

PRACTITIONERS' MOTIVES FOR PARTICIPATING IN PRACTICE RESEARCH – EXPERIENCES FROM A KNOWLEDGE INITIATIVE IN IS MAINTENANCE AND EVOLUTION

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Abstract

Practice Research has evolved as a fruitful research paradigm in Information Systems (IS). Due to its ground in philosophical pragmatism, case studies in local practices are central. Such case studies require cooperation with practitioners. A researcher's motives for conducting case studies are primarily to collect and analyze data for research purposes. A practice researcher also aims to develop scientific contributions of practical value. This paper elaborates on the practitioners' motives for participating in practice research. For the last three years we have been engaged in a knowledge initiative (KI) concerning IS maintenance and evolution. KI has been arranged as a professional network in which practitioners (as KI members) and researchers have worked together to develop knowledge. By analyzing patterns of the KI members' statements and engagements, we identify some tentative motives for practitioners to participate in practice research. The results show that their main motives are to influence research, increase competence, being a part of a social community, and solve specific problems. With this in mind we are able to arrange for successful practice research cooperation that meets both researchers' and practitioners' motives.

Keywords: Practice research, Practitioners' motives, General practice, Local practice.

Accepted to the International Workshop on Practice Research in Helsinki, June 8, 2011

1 Introduction

Practice research has evolved as a meaningful way to conduct IS research as well as other professional oriented disciplines. Based on the philosophy of pragmatism and a long time experience of Action Research (AR), Goldkuhl (2008) introduced a Practical Inquiry approach, which later has been developed and labelled as Practice Research (PR). PR gets its theoretical inspiration from Dewey's (1938) pattern of inquiry and according to a pragmatist's view research should be useful for practitioners as well as for researchers. In PR the organizational perspective is taken one step further since both a local practice and a general practice are defined in addition to the research practice. PR has much in common with AR, which is a common IS research method (e.g., Baskerville and Myers, 2004). The main difference is that AR research must contribute to a local practice, while PR research may contribute to a local practice but must contribute to a general practice (see further discussion below). The main purpose of PR is to create scientific knowledge of practical value (Goldkuhl, 2008).

PR requires a more or less active participation from practitioners and Foster (1972) states that the agreement between the researcher and the client (i.e., the participating organization) is a guiding foundation for a satisfying collaboration between researchers and practitioners. But what makes practitioners willing to participate in a research project? The most obvious motive might be to solve local problems (Melin and Axelsson, 2007). However, according to our experience the view of practitioners' motives to participate in PR research is yet to a great extent unexplored. Practitioners' intention to participate in research is sort of taken for granted, but not questioned in any detail.

For the last three years (2008-2011) we have been managing a professional knowledge initiative (KI) concerning IS maintenance and evolution. The purpose of KI is to develop useful and innovative knowledge through cooperation between researchers and practitioners. The initiative has been organized as a professional network of organizations, funding and participating in research and education within this particular area. It is, however, out of the scope of this paper to discuss results from KI practice research projects. Instead, we will examine KI as a case from which we can learn more about practitioners' motives for participating in PR. The purpose of the paper is to analyze the KI members' statements and engagements in order to learn how to arrange for successful practice research cooperation that meets both researchers' and practitioners' motives. We view KI as an example of a community in the general practice, as defined by Goldkuhl (2008).

If we review the field of IS maintenance and evolution, which is the focused area in KI, in literature we find that the definition of IS (system) maintenance often stresses the post-delivery characteristics and define system maintenance to be different types of changes (IEEE, 1998). The categorization of changes originates from Lientz and Swanson (1980), but has been further developed by many researchers' and practitioners' experiences (Chapin et al., 2001). Surveys indicate that most of the change activities aim to improve and adapt IS to changed environments. Many researchers therefore argue that maintenance is too narrow as a concept and prefer evolution (Parikh, 2005). Their point is that maintenance is associated with corrective activities, rather than further development (ibid). Another dimension of the definition of maintenance is that the term has been criticized as being too narrow because of its delimited content regarding change activities. Researchers also seem to agree that system maintenance is quite unfairly treated and therefore underexplored, in theory and practice, in relation to its importance for work practices (Chapin et al., 2001). All these characteristics of the field in focus are important to understand as a background to KI.

