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Aiming for inclusion: processes taking place in co-creation involving students with disabilities in higher education

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ABSTRACT

Students with disabilities encounter challenges through higher education and into employment. Despite holistic disability paradigms, higher education institutions continue to view disability as a human quality, providing support services through a medical lens. Through participatory action research, students with disabilities, in collaboration with university researchers co-create an intervention to promote the voices of students with disabilities in higher education. This study explores and describes the co-creation processes. Data were generated through group discussions, mapping, shared analysis, and shared writing through digital and in-person workshops, and shared documents. A reflexive thematic analysis resulted in the generation of five themes; enabling participation and including all voices; sharing and relating to each other; shifting from being a problem to being discriminated; and translating experiences into actions. The fifth and overall theme is the transformation of co-creators' understandings. The results indicate empowering processes of being awakened to discriminating structures and seeing own capabilities to make changes.

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Introduction

To take part in education and working life is not only a human right, but also a cornerstone to societal and individual welfare (European Commission 2010; J. Sachs et al. 2021). Despite political goals and legislations to ensure equal participation in society (Equality and Anti-Discrimination Act 2017; United Nations Convention on the Rights of Persons with Disabilities 2006), students in higher education with disabilities are less likely to graduate compared to non-disabled peers (Kim and Lee 2016; O'Neill et al. 2012), and face barriers when transitioning to employment (Goodall et al. 2022; Nolan and

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Gleeson 2017; WHO 2011). Higher education is an important pathway to employment for the general population, but more significantly for people with disabilities (Legard 2012).

Across Nordic countries, at least every fifth student in higher education reports a disability that limits study participation (Hauschildt et al. 2021). Students with disabilities work beyond their capacities, miss out on social activities (D. Sachs and Schreuer 2011), and experience challenges regarding misconceptions, individual identity, and stigma (Kraus 2008; Lightner et al. 2012). If able to document a medical need, however, students can be granted 'reasonable' accommodations or adaptations in their studies (University and University Colleges Act 2005, §4-3). Still, the process is both time-consuming and challenging (Langorgen and Magnus 2018), and research raises concerns about the present way universities fail to include students with disabilities (Hutcheon and Wolbring 2012; Leake and Stodden 2014; D. Sachs and Schreuer 2011). The accommodations available are mainly compensating measures (e.g. extended time on exams) and aids. Through both language and practice, universities approach disability through medical lenses, viewing students with disabilities as 'different', 'special', and a 'problem to be fixed' (Nieminen 2021, 3). A view that can maintain and reinforce further stigmatisation (Liasidou 2014). Contrastingly, the social model views disability as a socially constructed phenomenon, existing due to barriers in the environment (Shakespeare 2017).

Actively engaging students in decisions and in participatory and democratic processes is suggested as an important step towards change for promoting inclusive practices and social justice (Kraus 2008; Liasidou 2014). Co-creation and co-production are terms describing the collaborative processes and active involvement of communities and citizens as stakeholders in decisions affecting their lives, as well as in the design and delivery of solutions and services they themselves use (Brandsen, Steen, and Verschuere 2018). Involving relevant parties in processes of practice development, as well as research, represents a paradigm shift in the way societies face challenges and the way knowledge is produced (Martin 2010; Nowotny, Scott, and Gibbons 2001). The concept of promoting 'user' voices traces back to pioneers such as Kurt Lewin and Paulo Freire, and can enable democracy, empowerment, and prevent oppression (Beresford 2013; Freire 2020). Despite recommendations, research documenting and exploring co-creation processes involving university students with disabilities is sparse. A literature search restricted to studies using terms such as co-creation, co-production, and participatory research yielded few results. Those identified, however, show positive outcomes on the generation of locally relevant knowledge, the immediate effect on generating physical, attitudinal and social changes in higher education institutions, opportunities to be recognised, and experiences of empowerment for students involved (Agarwal et al. 2015; Bessaha et al. 2020; Luthuli and Wood 2020). Empowering mechanisms are, however, individual and dependent on the specific context and population (Zimmerman 2000).

