

Methods for Learning in Tripartite Collaboration: A Study Inspired by Action Research

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Abstract: Both private and public organizations are in need of employees with sustainable health, to be effective and productive. Mobile health applications have now started to be implemented for health promotion for individuals and groups at work. Such applications can motivate participation and engagement for health activities, and support managers in suggesting appropriate activities for the individuals and for the working groups, to promote the health of the employees in the production industry. The aim of this research is to analyze how research activities can be designed in collaboration with industrial companies and a software company to support learning for improved work-related health, in implementing digital applications. Action research is used as an approach to knowledge production within this field of work. This paper sheds light on the underlying mechanisms that make the collaborative endeavor a dynamic and impactful process. The active involvement of researchers, private industrial companies, and the software company is not merely a facilitator for data collection; it is the driving force that propels the research forward, ensuring its relevance, innovation, and real-world impact.

Keywords: Action research, Work-related health, Tripartite collaboration, Digital application, Engagement

1. Introduction

Both private and public organizations are in need of employees with sustainable health, to be effective and productive. Health promotion is generally seen by those who have defined it as involving a diverse set of actions focused on the individual or environment which through increasing control, ultimately leads to improved health or well-being (Rootman et al, 2001). According to the World Health Organization (WHO, 1998) health promotion is the process of enabling people to increase control over, and to improve, their health. Human relations departments and managers in organizations have challenges related to evaluating the employees' work-related health, and to initiating different activities to support the work-related health for their employees (Brynjolfsson et al, 2019). Organizations often repeatedly follow up the employees' well-being in the working environment, but obviously in practice they have difficulties in using those data to improve the employees' psychosocial health and the company's productivity.

Workplace interventions that are implemented to improve the working conditions are expected to achieve substantial reductions in work-related ill health (Dellve and Eriksson, 2019). For this work digital applications can be used for smoother work processes for evaluating the employees' work-related health (Zhang et al, 2021). Mobile health applications have now started to be implemented for health promotion for individuals and groups at work, like for example applications with gamification. Such applications can motivate participation and engagement for health activities, and support managers in suggesting appropriate activities for the individuals and for the working groups, to promote the health of the employees in the production industry. Thus, digital solutions can be used to drive organizational change (Markus, 2004). As such, the opportunities with use of digital applications for evaluating and supporting work-related health factors are far from fully utilized. Furthermore, activities to promote work-related health at the workplace also have the potential to be supported by digital applications. It is important for managers in organizations to get information and an increased understanding about the employees' working situation and their well-being, together with what they need in the context of their competence and learning in relation to the changing requirements at work and to have work-life balance (Nunstedt et al, 2020). Therefore, there is a need to study the implementation process of digital applications to support learning for new and innovative practices in organizations in relation to promote the employees' work-related health. The aim of this research is to analyze how research activities can be designed in collaboration with industrial companies and a software company to support learning for improved work-related health, in implementing digital applications. Action research is used as an approach to knowledge production within this field of work.

2. Research Method

In this study the researchers are collaborating with three private industrial companies, together with a software company. Methods on how to collaborate are emphasized in this qualitative research, as a way for research to synergistically inform digital application development, practice and research (Avison, et al, 1999; Nicolini and Monteiro, 2017). As such, this research is conducted inspired by action research. Several dialogue meetings were held, and quantitative data were collected by questionnaires. Thus, both qualitative and quantitative data are used to develop work processes in collaboration.

The research has been conducted since August 2021, thus been ongoing for two and a half years. The aim of this action research project has been to promote the work-related health of the employees at the three private industrial companies. The software company is a small company developing a digital application to support human relations (HR) departments and managers in organizations to promote the work-related health of their employees.

As preparation, the researchers have had a few reconciliations with the CEO and the PCO at the software company each week and discussed several things during a period before the study was started. For example, questions in the survey, results of the surveys, work processes when managers and employees use the digital application, actions that could be built in the digital application, and how the company responds to ideas and opinions about changes and improvements of the digital application.

Several meetings and dialogues were held with HR partners and managers at the industrial companies, on average once a month (Grundén et al, 2020). Notes were taken during all the meetings and dialogues. Interviews were held with employees at the industrial companies, on what they think of using digital applications to increase their work-related health. Ten, eight and seven semi-structured interviews respectively were held with employees from the different industrial companies in the first round, and 24, 32 and 15 respectively in the second round (Gioia et al, 2012; Yin, 2009). It was each company that selected the employees that were interviewed. The interviewees were informed of the aim of the study and gave their consent to be participants in the interviews.