The starting point for KI was the lack of funding for a PhD thesis in IS maintenance and evolution. In the IS maintenance and evolution field, it is usual that needs for new knowledge are expressed by practitioners based on their experiences of practical problems (Sneed, 2005). This is why we decided to start the initiative as a type of call for knowledge development, directed to organizations who deal with problems concerning IS maintenance and evolution on a daily basis.

When we launched KI the following arguments to become a member were formulated in the prospect directed towards practitioners:

- Possibilities to influence research questions
- Offering ‘a door’ into the university with useful knowledge, i.e., easy access to researchers
- Membership in a community concerning IS maintenance and evolution
- Access to students’ work and, thus, potentially contact with future employees

Viewing these arguments, we assumed that practitioners have a “thirst for scientific knowledge and are social human beings in search of new employees”. Retrospectively, we see that our argumentation was based on an unexpressed ideal of a practitioner which we wanted to attract. We did, however, not know if this ideal was based more on researchers’ notions of practitioners than corresponding to a practitioner’s real motives. Anyhow, KI attracted 46 organizations which were far more than we had expected. Managing KI for the last three years has given us some useful experiences regarding practitioners’ motives for participating in research, which we intend to explore in this paper.

After this introduction, the paper is organized in the following way: In Section Two practice research is further described and discussed. KI as our empirical case is then presented in Section Three together with some methodological remarks. The empirical findings are discussed and analyzed in Section Four. The paper is concluded in Section Five, where we also make some statements about the need for further research efforts.

2 Practice Research

As mentioned above, PR has a lot in common with AR. Action research has over time been used and accepted as a method in IS research (e.g., Baskerville and Myers, 2004). The idea of AR is to solve organizational problems through intervention and at the same time to contribute to the body of knowledge. In AR researchers and practitioners cooperate to solve real-life problems. Initially AR was criticized for its lack of rigor (Cohen and Manion, 1980) and difficulty in making a sharp distinction between research and consultancy (Avison, 1993). Nowadays most researchers agree that consultants are more interested in changes while researchers are interested in both changes and research (Cronholm and Goldkuhl, 2004). The approach of AR means that an AR project has to satisfy two quite different target groups; a specific organization and the research community (Kock and Lau, 2001) which implies a complex balance. Dickens and Watkins (1991) illustrate this challenge by stating that AR sometimes tend to produce “research with little action or action with little research” (ibid., p. 131).

In order to increase practice relevance, Schein (1995) introduced a so called clinical model which is based on organizations’ needs. He argues that in the clinical model the researcher is involved in the organization’s business, instead of the organization being involved in the researchers’ business. The latter, Schein (ibid.) states, is common in many AR studies. Furthermore, Schein (ibid.) means that an unattended researcher can cause many problems by intervening in a wrong way. By not looking at the data gathering as a way of intervention, a potentially good problem solving can be missed (ibid.).

AR has its strength in practical relevance with a clear aim to improve a local practice as well as to contribute to the research community. Obviously AR and PR have much in common, but there are also some distinctions between them. Primarily that AR contributes to a local practice in order to increase relevance, while PR is set to contribute to a more general practice. The latter has a pragmatic outlook which implies that it contributes to knowledge aimed for practical use. The contribution to the scientific body of knowledge in PR is not restricted to the research community. Scientific knowledge should also give a general practice contribution (Goldkuhl, 2008). PR has its starting point in Dewey’s (1938) idea to improve the world a little. This means that the world must be a bit better by PR developed knowledge than without it.

PR is also inspired by Design Research (DR). Like AR, DR is well recognized in IS literature but when AR represents a behavioural science paradigm, DR represents a problem solving paradigm (Hevner, 2004). DR focuses on artifacts that can make practices more effective. DR produces artifacts, but also meta-artifacts such as constructs, models and methods. This means that users of DR results can be found in a practice community as well as in a research community. The practice community can be seen as a general practice community (Goldkuhl and Lind, 2010). Hevner et al. (2004) argue for a combination of problem solving and behavioural research, while Lee (2000) goes one step further and states that these are inseparable in IS research. Aboulafia (1991), with basis in pragmatism, argues that scientific research should be evaluated in the light of its practical implications.

In figure 1, the different practices of PR as well as their contributions are illustrated.