To reach political goals of inclusion, universities must develop strategies and support on campus that build on students' experiences and capacities and actively involve students in developing inclusive practices (Bjørnerås et al. 2022; Kraus 2008; Nolan and Gleeson 2017). Thus, the aim of this study is to explore what processes take place when students with disability and researchers engage in the co-creation of an intervention to meet the goals of inclusive educations.

Materials and methods

Study design and context

The overall study design is positioned within a qualitative interpretative framework (Creswell 2013). The authors embrace a social constructivist viewpoint in conducting this study and interpreting the data. Social constructivism views knowledge as constructed, socially and historically, through interactions with others (Creswell 2013). The methodological process was guided by principles for Participatory Action Research (PAR) (McTaggart 1991). PAR is an approach to inquiry that promotes collaboration between researchers and participants and focuses on solving real-world problems in real-world settings (Lawson et al. 2015).

In this study, PAR was used to guide a series of co-creation workshops involving students with disabilities and researchers aiming to develop an ambassador intervention. The workshops were centred around dialogue, reviewing literature and shared analysis, and evolved through iterative processes (Plattner, Meinel, and Leifner 2012). In the intervention, students with disabilities took roles as experienced supervisors, addressing disability related issues, and breaking grounds for students and staff at a Norwegian university. This article presents the processes taking place during co-creation.

Recruitment

Ten students were considered as an appropriate number of participants, as sample size in qualitative research should not be too small nor too large (Sandelowski 1995). Students were recruited through billboards on campus and an e-mail blast. To be eligible, participants had to be current students and identify as having a disability. All needed to be able to give informed consent and to be comfortable sharing their experience and opinions in a group together with other students. Approximately 300 students made contact during the weeks of recruitment, and a purposeful sampling strategy (Creswell 2013) was the basis for selection to include a variety in faculty and campus affiliation, gender, age, and types of disabilities (Table 1).

Participants

Ten students and two researchers affiliated to the same university formed the co-creation group and will be referred to as the co-creators. The researchers, ABB and SH are females, Scandinavian, and without disabilities; one associate professor in her sixties with a background in occupational therapy, and one PhD candidate in her thirties with a background in audiology. Of student co-creators, five identified themselves as men, four as females, and one as non-binary. The age ranged from 19 to 34 (mean 26,8). All students represented different areas of study across five different faculties. Eleven health conditions were self-reported and grouped into seven categories. In addition, several reported mild mental health issues. Table 1 provides an overview of the student co-creators characteristics, and pseudonyms adopted.

Table 1. Student co-creator's characteristics.

Student co-creator's characteristics	Number
Gender	
Female	4
Male	5
Non-binary/other	1
Age	
19-24	3
25-29	5
30-34	2
Ethnicity	
Scandinavian	8
Indigenous/National minority	1
Other	1
Faculty affiliation	
Faculty of Social and Educational Sciences	3
Faculty of Information Technology and Electrical Engineering	3
Faculty of Medicine and Health Sciences	2
Faculty of Engineering	1
Faculty of Natural Sciences	1
Degree	
Bachelor	6
Master	3
Not reported	1
Health condition	Pseudonyms
Mobility/physical impairment	Philip, Sarah, Ailo
Dyslexia	Nora
Attention Deficit Hyperactivity Disorder	Alex, Mark, Ailo
Autism Spectrum Disorder/Asperger Syndrome	Markus
Hearing impairment	Oliver
Vision impairment	Ailo
Myalgic Encephalomyelitis/Chronic Fatigue Syndrome	Ingrid, Emma

Ethical and methodological considerations

Participation was based on voluntary informed consent (Health Research Act 2008). Participants were informed of methods for data collection, how confidentiality is safeguarded and procedures for withdrawal. The researchers aspired to be sensitive to potential negative effects throughout the process. Ethical vigilance is important in participatory processes (Lid and Rugseth 2019) and considerations are included in the discussion. The study was reported to and approved by the Norwegian Center for Data Services (reference number 450502). The large number of students making contact during recruitment could have enabled arranging multiple workshop groups, potentially strengthening the knowledge base for this study. However, one group with ten students were perceived as sufficiently given the scope of the study and their breadth in characteristics as well as being able to safeguard the ethical aspects of a PAR design with the resources available (Khanlou and Peter 2005).