The interviews were analysed by thematic analysis (Brown and Clarke, 2006). Then reports were written concerning each of the industrial companies. The reports were then distributed to the HR partners in each of the included industrial companies, and to the software company. The content of the reports was also discussed with each of the HR partners and the management group together with the CEO of the software company.

The results of the employee surveys were analyzed by the software company and the researchers and were reported to the industrial companies. Then suitable actions were discussed that could contribute to increased work-related health of the employees at the industrial companies.

3. Results

The aim of this research is to analyze how research activities can be designed in collaboration with industrial companies and a software company to support learning for improved work-related health, in implementing digital applications.

The results show why and how participation of the three actor groups; researchers, private industrial companies, and the software company, is important. The various phases of research, forming the constellation of companies, crafting research design and research questions, selecting methods for qualitative and quantitative data collection, sampling, analyses in different phases and figuring out how to proceed to produce knowledge in collaboration, depending on the actors' different interests.

3.1 Forming the Collaboration

Issues in work-related health are on the agenda for the industrial companies in this study. Traditionally, employee surveys have been conducted on a yearly basis at these companies. However, the companies perceive that a digital application could be a tool to support the work-related health issues to a greater extent.

The software company is a new venture company, started in 2017, developing a digital application to support work-related health issues in companies. The idea behind this digital application is based on the founder and his previous work at an insurance company. Due to marketing activities the company has provided the digital application to the industrial companies. Thus, resulting in a business relationship.

Researchers at the university have collaborated with the software company in previous research projects, and they have established a positive collaborative relation. For the researchers, an opportunity arose to seek external funds for a research project, with the aim of collaborating with industrial partners. Based on the relation between the researchers and the software company, an idea for this project was initiated, and the work in forming an application was started in late 2020. The industrial companies were asked to collaborate, and they accepted. The application resulted in the project being granted funds for the researchers' work. In return, all companies were also required to contribute in-kind.

3.2 Analysis of the Current Situation

The software company already has established its relationships with the software company and a few of the researchers respectively. Therefore, the project started with meetings where researchers had opportunities to learn more about each of the industrial companies, to get an understanding of the current situation. The researchers also got the opportunity to have a few workshops to get familiar with the digital application.

The first meetings and dialogues were aimed at supporting the HR partners and managers with advice in their daily work on planning and following-up employee surveys. It was discussed how to use the digital application to increase work-related health, and to implement actions to enhance issues that were assessed below average in the surveys.

Meetings were then held where the researchers got more detailed information from the industrial companies. Employees from the software company were also invited to these meetings. In the meetings the researchers also got information on the companies' challenges related to their work for sustainable work-related health for their employees. From this information the researchers then prepared a proposal for further collaborative work, for each of the companies. Meetings were held with the management group to discuss the proposal with each company, where they had the opportunity to reflect and give feedback. During those meetings a plan for further collaboration then was created. In the plan it was also included how the digital application should be used during the study. Moreover, meetings were also specifically held between the software company and the researchers on how the digital application could be used during the study, so the functionality of the digital application could be adapted to the activities planned.

3.3 Pilot Studies at Each Industrial Company

Based on the agreement on the plan for further collaboration, the work was continued at each of the three companies. First, interviews with managers and employees were held. The use of the digital application and the interest in using it for promoting work-related health was of interest in the first round of interviews. The second interview guide was based on a framework of critical success factors (CSFs). In each round, the interviews were analyzed, and the results of the analysis were presented for the management group at each company, where also employees from the software company attended. Each company had the opportunity to ask questions at the meetings.

From the analysis a focus group interview guide was formulated, to be used during focus group interviews at the industrial companies. Between 8 and 10 employees were included in each focus group. Moreover, specific activities were arranged, to be conducted by the employees in between the different rounds of focus group interviews. An example of such an activity is that each employee could, before going to work, reflect on what positive expectations there are for the working day. The activities were integrated in the digital application, so the employees could use the application to document their activities. During the period of three to four focus group interviews, one each month, an employee survey was distributed to the employees included in the focus groups.

4. Discussion

The collaboration ensures a synergistic blend of expertise. This interdisciplinary collaboration enhances the research by bridging gaps between traditional organizational practices and cutting-edge technological solutions. The mutual exchange of knowledge fosters an environment where theoretical concepts are tested against practical feasibility, leading to the generation of insights that are both innovative and actionable.

Design of tripartite research activities in implementing digital applications reveals the following aspects that promote the different actor groups in accordance with their different purposes.

