insecure or embarrassed?
- Dependability: Can the members count on each other to do high quality work on time?
- Structure and clarity: Are goals, roles, and execution plans on the team clear?
- Meaning of work: Are the members working on something that is personally important for each of them?
- Impact of work: Do the members fundamentally believe that the work they are doing matters?

Out of these, psychological safety is the most important one, underpinning the others. The Handbook in Employee-Driven Innovation (EDI) (Nærings- og handelsdepartementet, International Research Institute of Stavanger & NTNU Samfunnsforskning, 2011) highlights success factors for employee-driven innovation. The most important themes mentioned are ownership to one's work, good teamwork, and good handling of proposed ideas. They write that what characterises organisations that succeed with employee-driven innovation is that they have engaged employees, are teamwork and development oriented, show trust, and are safe, autonomous, tolerant, and open. Being given permission, time, space and tools to create innovations, Hasu et al. (2011) observe that service employees were eager to act as innovators

of their own services. This implies experiencing some kind of deeper motivation, which will be further explored in the next section.

3.2   Competence, autonomy and relatedness

To be motivated is said to be moved to do something (Ryan & Deci, 2000a). Self-determination theory (SDT) has provided empirical support for the idea that all humans have three universal psychological needs: Competence, autonomy and relatedness. These must be continually satisfied for people to maintain optimal performance and well-being and has been showed to extend to workplaces as well (Deci & Ryan, 1985). SDT states that there are two types of motivation: Intrinsic and extrinsic. Intrinsic motivation is doing an activity for its inherent satisfaction. Extrinsic motivation is doing an activity to obtain a goal that is separated from the activity itself. Extrinsic motivation can vary in terms of internalization and integration. Internalization is the process of taking in a value or regulation, and integration is the process when individuals transform the regulation into their own so that it comes from their sense of self (Ryan & Deci, 2000a).

SDT proposes that internalization is more likely to happen when feelings of relatedness, autonomy and competence are present. You feel relatedness if you feel connected to and cared for by significant others. A feeling of mastery makes people more likely to adopt an activity, and feedback on positive performance has been showed to enhance intrinsic motivation (Ryan & Deci, 2000a). Autonomy is a critical element for a regulation to be integrated. For people to feel autonomous they must grasp the activity's meaning and align that meaning with their own goals and values, thus making the activity feel meaningful. This is facilitated by a feeling of choice and freedom. A sub theory of SDT, Cognitive Evaluation Theory (CET), specifies that unless a sense of autonomy is present, feelings of competence will not enhance intrinsic motivation (Ryan & Deci, 2000a).

In the workplace, autonomous motivation has been shown to facilitate effective performance and well-being, whereas controlled motivation can diminish those outcomes, especially if the task requires creativity, cognitive flexibility, or deep processing of information (Gagne & Deci, 2005). Giving employees choices about task engagements and providing meaningful rationales tends to enhance feelings of autonomy and facilitate internalization and integration. Giving people an overview of their own work in relation to the whole gives a greater sense of the importance of their work because they can see how the various parts of the jobs fit together into a meaningful unit (Gagne & Deci, 2005). This implies achieving a balance between ownership on the one hand and recognizing one's own role as part of a community on the other hand.

3.3   Ownership

Another way of becoming motivated towards a project is through ownership. Pierce, Kostova and Dirks (2001) define ownership as the feeling of possessiveness and of being psychologically tied to an object or idea. They identify three routes to the feeling of ownership as being in control of, have intimate knowledge of, and having invested oneself into something. Investment of the self comes in many forms, like investing one's time, ideas, skills, and physical, psychological, and intellectual energies (Pierce et al., 2001). Still, according to Rochberg-Halton (1984), it is not enough to just invest yourself in something, you also need to feel your own presence in its existence. To create ownership, people need to feel like their contributions are included in the outcome. Ownership in turn gives an expectation of rights, and presumed responsibility. It can promote the willingness to change, if the change is self-initiated, evolutionary or additive, but it can also have negative effects, like failing to delegate authority

and share information (Pierce et al., 2001). In the EDI Handbook, ownership is explained as the result of knowledge and responsibility (Nærings- og handelsdepartementet, International Research Institute of Stavanger & NTNU Samfunnsforskning, 2011).

4 Experiences of co-creation in practice: Findings from interviews

Interviews were conducted with five employees of a public service in Oslo, Norway, who had been part of a co-creative innovation project carried out by a third-party design bureau. The goal of the project was to develop means for improving the communication and relations between the public service providers and service recipients. The project was carried out in 2016, it lasted approximately 3 months, and the interviews were conducted in 2017. The service involved has several branches across the district, and three branches were chosen by the project leaders to act as pilots. The result of the project were three concrete design solutions with guides for use. By the time of the interviews, the pilot branches had used the solutions from the project for about one year, and they were now being implemented in other branches. The interviewees were three front-line workers from pilot branches, one manager and one project leader. The questions were based on theory about collaboration, self-determination theory and ownership. The project leader, manager and one of the front-line workers had participated in at least one workshop, regarding either ideation or design of solutions. The last two front-line workers, had not participated in any co-creative workshops, but had been asked to implement the solutions, and later share their experiences with other employees when the solutions were implemented in more branches.