The authors wish to raise awareness of the large number of students making contact including many international students without disabilities, although language and cultural barriers were not within the scope of this study. The large number of students with and without disabilities interested in participating, indicates a prominent need to address issues of participation and inclusion at universities.

Co-creation workshops

Most workshops utilised digital platforms and tools for co-creation due to the covid-19 pandemic at the time. Figure 1 provides an overview of the phases, contents, platforms, and methods used in the co-creation process. Seven workshops were arranged using videotelephony by Zoom. A digital mind map using Mindmanager was used to collectively organise and analyse experiences from students and research. A Microsoft Teams site, with equal ownership for all co-creators, provided access to mind maps, workshop summaries, research articles, and project documents. The Teams site also provided co-creators with opportunities to create, review, edit, and co-write in documents during or between workshops, thus not restricting co-creation to organised workshops. Primary methods for co-creation were group work and discussions, mapping, shared analysis, and shared writing (Kendon, Pain, and Kesby 2007).

At the first workshop, co-creators got to know each other and were introduced to research methods and ethics. The co-creation period entailed three phases (Figure 1). In the first phase, co-creators worked on generating knowledge of the experiences of students with disabilities in higher education. Students shared experiences of university life, and the researchers presented national and international research literature on this topic.

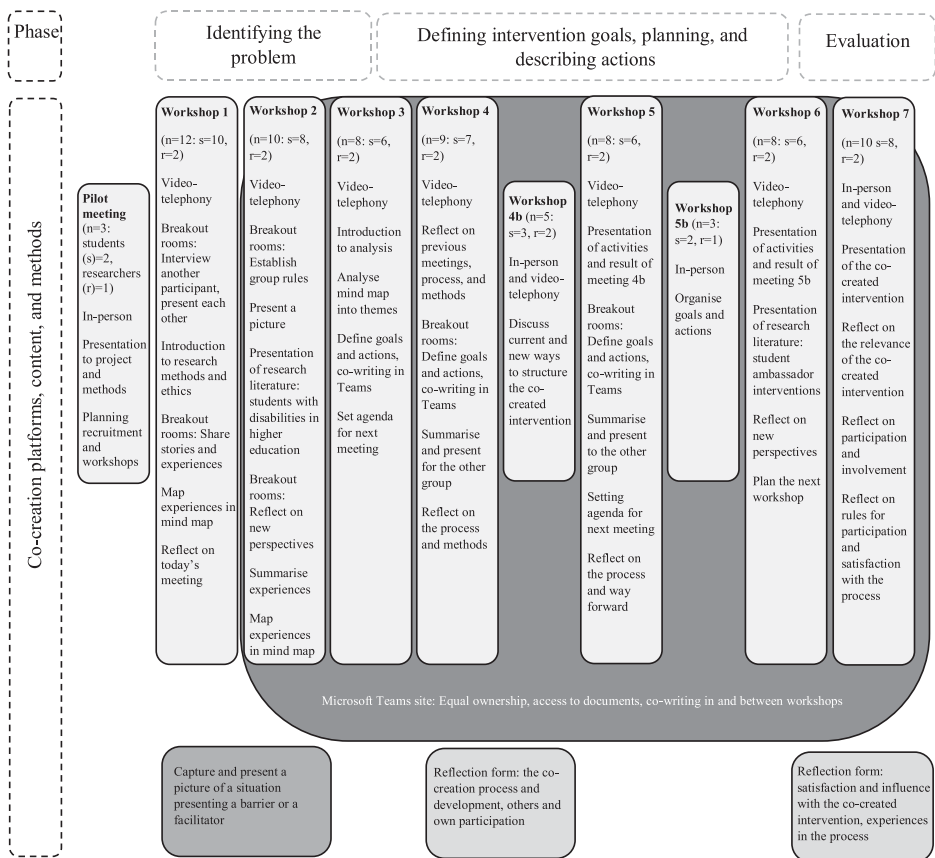


Figure 1. Overview of the co-creation contents and methods.