4.1 Unveiling Collaborative Synergy: A Dynamic Intersection of Practice and Research

In a continued exploration of collaborative synergy, the results illuminate not only the integration of action research principles but also the emergent insights from the collaboration with private industrial companies and the software company. Beyond being a facilitator of data collection, the collaborative approach reshapes the very nature of research as a co-creative process. The dialogue meetings, meticulously designed for knowledge exchange, lead to synergies that go beyond the study's immediate scope. The dynamic interplay between researchers and industry partners becomes a nexus where theoretical insights meet real-world applications, fostering innovation and influencing the trajectory of the ongoing research. This collaborative synergy emerges as a catalyst for transformative endeavors, exemplifying how the fusion of theory and practice can yield novel solutions.

4.2 Beyond Time: Unravelling the Threads of Ongoing Engagement

The temporal evolution of the research process reveals not only the outcomes but the iterative nature of collaboration. The weekly reconciliations, rather than being routine, become strategic sessions where outcomes from surveys and insights into digital application integration are woven into an evolving narrative. The commitment to ongoing engagement is not solely driven by data outcomes but is deeply rooted in a shared commitment to organizational well-being. The results emphasize the importance of sustained, adaptive collaboration over time, demonstrating how ongoing engagement transcends the conventional boundaries of a research project and evolves into a dynamic partnership.

4.3 Multi-Modal Data Narratives

The research uncovers rich insights from the multi-modal approach employed. Employee questionnaires, as a quantitative tool, reveal not only statistical trends but also nuanced sentiments. Semi-structured interviews, guided by thematic analysis, uncover qualitative narratives that add depth to quantitative findings. The deliberate inclusion of employees in the interview process proves instrumental in capturing nuanced perspectives, transforming the interviews into collaborative sense-making sessions. The reports, distributed and discussed collaboratively, become iterative artifacts that embody the continuous evolution of understanding. This approach highlights not only the richness of the data but the transformative potential of collaborative sense-making.

4.4 Learning in the Collaborative Crucible: Orchestrating Actor Groups' Harmonious Participation

The collaborative crucible, as a metaphor for the research process, underscores that the orchestration of actor groups goes beyond the static delineation of roles. The results reveal that collaborative learning is not only about sharing insights but actively shaping the research trajectory. The collaborative constellation becomes a dynamic space where research design, methodology, and analysis are iteratively co-created. The emphasis on diverse interests is not merely a recognition but a deliberate strategy for fostering innovation. This section emphasizes that the collaborative process itself is a result, showcasing the profound impact of collaborative research activities in producing not only insights but also a sustainable and adaptive learning process that contributes to the ongoing improvement of work-related health and organizational practices.

These new insights provide a deeper understanding of how collaboration and ongoing engagement are not just means to an end but integral components that shape the very nature and outcomes of the research endeavour.

4.5 The Significance of Tripartite Participation

The active participation of the three actor groups – researchers, private industrial companies, and the software company – is pivotal for several reasons. Firstly, it brings diverse perspectives to the table, enriching the research process with a comprehensive understanding of both theoretical and practical dimensions.

Work-related health is a multifaceted issue influenced by organizational culture, managerial practices, and technological interventions. This holistic approach not only broadens the scope of the research but also ensures that the proposed solutions are comprehensive and address the intricacies of work-related health from multiple angles. Moreover, collaborative engagement is not a one-time event but a continuous process. Regular dialogues, as evidenced by weekly reconciliations and monthly meetings, foster a culture of open communication and mutual learning. The ongoing interaction allows for real-time adjustments, iterative improvements, and dynamic adaptations to emerging challenges. This iterative nature of collaboration ensures that the research remains responsive to the evolving needs and dynamics of the participating entities.

5. Conclusions

The findings explore how relationships and collaboration are developed, how the resources from both academia, private industrial companies and a software company with employees are combined, and how the activities are performed, as well as the outcomes of the processes. The study shows that all the actors' commitment to participation in the work is important. This includes reflection on values, power, and the democratic production of knowledge. This contributes to the practical implications for organizations to collaborate and create sustainable relationships.

Tripartite participation is crucial for its ability to bring diverse perspectives, blend interdisciplinary expertise, adopt a holistic problem-solving approach, and foster an ongoing, adaptive collaboration. This paper sheds light on the underlying mechanisms that make the collaborative endeavor a dynamic and impactful process. The active involvement of researchers, private industrial companies, and the software company is not merely a facilitator for data collection; it is the driving force that propels the research forward, ensuring its relevance, innovation, and real-world impact. The theoretical implications are emphasizing the active involvement of participants from the tripartite organizations as a method to enhance learning for innovation.

As this study is based on only one case this could be considered as a limitation. Although, the method used in this case proved its usefulness for the participants, that would not allow for applying the method successfully in other contexts. Future research should focus on more case studies, also in other contexts.

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