The three threats of action research: a discussion of methodological antidotes in the context of an information systems study

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Abstract

This paper provides a brief historical discussion of action research (AR), from its emergence as a distinct research approach after World War II to its relatively recent use in the field of information systems (IS). Based on a review of the research methods literature, it presents and discusses three main threats inherent in action research, called "uncontrollability", "contingency", and "subjectivity"; and three methodological antidotes to deal with these three action research threats, called "unit of analysis", "grounded theory", and "multiple iterations". Both the threats and the antidotes are discussed in the context of a real information systems action research study that investigated the impact of computer support on the success of group-based business process improvement (BPI) attempts.
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1. Introduction

The emergence of organizational action research (AR) and its later use in the information systems (IS) field [8,13] has been motivated by the recognition that an organization can be more deeply understood if the researcher is part of it, which can be achieved by the researcher facilitating improvement-oriented change in the organization [6,17,24,25,39,62,73]. This type of involvement is also believed to foster cooperation between researcher and those who are being studied, information exchange, and commitment towards both

generating valid research conclusions and desirable organizational changes [41,62,65,69].

Conducting organizational AR involves helping an organization solve its problems and become "better" in terms of some of its key attributes such as productivity, the quality of their products and/or services, and working conditions. At the same time, AR involves collecting, analyzing, and drawing conceptual and theoretical conclusions from organizational research data. This combination of "action" and "research" in organizational settings is perhaps the most appealing aspect of organizational AR [25,93,94]. In spite of the advantages that this combination of "action" and "research" can bring about, the use of AR in organizational research and, more specifically, in IS

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research, has been very limited [69,71,83]. This is surprising, particularly given AR's potential for generating outcomes that are relevant to industry practitioners pointed out by Truex [101] and highlighted by the guest-editors of a recently published special issue on IS AR of the journal *Information Technology and People* [65].

Obviously, there must be reasons why AR is underrepresented. A review of the research literature suggests that AR poses unique "threats" to research success [46,47,79,87], which can potentially lead to a high proportion of failures in the conduct of AR and scare away potential adopters of AR as an approach for organizational research. This paper addresses this problem by presenting and discussing three fundamental "threats" posed by AR to researchers, as well as three methodological "antidotes" for the threats. Both the threats and the antidotes are discussed in the context of a real IS AR study that investigated the impact of computer support on the success of group-based business process improvement (BPI) attempts [64]. The paper is organized as follows.

The section "Action research and its use in information systems" provides a brief historical discussion of AR, from its emergence as a distinct research approach after World War II to its relatively recent use in the field of IS. This section also contrasts AR with other research approaches in IS. This is followed by the section "The three threats of action research", which presents and discusses three key threats posed by AR to researchers: *Uncontrollability*, *contingency*, and *subjectivity*. The discussion is based on a review of both the AR literature as well as the more general literature on research methods.

The section "Dealing with the action research threats: a discussion of three methodological antidotes" presents and discusses three methodological antidotes to deal with the AR threats identified in the previous section. The antidotes are developed from the general literature on research methods and are called *unit of analysis, grounded theory*, and *multiple iterations*. The following section, "Spotting the threats: a look at a real information systems action research study", discusses the three threats based on a real IS AR study whose main goal was to investigate the impact of electronic communication support on BPI groups. The following section, "Applying the methodological antidotes", discusses the application

of the antidotes in the context of the IS AR study presented in the previous section. Finally, the "Conclusion" section concludes with a call for unity among those who subscribe to and practice AR and those who do not for reasons related to their epistemological orientation.

2. Action research and its use in information systems

Although there is controversy about its origins, AR seems to have been independently pioneered in the US and Great Britain in the early 1940s. Kurt Lewin is generally regarded as one of its pioneers [6,25] through his work on group dynamics in the US. He is also believed to have been the first person to use the term "action research" [73]. Lewin [72] defined AR as a specific research approach in which the researcher generates new social knowledge about a social system, while at the same time attempting to change it [21,72,85]. A distinctive thrust of AR has also developed after World War II in Great Britain at the Tavistock Institute of Human Relations in London. There, AR was used as an innovative method to deal with sociological and psychological disorders arising from prison camps and war battlefields [41,87].

In AR, "action" and "research" are combined into a structured process usually referred to as the AR cycle [34], of which variations exist [76]. Perhaps the most widely accepted view of the AR cycle is that provided by Susman and Evered [97] in what is believed to be a seminal article that laid the foundations of modern organizational AR. Fig. 1 shows Susman and Evered's [97] AR cycle, which comprises
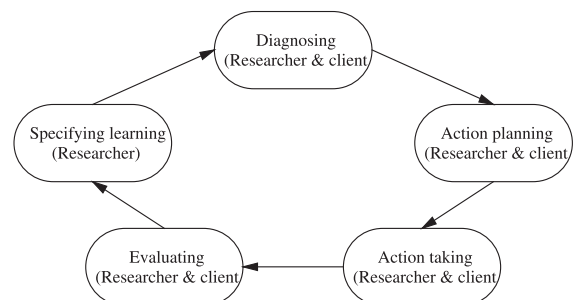

Fig. 1. Susman and Evered's [97] AR cycle.