Experiences were plotted as codes into the mind map and were organised and analysed into categories and themes *identifying the problem*. In the second phase, co-creators defined intervention goals based on the identified themes through co-writing in Teams. Students planned how issues can be addressed and actions to take as ambassadors. In the phase *defining intervention goals, planning, and describing actions*, the researchers also presented literature describing similar interventions. In the third phase, *evaluation*, the researchers summed up the co-created intervention in a written report and an oral presentation, where co-creators commented, reflected, and evaluated the process and intervention. Evaluation data were also collected throughout workshops and in structured reflection notes.

Data generation

Data were generated during the co-creation period from February to June 2021. Data were collected through sound recordings of workshops ($n = 7$), transcribed by ABB, and supplemented with field notes from ABB and SH. Reflection forms (Table 2) were sent to students, electronically, mid-way and at the end of the co-creation period. They were voluntary and anonymous to enable additional perspectives and evaluation on the co-creation process ($n = 10$). The transcribed sound recordings and reflection notes resulted in 182 typed pages. Documents generated through shared writing were also included in the analysis.

Data analysis

A reflexive thematic analysis was undertaken as it provides a systematic and flexible approach, and values researcher subjectivity (Braun and Clarke 2006; 2019). After the last workshop, ABB, SH, and EL started by reading all the data while highlighting sections and taking notes, according to the first stage in the analytic process (Braun and Clarke 2006). The notes guided the second stage, where initial codes were brought forward. Several meetings were held through this stage to generate nuances rather than reach a general agreement (Braun and Clarke 2019). Next, the authors organised the initial codes into potential themes. The themes were reviewed according to the data set in the next phase, developing or rejecting themes. AEL, a student co-creator, was included in meetings to discuss the development of themes and continuously reviewed manuscript drafts. Although starting inductively, authors moved through deductive phases and back again. The researchers involved as authors of this article have spent their careers

Table 2. Structured reflection forms (translated from Norwegian to English).

Reflection form, mid-way ($n = 4$)

What is your impression of the workshops so far?

How do you experience the development and progress in the co-creation process so far?

How do you experience your own and others participation in the group?

Reflection form, at the end ($n = 6$)

What are your thoughts on the final goals and actions, and how do they agree with what you think is important?

Describe your experience of being able to participate and influence the process.

In what way have the digital format affected the process for you?

Do you have other thoughts on the process you care to give?

researching disability. As such, the themes constructed are products of their epistemological viewpoint and a relational understanding of disability (Tøssebro 2004). All authors worked to shape and construct the final themes through the last stages of analysis when producing the manuscript, and all student co-creators were invited to review and approve the final draft.

Results

The aim of this study was to explore what processes take place when students with disability and researchers engage in co-creating an intervention to meet the goals of inclusive educations. The analysis resulted in the construction of five themes (Figure 2): the supporting process of enabling participation and including all voices; the three core processes of sharing and relating to each other; shifting from being a problem to being discriminated; and translating experiences into actions. The fifth theme was the overarching theme where the processes, individually and combined, represent a process of transforming co-creators' understandings.

Enabling participation and including all voices

The first theme represents how co-creators enabled participation and actively included all voices, a process supporting the co-creation throughout the period. It entailed flexible