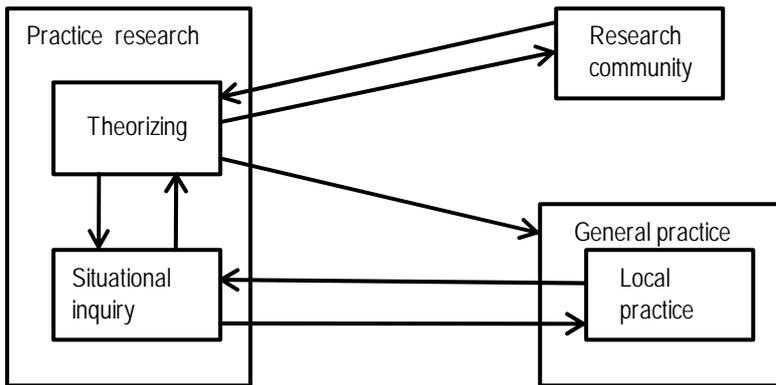


Figure 1. The anatomy of practice research. (Further developed from Goldkuhl, 2008)

During a situational inquiry, researchers collect empirical data in a local practice and generate a local practice contribution. The result meets theories from the scientific body of knowledge, developed by the research community, during the researchers' theorizing actions. This results in a research contribution with the research community as target group, but should also result in a general practice contribution (Goldkuhl, 2008). The knowledge development within KI follows this line of thinking, aiming for both local practice contributions, general practice contributions and research contributions.

3 The Knowledge Initiative in IS Maintenance and Evolution

As mentioned above, we view KI as a case from which we intend to learn more about practitioners' motives for participating in practice research. The empirical descriptions and analyses presented in this paper are based on conducted activities and results from KI during a three year period. In order to structure experiences from practitioners we have also coded and analyzed empirical data from evaluation forms of KI activities, such as conferences, workshops and network gatherings, using a qualitative approach (Walsham, 2006). Some of our analyses are also based on presentations done by the KI members. We have also collected data in dialogues with the members during these three years. This implies that we have conducted a case study of KI using multiple data collection methods and sources of data.

The 46 organizations that were attracted by the call for knowledge and decided to join KI come from local and central government as well as private industry. Some universities and county councils were also attracted. Member organizations from industry mainly represent the finance and insurance sector as well as the manufacturing sector.

The main purpose of KI is to develop relevant knowledge within the field of IS maintenance and evolution; therefore the first KI activity was to arrange a workshop aiming to collect and discuss the members' suggestions of topics for knowledge development. Approximately 50 persons participated in the workshop. In five groups with ten persons in each, the members discussed common problems in

their organizations. The discussions took approximately two hours to conduct and were concluded by presentations of the results from each group. The topic of handing over results from project organization to maintenance organization soon arose in almost every group discussion. The second part of the day, the discussions in some groups revolved around the problems of the handover situation in more depth. The result from the workshop was the starting point for KI's first knowledge development. A PhD student used this problem, grounded in practice, as a starting point for her studies concerning handover from project organizations to maintenance organizations. Together with two of the member organizations of KI, she carried out case studies in order to develop knowledge on this topic.

The described process above is quite representative for the work conducted in KI. In three years we have investigated five main topics; the first one is handover from project organizations to maintenance organizations and the latest one is presented in this paper and concerns practitioners' motives for participating in practice research. The three other topics are;

- Maintenance and evolution of IT infrastructure
- Architectural maintenance and evolution
- Benefit analysis when implementing a model for maintenance and evolution

We have throughout KI mainly had a prevalent research process with theoretical studies along with case studies. For the benefit analysis we tested a rather unusual case study method. Instead of selecting one organization, we invited eight professionals to play roles in a fictive organization that was about to implement a new model for maintenance and evolution. The organization and the situation were created based on experiences of one of the KI members regarding implementation of a model for maintenance and evolution in more than hundred organizations. Key figures found in articles were used as a complement in the study. The group conducted a benefit analysis for the fictive organization during five workshops. The group found it rather difficult to achieve the given task, but the difficulty mostly related to the benefit analysis as such. The participants expressed that they had learned a lot and they were very satisfied with their decision to participate. One of the professionals said that he had recognized that the problems in the field of maintenance and evolution were more alike between organizations than he first had expected.

