HOW TO FACILITATE COLLABORATIVE CONTINUING AND EXPANSIVE LEARNING?

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ABSTRACT

Change is a constant in many organisations. Combining sustainable change processes with learning for the professionals involved ensures that participants acquire the capacity to transform a given situation and capably steer future change at the workplace. In this conceptual article, we reflect on an approach for designing and investigating change processes where learning and change co-occur: Change-Laboratory. We draw on a case from our empirical work in the Dutch healthcare domain, where participants in a change process discuss, describe and disseminate collaborative patient-care-agreements. The most critical outcome of a Change-Lab is transformative agency, which is an evolving capacity of the collective to seek new possibilities toward change. It is essential for participants' lifelong continuing development. Universities would benefit from increased attention this outcome in order to learn expansively and facilitate these Change-Lab processes.

BACKGROUND

In many settings such as in healthcare organisations, universities, and commercial companies, change processes are continual and continuous. For healthcare, a variety of change intervention (CI) methods for organisational transformations have been described and put into practice (Taylor et al., 2014). In traditional CI methods, the focus and desired outcomes are frequently predetermined at the beginning of the change trajectory, often by those in management positions. This type of 'top-down' approach can create difficulties, especially when ideas around the direction or nature of the change differ (Engeström and Pyörälä, 2020) which endangers the feasibility and sustainability of the change. A more open-ended change intervention and research methodology, the Change-Laboratory (hereafter: Change-Lab), has been developed which addresses such tensions (Virkkunen and Newnham, 2013). Through Change-Lab, researchers, healthcare professionals, and

managers analyse problems in the work processes together, agreeing on the direction for change without setting fixed outcomes at the outset (Engeström, 2018). Participants democratically develop outcomes, in incremental cycles, and together evolve collective knowledge and activities in a process called 'expansive learning' (Engeström, 2018; Morris *et al.,* 2020). The Change-Lab approach simultaneously facilitates change alongside learning and research. As such, it aligns with modern ideas about continuing education which focus less on offering course material and more on learning while working.

We invite practitioners and researchers interested in transformations, in healthcare settings and elsewhere, to become enthusiastic about delving into the Change-Lab approach.

We recognize, however, that full implementation of the Change-Lab approach brings many challenges. One of the challenges may be the 'research-led' nature of the Change-Lab. Researchers collect materials from within the organisations that provide a historic overview of how processes have evolved and use this information to provoke discussions with participants during the change process. Showing and discussing these 'mirror data' (explained in more detail later) permits participants a deeper understanding of how processes came about and helps to imagine innovative outcomes. However, there is a limited availability of researchers with expertise in this approach and the participatory role for researchers add to other challenges, including the costs and time involved for a full Change-Lab approach (Virkkunen and Newnham, 2013). Therefore, in many change processes within healthcare the involvement of researchers may be considered unachievable.

Based on the arguments summarised above, we argue that sustainable transformation through change interventions requires an approach that participants do not view as top-down and where the focus is on collaborative learning. This dual ambition of change and learning can both be addressed using a Change-Lab approach. However, the problem remains that this approach may not be practical or fully achievable in healthcare settings.

Using the experience of our conceptual work, we argue that some of the theoretical concepts behind the Change-Lab provide a useful framework to investigate and implement change processes where participant learning is key. This learning is called 'expansive learning,' where learning and change co-occur while participants gain transformative agency.

To illustrate the potential value of the Change-Lab lens, this paper considers how using the Change-Lab concepts has enhanced our ongoing study of an already existing change process. We aim to discuss Change-Lab development at a general level by explicating the key concepts in the Change-Lab process. Within this, researcher-interventionist roles and mirror data are important features.

EMPIRICAL CONTEXT: THE CPCA PROCESS

The change project carried out was the development of a Collaborative Patient-Care-Agreement (CPCA), a project not initiated with Change-Lab's explicit focus on combining learning and change and without an explicit researcher role (Meijer *et al.,* 2020) (see box 1).

