Participatory innovation through user-designed knowledge sharing and Web2.0 in the Danish seed industry

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Abstract

For many years the Danish seed industry has been at the forefront with high quality seed production, but in a rapidly changing global market innovation is a key factor for the future of Danish seed production – one important element to innovation is transfer of knowledge. In a new Ph.D. project seed scientists from Aarhus University will work together with seed growers and seed company consultants in designing a collaborative knowledge platform to optimise the diffusion of innovation between them.

The aim of the Ph.D. project is to look at the processes within the three communities of practice in their participatory efforts to design and select technologies that will improve their knowledge dissemination through a shared understanding of learning and innovation within the Danish seed industry.

The research questions are:

> What boundary objects emerge between and within the collaborating communities of practice, and in what way do they promote the negotiation of a shared understanding?
>
> Which commonalities can be derived from the participatory design of a "third space" community among communities of practice through participation in the Danish seed industry?

The work will be based on preliminary field research including qualitative semi-structured interviews staging the local concept to knowledge and innovation quantified by large-scale questionnaires. A random target group will work with imaging, tagging and categorising their personal experience and thoughts of knowledge and innovation through advanced online photo diaries.

The outcomes will be presented in a 3-step workshop series with representatives from the involved communities of practice. A "future workshop" will focus on commonalities and contradictions between the involved domains and how they redefine shared knowledge from their previous experience. A second workshop will focus on hands-on user experience based on a prototype predesigned from the preliminary research findings. The final workshop will build up a common knowledge discourse among its participants, and work towards an overall requirement specification for a preferred future knowledge innovation method in the Danish seed industry.

The three workshops will be recorded by video and subsequently hermeneutically analysed to determine relevant boundary objects and commonalities between the participating communities of practice.

Keywords

diffusion of innovation, boundary objects, communities of practice, networked learning, participatory design, seed science

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Introduction

For many years the Danish seed industry has been at the forefront with high quality seed production, but in a rapidly changing global market, innovation is a key factor for the future of Danish seed production. One key element to innovation is transfer of knowledge between the involved domains and organisations (Dodgson, 1993; Hargadon, 2003; von Hippel, 2007).

Rogers (2003, 2004) defines diffusion as the process in which an innovation is communicated among the members of a social system and that communication is a two-way process in which participants create and share information in order to reach a mutual understanding – or social change by which alterations occur in the structure and function of the social system.

In a new Ph.D. project seed scientists from Aarhus University will work together with seed growers and seed company consultants in designing a collaborative knowledge platform to optimise the diffusion of innovation between them.

Aims and objectives

The aim of the Ph.D. project is to look at the processes within the three communities of practice in their participatory efforts to design and select technologies that will improve their knowledge dissemination through a shared understanding of learning and innovation within the Danish seed industry.

The objectives of the project are to find out what boundary objects emerge between and within the collaborating communities of practice, and in what way they promote the negotiation of a shared understanding. In addition, which commonalities can be derived from the participatory design of a "third-space" community (Engeström, 2001; Gutiérrez, Baquedano-López, & Tejeda, 1999) among communities of practice through participation in the Danish seed industry.

Design

The project is currently in the first stage and in the final steps of the project design. The methodology will be based on a participatory action research approach to explore the structuring of seed knowledge among three collaborating communities of practice (seed scientists, seed company consultants, and seed growers).

The work will be based on preliminary field research including qualitative semi-structured interviews staging the local concept to knowledge and innovation quantified by large-scale questionnaires. A random target group will work with imaging, tagging and categorising their personal experience and thoughts of knowledge and innovation through advanced online photo diaries.

Analyses and observations are presented and reflected upon in a 3-step workshop series. A "future workshop" will focus on commonalities and contradictions between the involved domains and how they redefine shared knowledge from their previous experience. A second workshop will focus on hands-on user experience based on a prototype predesigned from the preliminary research findings. The final workshop will build up a common knowledge discourse among its participants, and work towards an overall specification requirement on a preferred future knowledge innovation method in the Danish seed industry.

The three workshops will be recorded by video and subsequently hermeneutically analysed to determine relevant boundary objects and commonalities between the participating communities of practice. In the end the results from the analyses will be presented to representatives from the involved communities of practice at a final seminar, where the research findings will be discussed.

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