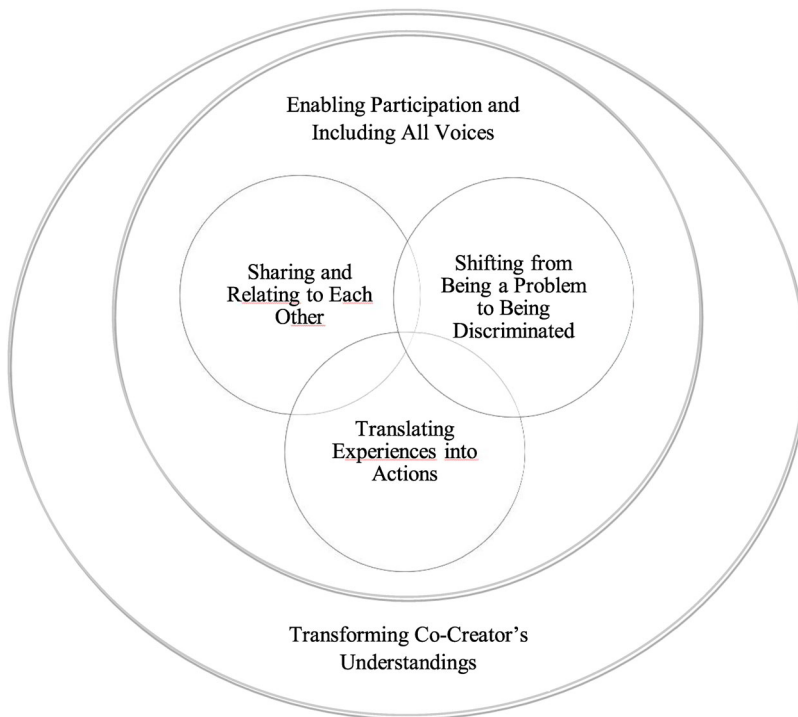


Figure 2. The five co-creation processes.

ways to participate accommodating each students' strengths, and how students demonstrated skills of inclusion.

The researchers invited students to take part in planning the workshops, leading to including multiple formats and arenas for co-creation. The Teams site, initiated by Mark, provided both flexibility and transparency in the process and enabled participation even if unable to attend workshops. The researchers were concerned flexibility could jeopardise participation consistency and feelings of ownership. However, students worked in between organised workshops and participated according to their capacity. Being able to contribute without being restricted to the timeframe of workshops facilitated unexpected advantages, such as having time to reflect, as one student valued in a reflection note:

I think it was nice that it was written down in a document that we had access to. Because I thought of something the next day and I wrote it in. It's nice to have the opportunity to let it sink in a little. Because this is a process in a way. And I often think of things two or three days later.

The researchers facilitated a specific discussion regarding group atmosphere, whereby students agreed on a set of rules. Students emphasised a shared responsibility to participate and to include all voices. Discussing participation and inclusion were perceived to result in students feeling that their perspectives were welcomed and appreciated, and that all perspectives were included in the discussions. Students were highly sensitive to include each other and took leadership in discussions to create a space for everyone to share experiences and ideas. For instance, when a student feared her opinions were not shared by others during a discussion, Sarah clarified:

All possibilities are open, we talked about that the first time [when establishing the rules]. Everyone can speak their minds. But that can also involve conflicting views, and that needs to be okay.

Whereby Ingrid confirmed:

We share our experiences, and it can be tough, but if so, you can say it. We can try to support and provide the space necessary for others to share. It is an important thing and, really, a good place to do it. And I think it's nice to be so open about it.

This example showcases how students actively included all voices in the co-creation. Differences in opinions, or even conflicting views, were perceived as a strength in the process and highlighted the inclusive atmosphere the co-creators established. It also exemplifies the value of sharing and having a safe space to do so.

The students, with first-hand experience of what hinders participation, demonstrated skills of inclusion, created a safe space, and included one another. Although enabling participation for many students', the digital format was perceived to negatively affect the extent to which co-creators got to know one another. Still, students valued the flexibility the digital format provided and accommodated different needs, where each could participate in accordance with their strengths. Having flexible options was important for students, yet something unfamiliar within the university system. The researchers adapted to students' preferences, with new awareness of the students' resourcefulness when having to adjust to fixed situations.

Sharing and relating to each other

One of the three core processes of the co-creation was the way students shared and related to each other. Through this process, students made the discovery of not being the only one. The researchers encouraged student co-creators to share their experiences in the first workshop, something the students confidently initiated themselves throughout the co-creation period.

Meeting others and sharing stories were perceived to have great value for the co-creation process, as well as the individual student. Workshops provided an arena for expressing feelings and thoughts, articulating frustrations, and being acknowledged. The researchers consciously signalled attentiveness to the student's experiences, not their diagnosis. However, the students themselves disclosed, and openly invited others to share in their own way and time. Co-creators were divided into two random groups using breakout rooms to facilitate discussions in smaller groups and could express experiences orally or in writing through the workshops. Outside the workshops, students could contribute perspectives in writing through the Teams site, in the reflection forms, or by taking photos. The data provide rich examples of how students, through sharing, and reviewing literature, discovered common challenges and related to each other's experiences. The experiences were collected as codes in the mind map, which expanded during the first two workshops.