CPCA process: an existing professional practice

In Dutch health care, general practitioners, medical specialists and others, working in different organisations experience contradictions in delivering collaborative patient care. In some regions a medical coordinator arranges and organises meetings of involved professionals in 'CPCA-groups'. In these 'CPCA-groups', the common patient care trajectories are discussed and collaborative patient care agreements (CPCAs) co-created, over several meetings. In the CPCA, the roles of all professionals involved in the (chronic) care of patient groups is specified. In addition, the CPCA document describes the process of collaboration across organisational boundaries; who needs to be informed, when, how and so on. CPCAs thereafter are disseminated within the respective communities of the professionals in the region.

The iterative change process of creating and disseminating CPCAs provided opportunities to develop new means of crossing boundaries, improving collaborative patient care. Working together to create CPCAs inspired practitioners and created opportunities for expansive learning and to gain collective transformative agency.

(based on Meijer et al., 2020)

Box 1: The CPCA process: empirical context

METHOD

Here we explain how essential (theoretical) advantages of the Change-Lab might be realised within (studies of) other change processes. This could inform practitioners interested in learning from change processes in the field as well as researchers interested in studying change processes. As stated above, Change-Lab is an interventionist approach (Engeström, 2011). Therefore, advocating for exploration of this approach without researchers who intervene might be considered an oxymoron. We hope to convince readers that awareness of the Change-Lab lens is beneficial even when studying learning and change processes without researcher-initiated interventions. Through reading and discussing in our research group, we further explored the Change-Lab lens to gain a better understanding of how to use this theoretical background in our health care studies.

Below, we first briefly describe the key concepts of the Change-Lab approach and CPCA change process. We then compare two aspects of this process with the Change-Lab: the role of the researcher(s) and of mirror data. To conclude, we reflect on what we learned and provide suggestions to consider when using the Change-Lab lens for implementing change processes.

Our proposed solution, underpinned by literature, is supported with 'on the ground' practical experience and knowledge of the authors about the CPCA process in the Netherlands. Loes Meijer has been involved in the development of a national methodology for developing regional collaboration agreements and has participated as medical coordinator in several CPCA processes. The CPCA change process takes place among different healthcare professionals (frequently general practitioners and medical specialists) who provide joint patient care and collaborate at the regional level while embedded in different organizations. These organizations are mainly primary care practices and hospitals.

KEY CONCEPTS OF CHANGE-LAB

During the Change-Lab, cyclical processes of change help bring about expansive learning in several steps, starting with questioning the current situation, modelling a new solution, and moving through to consolidating the new process. The theoretical foundation of each step in this cycle of the Change-Lab is essential for understanding why Change-Lab is different from other change interventions, and how the most critical outcome of a Change-Lab, transformative agency, (Engeström *et al.*, 2020) is supported and realised. Transformative agency is an evolving capacity of the collective to seek new possibilities for taking initiatives toward change. It goes beyond traits of individual participants and is essential for their lifelong continuing development (Haapasaari *et al.,* 2016).

The expansive learning that is assumed to occur in a Change-Lab is associated with two key ideas: (1) from the abstract to the concrete and (2) double stimulation. Alternating from the abstract to the concrete means that there is both a focus on developing theoretical insights at a conceptual level as well as on increasing the participants' transformative agency and objective material changes (Engeström *et al.,* 2020). This move is put into motion when practitioners become aware of contradictions (Engeström, 2020). A contradiction is, for example, when a healthcare arrangement which has been designed for care within one organisation and organised around a specific disease appears not to be suitable for patients with multiple diseases who are treated in different care organisations (Engeström and Pyörälä, 2020).