The manager and the project leader seemed to have ownership to the problem before the project had started, and so they were both engaged in the project. The front-line worker who had participated in a workshop expressed some ownership to the problem. All three thought the work they did was meaningful, and all three had felt that they had the necessary competence to contribute at the workshops. The two employees who had not participated in workshops experienced a lack of autonomy and were more sceptical to the new service elements. They felt they had been given "a package solution", without much explanation of why the project was conducted, the reasoning behind the designs, or if they actually worked. One explained about a tool for information sharing: "It's super that information is distributed in a good way, but we don't know whether the [users] actually read that information or not, or what they think. Do they think the solution works?" Both were positive about being able to share their experiences with new users of the solutions and noted that they had given them some sense of ownership. During the interviews, little to no comments were made on the motivational aspects of relatedness.

At the end of the project, the front-line workers felt a lack of closure, while the project leader and manager did not. This seemed to be because the leader and manager thought the issues addressed by the project were meaningful, and they had information about the effectiveness of the solutions and their implementation in all the branches. The front-line workers varied in how much they thought the issues were pressing, and did not have information about effectiveness, even though they were curious about it. In addition, one of the solutions tested in the pilot branches was not continued. The leaders had made this decision, but did not inform the pilot front-liners, who seemed to notice that the ball had been dropped, which made them feel a lack of closure and autonomy.

5   Discussion

Our literature review revealed opportunity, ownership, good collaboration, autonomy and experienced meaningfulness as important for engaging and motivating employees of public services to participate in co-creation. Moreover, the interviews largely confirmed this in addition to highlighting the issue of being aware of and catering to the many different roles in and around a co-creation project. In the following, we reflect on these findings and discuss possible implications for a co-creative service innovation process.

The results from the literature review thus seem to correspond well with the interview findings: presence of ownership, experienced meaningfulness, competence, access to information and sharing of experiences all seem to contribute to employee well-being and performance. Not only are these vital parts of an engaging co-creation setting, but co-creation is also an excellent setting to generate these experiences. It is important, however, to emphasize that these are not something that can be given to people; they can only be facilitated and nurtured.

Based on the findings, one way of describing participants' experiences with co-creation can be to divide them into three levels of increasing experienced participation: Involved, engaged and internally motivated. Factors like possibility to participate, ownership, collaboration, and internal motivation seem to build on each other, and based on findings from articles about co-design cases, not all factors need to be present to complete a collaborative design project. Figure 1 illustrates these levels of experienced participation and how they build on each other. This figure is a hypothesis based on the literature cited in this article. 'Involved', here, describes participants that have been involved in the co-creation of a project in every practical sense, but not anything more. 'Engaged' is meant to describe participants' experienced ownership in a collaboration that is participative, constructive, and open. 'Internally motivated' refers to experienced meaningfulness which includes demonstrating one's competence and experiencing autonomy as well as relatedness. It is important to point out that Figure 1 is a simplification of very complex relationships. We suggest that the figure should be understood in such a way that if participants are to stay engaged and motivated for a prolonged period, they need to be at the top of the pyramid, at least some of the time. As such, we expect it to be useful for planning, conducting and evaluating co-creative service innovation processes.
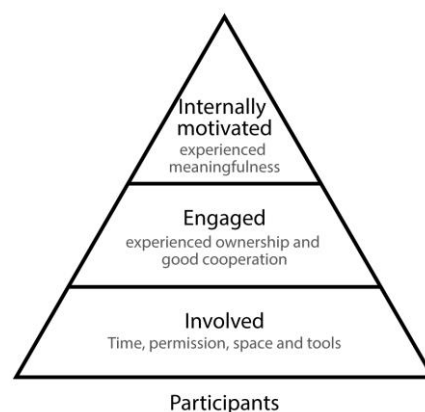

Figure 1. Levels of experiences of participation in co-creation. Made by the first author (2017)

Involving participants and enabling them to participate is fundamental to co-creation. Hasu et al. (2011) describe an enabling environment as to consist of time, permission, space and tools. Bowen et al. (2013) find that 'time' is both actually having time and feeling that you can justify the time usage. Justifying the time spent is a balance between the felt importance of your own

work versus perceived importance of your presence in the co-creation project. Even more important than time is permission. Key decision makers and stakeholders need to be involved in a project for it to succeed. This involvement can be referred to as 'anchoring' and it is considered necessary for accomplishing change (Innoco & SINTEF, 2017). Anchoring with employees is also needed for changing a service. That is partly why co-creation is an important principle of service design, because it requires anchoring with employees as stakeholders.