Above we have described workshops and case studies as two ways of interacting with the KI members. We have also conducted network gatherings hosted by different members. We have arranged an annual conference with presentations given by members, researchers and other invited speakers. The topics at the conferences have varied from reports of ongoing knowledge development and trend analysis concerning nearby topics influencing the field of maintenance and evolution to different KI members' experiences in the field. Every arrangement has attracted at least 75 percent of the members, in most cases more. Seven members have given presentations and nine organizations have participated in case studies.

To sum up we have five topics of knowledge development in KI. Four of these have their origin in practical problems in some of the 46 different local practices. We have conducted prevalent case studies including a more unusual role-play in a fictive case study. We have used conferences, workshops, educational courses, and case studies to interact with the KI members. Finally we have produced;

- 3 case studies reports and 2 case studies presentations
- 4 reports with practitioners as the main target group
- 4 academic articles (2 accepted, 2 under review)
- 1 master thesis
- 1 licentiate thesis (work in progress)

Results from practice research in KI have also been used as the basis for product development in a model for maintenance and evolution.

4 Practitioners' Motives for Participating in KI

The yearly conference, network gatherings, workshops and educations are all examples of interaction forms in the general practice. In table 1, below, we present the basis for analysis of the KI members' engagement in different interactions forms.

Forms of interaction	Engagement
Yearly conference	<ul style="list-style-type: none"> • High attendance, approximately 75 percent of the members • 7 member presentations of different topics
Network gatherings	<ul style="list-style-type: none"> • High attendance • Members as hosts
Workshops	<ul style="list-style-type: none"> • High attendance • Formulation & prioritization of research topics
Education	<ul style="list-style-type: none"> • Full course (11 participants) • 2 theses (a master thesis and a licentiate thesis)
Case studies	<ul style="list-style-type: none"> • Highly requested by members • Provided deep access to studied local practices • Deep engagement

Table 1. KI members' engagement in different interaction forms in KI.

Based on the high attendance in every activity arranged in KI it is our conclusion that KI is important to the members. The members have frequently expressed their satisfaction that KI fulfils its purpose; i.e., to develop knowledge about IS maintenance and evolution. In every form of interaction the members have stressed the possibility to interact with other organizations. We have also observed that smaller networks within KI have appeared during this period. Organizations, which have identified that they have a complex problem in common, have started to interact. These interactions are not permanent; they have been temporary aiming at exchanging experiences in order to solve a specific problem. In the conducted case studies, we have observed a deep commitment from the studied organizations. We believe that the main reason for this is that we have focused on real life problems and taken the organization one step further in solving their problem or at least getting them to look at the problem in a new way. Our conclusion is therefore that case studies in local practices attracted the highest engagement from the participants.

At the latest KI conference, some participants expressed their satisfaction of being a member of a knowledge development community. Seven members have presented their experiences from the field at KI activities. Almost every presentation has contained a quite extensive presentation of the organization. Our conclusion is therefore that the presenters took the opportunity to expose their own organization in the community. The high course participation is most likely a sign that the members have identified a need for higher competence in the field. One organization has also used developed knowledge as basis for product development.

By giving the KI members opportunities to formulate and prioritize the research issues, we have fulfilled Schein's (2005) idea of increased practical relevance in research. One sign of that is that reports and conference papers targeted to general practice are highly appreciated both by practitioners inside KI and others. In figure 2 below, we have related the KI contributions to the three different practices defined in PR.

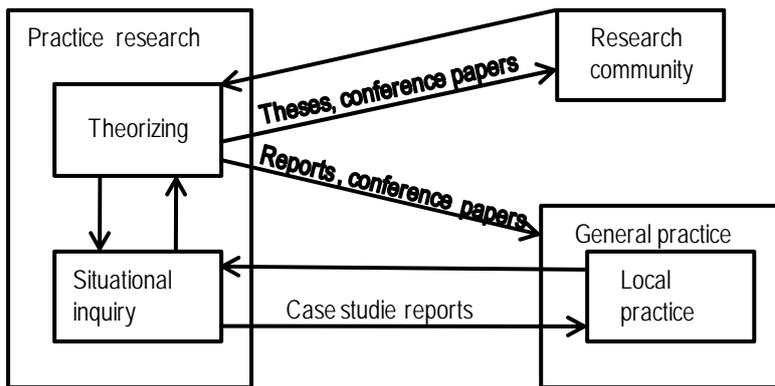


Figure 2. KI contributions in PR's different practices.