Double stimulation is closely intertwined with the move from abstract to concrete; the first stimulus is becoming aware of a contradiction and developing the motivation to improve the contradictory tensions, while the second stimulus is an external tool, for example, a video recording of a patients' story, that works as an auxiliary to bring about action. Tools derived from or directly relevant to their practice are called mirror data (Engeström and Pyörälä, 2020), which support the participants in their innovative ideas on how they could develop change processes. In addition, the tools help make tensions visible, and support thought experiments on how to solve those tensions. These reflections and discussions are cyclic: concepts, developed in the first round of discussion to be further refined in the next. Each cycle starts with analysing the present and how it came about, followed by developing and visualising models of what new practices might look like. In each cycle, over time, different levels of contradictions and tensions occur; by solving these contradictions and tensions together, participants learn expansively and develop collective knowledge and agency, the so- called transformative agency for further change processes.

RESEARCHER (INTERVENTIONIST) ROLE

In a Change-Lab, university researchers co-construct and co-produce knowledge with the practitioners and other stakeholders (Virkkunen & Newnham, 2013). Characteristically, these researchers are not merely passive and objective observers, as might be customary in more conventional research; they are active contributors to the process of change. Change-Lab-researchers have diverse roles in the process, from designers, participants, managers and analysts (Engeström *et al.,* 2003, pp. 105-118). One of the researchers' roles (Table 1) is to gather the mirror data during the whole process, choose which new elements to administer as a first or second stimulus during the meetings with the participants, and prepare in advance generic templates for models to be co-developed during sessions (Engeström *et al.,* 2003). These researchers are scaffolding the discussion with the intention of assisting the other participants to talk about and deal with challenges within and between organizations.

1. Organizer, supervisor of the collective work 2. Chair of the discussion 3. Documenter during and after sessions 4. Collector of mirror data (also with interviews) and strategic arranger of this data at various sessions 5. Conductor of the expansive learning process, e.g., clarifying issues that are unfamiliar to existing practices 6. Process analyst and subsequent author of research publications

Table 1: Roles of the researcher-interventionist in the Change Laboratory process (based on Virkkunen and Newhham, 2013)

Another important researcher role is to ask about assumptions from an outside perspective. They do not share the same (organisational) blind spots that the participants may have. In addition, the researcher cultivates 'multi-voicedness,' in which opposing and different perspectives between and within participants are made explicit to make room for contradictions and structural tensions (Skipper *et al.,* 2021).
In the CPCA development process, it is usually a medical coordinator rather than a researcher who organises and supervises the collective work. The coordinator fulfils the first four roles in Table 1. In (co)facilitating the discussion, the coordinator ensures that decisions and recommendations are written down and thus, in an implicit manner, they document the development of the shared model for future collaboration envisioned by the healthcare professionals. On reaching the fourth role, the overlap becomes less convincing. Within the CPCA development process, bringing in an outside perspective and questioning assumptions is a mechanism that can also occur because the coordinator is not working in the same hospital or GP practices as the participants and may therefore share fewer of the participants' institutional blind spots. A coordinator from the same discipline as some of the participants, however, may still retain some of the assumptions embedded in that discipline that a researcher in a Change-Lab would not take for granted. When this role is not explicit, the coordinator may not be consciously challenging preconceptions (his or her own and others') and exhibiting a high degree of reflexivity. To a limited extent, the coordinator may reach out to those outside of the group of CPCA participants when different input or perspectives are required for sustainable development, and thus safeguard multi-voicedness. The final two roles of a researcher interventionist, (Table 1) are not part of the medical coordinator role. We advocate that a medical coordinator with knowledge of the expansive learning process and a more conscious positioning as someone who brings a valuable outside view could contribute to the learning during the CPCA development process.

MIRROR DATA

One of the first steps in the Change-Lab process is the collection of mirror data (Skipper et al., 2021). Mirror data are ethnographic data collected in the workplace (Sannino et al., 2016). They are useful for researcher-interventionists themselves in order to become acquainted with the actual work practice and the tensions involved but are primarily shown to the practitioners to prompt discussion amongst participants. The purpose of mirror data is to trigger and support collaborative analysis and to cultivate innovative ways to comprehend and collectively carry out their work (Ivaldi and Scaratti, 2020). Mirror data synchronously reflect the present (troublesome aspects of participants' activity), the past (disturbances and challenges of the collaborative work practices), and the future (models under collective construction). During the change process, step-by-step new solutions are developed into plans for new models of activity; mirror data are again collected and discussed, to further interrogate the newly formed activity and consider its (future) feasibility.

