Chapter 5

Design Science Research to Produce Instrumental Knowledge for Evidence–Based Practice in OCD

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ABSTRACT

Evidence-based practice (EBP) is a promising approach to improve professional action. EBP is the use of the best available knowledge in professional problem-solving, in particular the best available knowledge produced by research. EBP has much promise for organizational change and development (OCD). However, for successful EBP, one needs a well-developed knowledge base of instrumental knowledge (i.e., knowledge-to-act). Unfortunately, academic OCD research is strong in developing conceptual knowledge (i.e., knowledge-to-understand) but rather weak in instrumental knowledge. In this chapter, design science research (DSR) is discussed: a research strategy to develop instrumental knowledge in the form of designs for effective interventions, processes, or systems to improve present practices. These designs are developed through experiential learning by executing a number of problem-solving projects in the messy "swamp of practice," often executed in partnerships with professionals. Embedded-in-action theories can be powerful inputs for EBP, thus improving the practice of OCD.

INTRODUCTION

Planned organizational change and in particular large scale planned organizational change and development (OCD) is a difficult to manage process. These processes do not always meet expectations (see e.g. Beer & Nohria, 2000; Stanford, 2016; chapter 1 of this book). Many feel that managers and OCD-professionals should be able to do better. Evidence-Based Practice (EBP) is a powerful and proven approach to improve professional actions in many disciplines. Its development started in Medicine as

Evidence-Based Medicine (Hamer & Collinson 1999; Sackett et al., 1996; Trinder & Reynolds 2000). Subsequently this approach has been transferred successfully to other disciplines in the social sciences, such as education, social policy and criminal justice under the name of Evidence-Based Practice (Davies, Nutley & Smith, 2000; Young et al. 2002). In the meantime, it has also been recognized as a promising approach in management (Briner, Denyer & Rousseau, 2009; Rousseau, 2012).

Essentially EBP means the conscientious use of the best available knowledge in professional problem-solving, particularly the best available knowledge produced by research (Sackett et al., 1996). An important contribution of using the EBP-approach is to compensate the bias, always present in personal professional experience, by complementing this experience with valid up to date knowledge produced by research. The key input for EBP is 'knowledge-to-act' to be used in solving field problems. In this chapter I use the distinction, made by Pelz (1978), between instrumental and conceptual knowledge; instrumental knowledge is 'knowledge-to-act', whereas conceptual knowledge is 'knowledge-to-understand'. Academic management research is strong in developing conceptual knowledge, but, unfortunately, rather weak in developing instrumental knowledge. The objective of this chapter is to discuss design science research (DSR), a discipline-independent research strategy aiming to develop instrumental knowledge to be used in EBP.

DSR is a family of research strategies, showing some variations across the various disciplines where it is used. But all family members share the objective of developing designs for interventions, and processes or systems to be used to improve present practices. In this chapter I will discuss DSR for OCD. In DSR for OCD, effective designs are developed, often in partnerships with professionals, on the basis of experiential learning through a number of problem-solving projects in the messy 'swamp of practice'.

In the next section EBP and its key input of instrumental knowledge will be discussed. Section 3 gives an account of three important barriers facing management researchers (including OCD-researchers), desiring to develop instrumental knowledge. These are paradigmatic convictions, institutional pressures and methodological problems. In section 4 I discuss systematic experiential learning as an effective approach for dealing with these methodological problems.

The academic literature may be weak in presenting instrumental knowledge, but there is a lot of instrumental knowledge for OCD to be found in the non-academic management literature on planned change (see e.g. Cameron & Green, 2015; Gibbons, 2015; Grenny et al., 2013; Kotter, 2012). It is a type of literature looked down on by many management researchers, often because of the limited evidence given to support its recommendations. However, this literature can give an idea of the character of instrumental knowledge relevant for the 'swamp of practice.' Section 5 is a plea to develop evidence-based versions of non-academic management literature using the DSR-strategy. Then, finally, section 6 gives an account of DSR for OCD and section 7 a number of OCD-issues relating to research using the DSR strategy plus some pointers on how to do this. Section 8 gives conclusions.

INSTRUMENTAL KNOWLEDGE AS KEY INPUT FOR EBP

In discussions of EBP with change agents often one gets the impression that they tend to consider EBP as a hype or as a strange idea devised by some academics. However, EBP is rather to be regarded as a millennia old core demand to *any* professional (see on professionals e.g. Freidson, 1973, Klegon, 1978; Schön, 1983). The core process of professionals, like medical doctors, engineers and lawyers, is knowledge-

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