One student co-creator in each group volunteered to take notes during group discussions and summarise on behalf of the group when meeting up. This allowed students to establish common understandings of the key points, confirm views, add new reflections, or clear up any misconceptions. Despite their heterogeneity as a group, the students discovered many common challenges. Emma expressed the value of meeting and sharing with other students:

It's something completely different to talk to someone who can relate to your experiences, and specifically if you have the same impairment. But you can learn a lot from each other either way.

This also raises notion to the substantial learning aspect in sharing processes. Students evaluated the process to increase their knowledge and awareness of others and the diversity of students at the university. Sharing their stories enabled learning about themselves, encouraging reflections and to organise thoughts related to own experiences. The learning aspect was also related to stories of overcoming challenges. Students presented digital tools crucial to studying, disclosure strategies, and how they structured and planned everyday studies. They showcased coping strategies, specific accommodations, and how they had learned about them. Students highlighted both individual resources and social resources as means to overcome challenges. Through group discussions and research literature, students discovered that they were not alone with their experiences, and many people face challenges and struggles on equal terms. The discovery of not being a one-off seemed to hit several of the students, as Nora expressed after the first workshop:

Today I learned that I am not the only one receiving accommodations. Not the only one who needs support. And it makes me end this conversation with a clear conscience. I am not the only one! And there are a lot of people out there, people who are like me.

This theme shows the value of co-creation through the process of meeting others and sharing stories for the individual student involved. Sharing and relating to each other led to feeling recognised and accepted.

Shifting from being a problem to being discriminated

This theme represents the process towards new understandings where students conceptualised the ‘real’ problem of discriminating structures and not being the one to blame. Researchers gained renewed understandings and attentiveness regarding barriers for inclusion through this process.

The mind map changed through discussions and new categorisations and concepts emerged as the students analysed, agreed, and developed new understandings collectively. The students presented drafts and ideas, generating new discussions and renegotiations. New issues were raised, expanding the co-creators understanding of the disability domain in combinations with ethnicity, gender, language, and race dilemmas. Co-creators started grouping related codes into a hierarchy of new categories, resulting in the generation of themes representing ‘the problem’. In the process, co-creators built a greater conceptual clarity of the issues at hand and represented a shift from students presenting individual struggles to presenting contextual discriminating structures and practices:

I don’t complete 30 ECT per semester, but I am still 100% a student! That’s all I do! (..) And I get in trouble with student loan and the interest starts running because I’m not a fulltime student. But I am a fulltime student! (...) And that’s the system, and something that should be corrected.

Emma, here, identifies a system incompatible with inclusion as the cause to her losing her student identity. Students started to raise issues, shifting from their own limitations to seeing contextual and societal barriers. Markus expressed this, as he reflected on the lack of awareness in society, and that people with disabilities are not the problem, society is:

If someone doesn’t have a personal experience of disability, then it’s completely abstract to people. They do not know it exists. And that they [people with disabilities] live normal lives. It’s not like, if you have a disability, you do not have a job or do not work in society. You are completely normal after all. You just need society to work a little differently.

Students nuanced this issue and raised dilemmas of what responsibilities rest on the student with disability, and what the surroundings can be held accountable for. They questioned why universities lack flexibility and universal design that accounts for function variations, and why universities approach disability as something separate, that does not concern the general student. Information on accommodations is hard to find, not only providing difficulties for students in need of the information but also signalling disowning disability as a human variance. After Markus surprisingly learned from Alex that there exists a support group for his specific disability at the university, Emma reacted:

But again, why don’t we know these things?! This keeps surprising me. (...) Where is this information?! (...) A lot of the information regarding disabilities are not on the ordinary web sites or information channels. They are on separate pages. (...) It should be visible

and normal, like, it's an obvious thing that someone needs accommodations. Not just in small writing at the bottom of the page.