Mirror data can be formal documents, such as external reviews and evaluations, or materials such as customer feedback and statistics; it could also be video recordings of working processes or transcriptions of interviews with different practitioners (Skipper et al., 2021). Within the healthcare domain, examples of mirror data include individual patient case notes, new guidelines, or an analysis of multiple electronic health records demonstrating intraprofessional collaboration between primary and secondary care. Anything considered by practitioners to be new or problematic could be suitable (Engeström, 2018). An example is given in one quotation in Table 2. Mirror data do not always appear in the form of material objects; a mirror to support discussion about collective action could also take the form of observation of each other's practice, with discussion of these observations, (Morris *et al.*, 2020) making tacit knowledge about the work explicit (Rydenfält *et al.,* 2012).

A physician assistant tells about the need to switch off an implantable cardioverter defibrillator (ICD) at the end of life: "*It really comes down to the fact that you rarely have to do anything with a pacemaker in patients at the end of life. But for patients with an implantable cardioverter defibrillator (ICD), you have to do something.* *An ICD has to be deactivated in time, if possible, so that it can be done on an outpatient basis. Ideally, we want to do this on an outpatient basis, but in an emergency, a technician can come to the patient's home, or a GP can put a magnet on an ICD, and as long as the magnet is on the ICD, it will not shock."*

Table 2: Illustrative quotation of mirror data of a physician assistant

Consideration of the mirror data unearths disturbances and problems in the participants' collective actions, with the intention being to create an emotional confrontation for those who experience tensions with their professional values to do the best for their patients. Emotions are considered necessary in Change-Labs. They facilitate participants' reflection on their collective actions and encourage their involvement in the change process (Engeström, 2018; 2020). It inspires motivation for change and willingness to learn. Collaborative interpretation and meaning making is realized as a result of the two-way dialogue between an emic (participant insider) and etic (researcher outsider) perspective (Nuttall, 2020). Finally, visualisations of the models of a new practice or other conceptual tools can also perform a mirror data role (Engeström *et al.,* 2003), because visualisation encourages collective reflection (Rydenfält *et al.*, 2012). A similar observation to that of the researcher's role can be made for mirror data and how these occur in the CPCA development process. Whilst in the CPCA process, mirror data are collected before the meetings and discussed during the meetings, this data are not truly considered to be a 'mirror' because the analytical view of an outsider, contributing elements that are not familiar to existing practices and making contradictions explicit, is missing. The medical coordinator collects information about, for example, the challenges to collaboration or new methods for diagnosis, as well as existing documents such as clinical guidelines of the national organisations, CPCAs, and CPCAs developed in other regions. These materials may act as mirror data (present) for participants. During the first meeting, the coordinator asks the questions brought forward during the preliminary phases and the participants have the opportunity to reflect on each other's work processes and how the collaborative activity had grown historically (past). They bring their perspectives which work as mirror data, but no observations were performed beforehand in practice and reflections on those observations are absent. Practitioners outside the group of participants provide information on working with the newly formed activity during the implementation process of the new model. This might become mirror data in the future.

The mechanism for bringing a variety of different perspectives into the CPCA change process is materially present through the national guidelines and previous editions of regional guidelines, but is not always deployed in existing CPCA processes. These material

representations provide an opportunity for critical benchmarking (Virkkunen & Newnham, 2013). Discussion around these materials may help to promote a shared understanding. Likewise, the discussion on guidelines of different medical disciplines may invoke emotions because they lead to conversations about specific, challenging patient cases or unearth power differences between various disciplines; again, this is not always fully exploited due to lack of knowledge about Change-Lab opportunities among medical coordinator and participating professionals. Finally, if Change-Lab principles were used, the CPCA would overtly visualise the overall process as a method to support expansive learning, whilst at present, participants discuss different text-based CPCA versions. As researchers, we advocate for the training of medical coordinators and participating professionals in the principles of Change-Lab and its tools. This could enhance joint opportunities to optimise these Change-Lab processes, fostering expansive learning and increasing the transformative agency of all.