The third level in the pyramid describes participants that are more or less internally motivated to work on the project. This level is a combination of SDT, having participants taking the role of co-designers (Sanders & Stappers, 2008), and Google's description of efficient teams (Duhigg, 2016; Rozovsky, 2015). Sanders and Stappers (2008) write that participants who have passion and knowledge in a certain domain can most certainly act as co-designers. Rozovsky (2015) reports that in efficient teams, members feel like they are working on something that is personally important to them and believe that the work they are doing will have an impact. SDT states the same about autonomy and internal motivation. Internal motivation is reliant on a feeling of autonomy, and autonomy is partly facilitated by experienced meaningfulness and experienced impact of work. Other things that facilitate autonomy is experienced choice, freedom, and self-initiation.

Looking at the interviews and analysing the interviewees' experiences against the pyramid in Figure 1, the project leader and manager would be positioned at the top. Even though it was not for the same reasons, they experienced the project, and their participation in it, as meaningful. The front-line worker that had participated in a workshop could be said to be located in the middle level. She was positive to the problem and the solutions, but not internally motivated. Figure 1 regards participants of workshops or other types of teamwork in co-creation projects, but cases wherein service employees are part of such projects without taking an active part in the actual *co-creation* are also relevant to include. We have chosen to name this role 'implementers', because this is the part of the process in which they are expected to participate. The goal with implementers in co-creation projects should be to increase felt autonomy and ownership, for example through facilitating a process to make the new solutions work for them. This should contribute to lessen the resistance to change, and to the co-creation of value (cf. Overkamp and Holmlid, 2017). Figure 2 illustrates three levels of felt autonomy that can be experienced in such a setting.
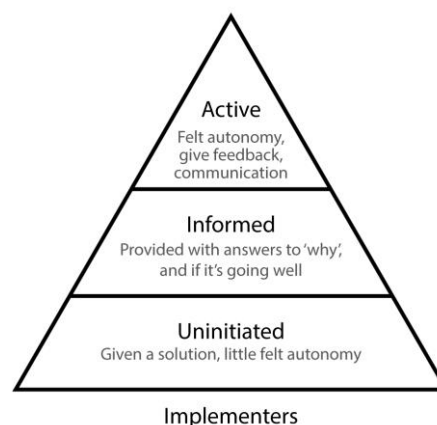

Figure 2. Implementers' levels of felt autonomy. Made by the first author (2018)

From the reviewed literature and conducted interviews reported in this article, an uninitiated implementer will be more likely to oppose, or be indifferent to a change than someone who are active or have been given information, depending on the culture of the organization. Uninitiated

implementers are simply informed that they will need to change some aspect of their work day, which lessens felt autonomy and gives little chance of feeling ownership. An informed implementer however, is told why they are given a new solution, why *this* solution, and preferably how it may improve or has improved the service overall at the end of the project, to make the change seem meaningful and thus increasing felt autonomy. Lastly, the active implementer is also given the opportunity to provide feedback on the changes and make them their own. Project leaders should try to facilitate for autonomy as much as possible, by providing the experience of having a choice, of meaningfulness, freedom, and self-initiation to everyone involved. However, according to Bowen et al. (2011), being successful in providing right information at the right time is challenging.

From the interviews, the two front-line employees who had not participated in workshops can be regarded as implementers of the results of the co-creation process. If analysed against Figure 2, they seem to be somewhere between level one and two. They had gotten some information about why, but not enough to satisfy them, and they had been invited to share their experiences with the units that were to start using the new solutions, which gave some sense of ownership and acknowledgement.

It follows that creating an optimally engaging co-creation setting is demanding, and expensive in terms of time, money and other resources. It is dependent on involving the right people at the right time, both in terms of power and skills, while still making sure that progress is being made. One interesting challenge is how to avoid disappointment. In the front-end of design and early innovation processes one can never truly know if the project will result in a desired outcome. We are coloured by our earlier experiences, and past experiences of having been disappointed tends to lead to cynicism and demotivation (Bowen et al., 2013; Henriksen, 2017). Lessening expectations has been suggested to lessen the possibility of disappointment (Bowen et al., 2013), but this might lead to less felt meaningfulness and motivation (Rozovsky, 2015; Ryan & Deci, 2000b). This challenge of avoiding potential disappointment while still maintaining motivation among participants could be interesting to investigate in the future. In addition, we do not know a lot about individual variations in how people experience co-creation, hence making this another area for future studies.

6   Conclusion

This article has investigated the relationship between co-creation and co-design, employee-driven innovation, collaboration, and motivation to try to find out how co-creation project in service design can be made more engaging and successful.

The literature referenced in this article seems to be in agreement as to what facilitates internal motivation and good teamwork, and that this encourages engagement, creativity and well-being. Providing sufficient and dedicated time, place, permission and tools makes it possible for employees to be involved in co-creation projects. Ownership and good teamwork increases engagement, makes the project more efficient and increases the chances of having the co-created solution implemented. To be internally motivated the three psychological needs, competence, autonomy and relatedness, need to be satisfied. Facilitating for autonomy becomes important, and as shown in our exploratory interview study, especially among employees who are part of a co-creation project without specifically being involved in the co-creation (the implementers). This opens up questions for future research, such as how to manage expectations to avoid disappointment, while keeping the participants motivated.

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