The non-use of microphones in class was a recurring topic among student co-creators and developed many reflections, raising new awareness and knowledge for all co-creators. Oliver, dependent on microphone-use to take part in learning activities, shared stories of the dilemma's lecturers put him in. Requesting that lecturers use a microphone often places him in a stigmatising position, with the risk of him being brushed aside and therefore being made to feel like the 'problem'. Staff wavering responsibility, as well as their lack of disability knowledge and awareness, was problematised. Co-creators learned how consistent and mandatory microphone-use, and how advocating on behalf of fellow students, would avoid placing the burden solely on students dependent on microphones.

Conceptualising the 'real' problems led to identifying the weaknesses in the students surroundings instead of in their own bodies. They identified a lack of universal design causing them to constantly advocate for solutions that should be in place, thus incorrectly placing the burden on the students. Students discovered societal barriers, leading to a shift from experiences of being a problem to the awareness of being discriminated.

Translating experiences into actions

Based on the themes representing the problems, students started to develop goals and plan actions through discussions, brainstorming, and co-writing. This entailed shifting focus from the identified barriers onto how the issues could be addressed. There was a turning point as students progressed from sharing experiences of discrimination to translating those experiences into possibilities and solutions, here articulated by Markus:

Our experiences are a resource to come up with the best measures (...). But I also agree that we have reached the stage where we can be more specific. (...) To change the mindset, instead of digging deeper into the experiences.

Although sharing has a value, Markus underlines the resources they hold to change the situation for the better. Being aware of their own resources, and not viewing themselves as a passive receiver of support, characterised their discussions further on. There were still phases of confusion and discomfort, managing the vagueness and overlap within themes, creating challenges to concretise goals and actions. To handle this, students initiated and arranged workshops in-between workshops, where some student co-creators took leadership to organise document drafts, containing their ideas regarding the intervention. Although a phase of chaos, Sarah reflected on the value of the process:

I think, even if the themes interfere with each other, you get to look at the same issue from another perspective. (...) It's different aspects of the same thing. I think it's important to go through each of the different ones [themes], because we come up with new things that I had not thought about before. It sets off the processes of reflections a little differently.

Students concretised an ideal and recognised their own resources. From not wanting to stand out, co-creation raised a collective belief in their ideas and the recognition of the power in student voices. They transitioned into a phase where they enthusiastically

planned ways they could gain attention at the university, and how they could advocate and showcase their voices. At the last workshop, students raised concerns due to first-year students starting in a few months, and what contribution they could put into action right away. The process of translating experiences into planning actions enabled the students to view their experiences as resources. This process marked a turning point from being victimised to holding competencies valuable for other students and university staff, and with a power to act.

Transforming co-creators' understandings

The overarching theme, recurring in all processes individually and combined, was the transformation of co-creator's understandings. The groundwork of enabling participation through language and actions facilitated a safe space and inclusive methods to co-create. When sharing their stories, students' experiences were validated, acknowledged, and created learning opportunities for all co-creators. Students related to each other and discovered not being the only one. Through collecting and analysing their own experiences and knowledge from research, students identified contextual and social barriers, lifting the burden from the students' shoulders. Co-creators gained new awareness of the mechanisms incompatible with inclusion at the university and in societies. Further, co-creators started raising questions of the levels of democracy in matters of disability, and collectively saw the value of student experiences and voices in matters of inclusion, and the potential to benefit future practice. Students raised a sense of agency to confront challenges, wanting to advocate through being role models.

Discussion

This study has explored what processes take place when students with disability and researchers engage in the co-creation of an intervention to meet the goals of inclusive educations. The results show processes of transforming understandings for the co-creators involved.

'Transformation', described by Needham and Carr (2009), refers to the potential co-production of services offers for the conceptualisation of power structures, partnerships, and resources for those involved. Similarly, in this study, the transformation changed students' and researchers' understandings of discriminating mechanisms, the collaborative value, and own resources. Through co-creation, the students in this study adopted a social understanding of disability (Shakespeare 2017). Such transformative processes relate to Paulo Freire's term 'conscientization', describing the awakening and empowering processes occurring in groups working together (Freire 2020). Zimmerman (2000) distinguishes between empowering processes and empowering outcomes. Collaborating with others, sharing responsibilities, decision-making, and leadership are empowering processes, while experiencing control and obtaining a critical awareness are empowerment outcomes (Zimmerman 2000). As such, this study views co-creation to entail both empowering processes as well as empowering outcomes. The empowerment of students with disabilities has been reported in other studies utilising participatory methodologies (Agarwal et al. 2015; Bessaha et al. 2020).