The analysis shows that KI gives quite even contributions to the three practices. However, the members' impression is that KI primary is a social network for developing and exchanging knowledge and experiences in at fruitful way.

5 Conclusions

When analyzing KI members' engagement in different interaction forms, we found different motives of which most can be related to our anticipated ideal of a social practitioner who has a thirst for scientific knowledge and is in search of new employees. Our conclusion is that knowledge desire has been a central motive for participation, however not necessarily solely scientific knowledge; rather knowledge targeted to general practice. It also seems that proven exercise is equally valued by the members, because of the members' interest for each others' experiences in the field of IS maintenance and evolution.

We have also found that the possibility to solve local problems is valued by the members as well as the possibility to increase competence in this field. Already in the prospect, we invited to a social community concerning IS maintenance and evolution. We had actually predicted that this would be the highest valued motive for the practitioner to join KI. This has been reinforced by our results which show that it is regarded as important for the members' personal image to belong to a knowledge development community.

We have not found any traces of the employment argument in the prospect, but this could be explained by the fact that most of the individual members are not in recruiting positions. We have not seen any explicit interest of other research topics (except for those already explored) in general expressions by the members. Maybe we should add "yet" here. Our experience is that it has taken us these three years to explore the interaction forms. This means that from the researcher's point of view we have not taken the full opportunity to expose other research topics in the KI community yet. Therefore we argue that it is too early to reject these arguments.

To sum up practitioners' motives for participating in practice research, we use the concepts of local and general practice according to Goldkuhl (2008);

- Local practice
 - Solve local problems
 - Increase competence
- General practice
 - Influence research questions
 - Increase competence
 - Strengthen the personal image
 - Expose the own organization
 - Basis for product or service development

The high occurrence of motives related to general practice shows that the general practice regarding the field of maintenance and evolution is an important practice when conducting PR. We have observed that members from quite different organizations can share experiences of maintenance and evolution. That is also what characterizes a general practice (Goldkuhl, 2008). It looks like it is possible to use social communities, such as KI, for bridging the gap between researchers and practitioners identified by Sneed (2005).

We note that KI has been a successful way to organize collaboration between researchers and practitioners in the field of IS maintenance and evolution. By analyzing the practitioners' engagement we emphasize the need to package and adjust scientific knowledge in certain ways to attract practitioners. The evolving interaction forms have given us the opportunity to present scientific knowledge aimed for practical use, target group adjusted to practitioners. This must be seen as fully in line with the purpose of PR (Goldkuhl, 2008; Goldkuhl and Lind, 2010). Our experience and understanding of practitioners' desire to be part of the knowledge community and to influence research questions have also given us the opportunity to increase relevance in our research (cf. Baskerville and Myers, 2004).

None of these findings regarding practitioners' motives for participating in PR is of course unexpected or new to us. However, by acknowledging practitioners' motives in a cohesive way we are able to arrange for successful PR cooperation that meets both researchers' and practitioners' motives. In addition to ordinary PR projects, conducted as a joint effort by researchers and practitioners in one organization, professional networks like KI can offer another arena for conducting PR, which corresponds to practitioners' motives for participating in PR.

We think it is reasonable to assume that the identified motives can be used both in the field of IS maintenance and evolution and in other fields when organizing future professional networks. By making practitioners' motives for participating in PR explicit, we hope that future PR efforts will benefit. Conducting PR implies cooperation between researchers and practitioners. Understanding the motives for both parties to take part in such cooperation makes it possible to design PR in a way that meets the expectations of all participants. The contribution of this paper is, thus, further understanding of the practitioners' motives, which we argue are taken for granted in many research projects.

The conclusions in this paper are based on analysis of empirical data from practitioners in the field of IS maintenance and evolution. Even though we think that the motives can be similar in other fields, an appropriate next step would be to explore the motives when attracting practitioners for PR research in other fields. No doubt, KI has been successful and improved the collaboration between researchers and practitioners, but we must also be aware that maintenance and evolution is quite unfairly treated in both theory and practice compared to other IT related areas (Chapin, 2001; Parikh, 2005). This can be one explanation to the high engagement by practitioners. Therefore, studying another field, with higher status, would maybe reveal other, supplementing motives for participation.

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