REFLECTION

Above, we have described key problems in existing change intervention approaches in healthcare settings, recognising that the solution of a more theoretically grounded formative intervention, Change-Lab, with a researcher-interventionist, is often not achievable or practical. To circumvent the challenges associated with Change-Lab as a solution for better change processes, we propose a focus on its theoretical concepts and advocate for utilising those concepts when designing change interventions, as well as training medical coordinators as health professionals in basic Change-Lab tools. Our argument is founded upon our reflection on more empirical work around this existing CPCA change process, where we used the lens from the Change-Lab approach. In our interviews study, the CPCA processes participants developed capabilities in what could be called an ‘onset of transformative agency’ (Meijer et al., 2020). Moreover, their medical knowledge and understanding about others’ capabilities and working with different patients from different organisations increased. In what ways has this comparison provided useful lessons for us, as ‘researchers from the outside’ who study the CPCA change process? Practically, as researchers, it helped us in the design and performance of studying the CPCA change process. Fundamentally, it brought to the fore areas for improvement in the design of CPCA change processes by uncovering potential for learning during change.

Professionals involved in change efforts should reflect on the following overview of what the Change-Lab lens enables:

1. Become sensitised to the learning necessary for change processes to have a sustained and sustainable impact. Through looking at the participants’ final agreements as an outcome of expansive learning, a model for a new way of working can be co-constructed.
2. Look at materials collected in the change process as mirror data. Mirror data are the material representation of the problems in the field; therefore, it is useful to explore this mirror data and study (for example, through discourse analysis) how participants talk about and act on these mirror data and learn as a result.
3. Promote guidelines for coordinators of change processes with respect to their skills in alternating between the concrete and the abstract and for timely provision of tools and mirror data as stimuli for learning. Coordinators need to remain aware of the importance of taking an outsider perspective to make contradictions explicit and valued.
4. Suggest recommendations for future change processes, based on what is missing in the present design of change process that a knowledge of Change-Lab literature can unveil. An example of this is visualisation. Knowledge of the value of visualisation described in the Change-Lab literature could make tacit knowledge explicit and serve as a facilitator for reflection.

5. Train coordinators and those involved in change processes with the basic tools of Change-lab, to use tools to reflect on during the process of change and make the change process more deliberate, which can contribute to transformative agency in the future.

CONCLUSION

Change is constant. As such, there is an understandable desire to implement change interventions that seek to combine learning and change whilst not being perceived as top-down by participants. While Change-Lab offers a potential solution for these problems, its practical challenges and resource intensive nature may lead it to be dismissed. We argue that lessons learned from a comparison between Change-Lab and another change process brings benefit because it elucidates what in the design of the change process is already expected to support expansive learning and what might be adjusted to heighten the chances of this happening. Similarly, findings from our single case study where we observe a CPCA process of four meetings (Meijer, 2023) show that it is necessary to explore how to ensure these differences do not undermine the expansive learning. Critical consideration of Change-Lab permits practitioners and researchers to dare to achieve sustainability in their endeavours, where the change carried out by professionals employed in the healthcare system may remain viable longer than with embedded, but temporary, researchers (Haapasaari and Kerosuo, 2015). The take-home message for educational researchers is that these theories are practical even when a complete Change-Lab intervention may not be fully achievable. Even though our study example is located within a healthcare context, in our rapidly changing world, an increasing need for people in workplaces to share knowledge and learn together to adapt ways of working make it relevant in other professions and working contexts.

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