Although PAR aims to promote change in real-world settings (Lawson et al. 2015), knowledge of methods and processes of co-creation can be important first steps towards identifying complex issues as well as incorporating collaborative strategies. PAR can entail a vast difference of approaches and PAR seeks to enlighten people about their own situation through learning processes and emancipate them from mechanisms limiting their lives (McTaggart 1991). The knowledge and understandings generated through PAR can be of different sorts. Certain understandings can be developed by the non-researchers, some can be shared by the members in the group, and others can be developed by the researchers (McTaggart 1991). Through the process of conducting, analysing, and reporting, questions of ‘whose voices and questions matter the most?’ need to be considered (Pyles and Svistova 2015). Similar reflections were generated in this study, to whose processes to explore, and the researchers’ significance and presence in the processes. In other words, the processes presented in this article have originated from both students and researchers, as well as jointly by the group. The most important, however, is the processes of students (Tandon 1988), and have therefore been given most attention in this study.

The authors’ experience of participatory research, varied from novice to experienced, and led to paradigmatic changes, from theoretical understandings to adapting practical methods of cooperation. The researchers engaged in the co-creation were continuously reflecting on their role and standings in workshops, and when and whether to plan, decide, control, and facilitate, throughout the co-creation. While some argue for an ideal of participants being equally and fully involved in all parts of the research process (ICPHR 2013; Martin 2010), the ideal can also be considered unattainable and that the preferences of people involved should be considered (Bell and Pahl 2018; McIntyre 2007). Power mechanisms can limit participants’ scopes of action and be implicitly embedded in researchers economic positions and titles, research experience, theory and terminology superiority (Lid and Rugseth 2019). Additionally, pragmatic, and formal requirements, and time limitations in research and funding processes can result in participants being left out of vital stages in the research process. Although this intervention was developed and shaped by the student co-creators, the ambassador intervention was the mandate, prior to recruiting participants. However, the researchers were conscious about adopting to student inputs through the workshops, allowing student voices to dominate the further co-creation. The success in this study, as such, rested on the students actively taking the control they were offered, and for researchers taking a step back at strategic points of co-creation. The results show that power can be obtained and shared through the process, and, in this study, manifested through co-creators feeling included, respected, taken seriously, and being presented with the opportunity to participate according to their strengths and capacities.

In higher education, students with disabilities can have limited capacities to participate in time-consuming work (Magnus 2009). Although PAR aims to promote the voices of underrepresented groups, participation can favour the most resourceful students. In this study, students were offered flexible ways to participate which can accommodate participation for a wider student body, as well as contribute to beneficial risk-benefit ratio and fair sampling (Emanuel, Wendler, and Grady 2000). In participatory research, however, participants are involved more than the mere ‘informant’. Feelings

of commitment and loyalty towards researchers can contrast to participants' desire and capacity to participate (Lid and Rugseth 2019).

Universities as research institutions are in unique positions to utilise co-creation to address disability issues, benefitting knowledge generation, students, and entire campuses when implementing change. As such, universities can promote a paradigm shift where students' voices are valued and showcased, instead of students having to be dependent on others for support (Kraus 2008). Creating structures for incorporating student voices in decision-making processes in higher education must be established. Democratically engaging students with disabilities in co-creating solutions and knowledge, utilising and integrating their experiences and capacities – as demonstrated in this study – can be means of shifting towards more inclusive higher educations.

Implications

This study illuminates the potential of utilising co-creation in the field of disability in higher education to inform research, practice, and benefit the individual student. Co-creation is not restricted to designing relevant services but can be transformational and entail personal and social value and empower co-creators involved. This study provides rationale to continue integrating experiences and voices of students with disabilities in research and practice development to turn for more democratic universities. Further research is important to explore co-creation processes involving students with disabilities in higher education.

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