

Chapter 30

End–User Participation in Health IT Development: The EUPHIT Method

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ABSTRACT

Despite there being extensive cumulative knowledge and many experiences about factors that contribute to health Information Technology (HIT) success, lessons are yet to be learned as many HIT developments still face a number of problems - many of them of an organizational nature. This chapter presents a new method - the EUPHIT method – for studying and understanding one of the most crucial organizational success factors in HIT development: end-user participation. The method was developed and used for the first time throughout a research study of an EHR planning process in a Danish region. It has proved effective in disclosing the interactions that occur between the different social groups involved in HIT development, and in understanding the underlying reasons for these. This allows HIT project management to explore new avenues during the development process in order to support, facilitate, and improve real end-user participation.

INTRODUCTION

Today an extensive body of knowledge and many research experiences about factors that contribute to health information technology (HIT) success exist (Ash, Stavre, & Kuperman, 2003; Berg, 2001; Kaplan & Harris-Salamone, 2009; Kaye et al., 2010; Van der Meijden, Tange, Troost, & Hasman, 2003). Yet, lessons are still to be

learned as many HIT implementations continue to face a number of problems, many of them of an organizational nature (Ash et al., 2003; Berg, 1999; Edmondson, 2003; Høstgaard & Nøhr, 2004; Lorenzi et al., 1997; Van der Meijden et al., 2001). One of the most crucial organizational success factors in HIT development is end-user participation (Berg & Winthereik, 2004; Høstgaard, 2009; Kensing et al., 1996; Kensing & Blomberg, 1998; Kushniruk & Turner, 2011; Lorenzi & Riley, 1995; Avison & Fitzgerald,

DOI: 10.4018/978-1-4666-2770-3.ch030

1995a). In this chapter, the concept is used in the sense of enabling end-users to exert real influence in decision-making throughout the technological development process. Most methods developed to support and facilitate this well-known success factor have been developed for organizations in general and have focused on the design stage (Bødker et al., 2004; Kensing et al., 1996; Mumford & Weir, 1979) – so far, no method has been developed for the healthcare sector specifically or for the entire IT development process.

This chapter presents a new method – the “EUPHIT method” (End-User Participation in HIT development) – for studying and understanding end-user participation in HIT development. It is aimed at HIT project management at all levels – and others working in the field of health information technology success. The method presents a new methodological approach to collect more detailed information on social groups participating in HIT development and their interaction during the development. This allows HIT management to explore new avenues during the HIT development process in order to support and facilitate real end-user participation. The EUPHIT method was developed and used for the first time throughout a research study of an EHR planning process in a Danish region. Thus, it was developed within and specifically for the healthcare sector.

Initially, the chapter will provide the background for developing the method. Subsequently, the EUPHIT method will be described – including the theoretical framework on which it is based, its target groups, and when and how to use it. Next, a more detailed review of the method will be provided through a thorough description of the research study throughout which it was developed and used for the first time. Finally, the strengths and the limitations of the method will be discussed as well as its relation to other approaches.

BACKGROUND

The fulfillment of the key objectives in health-care – patient safety and quality of treatment and care – is totally dependent on an optimally functioning health information and communication (IC) infrastructure within the healthcare sector. During recent years, many healthcare providers have made great efforts to replace the current health IC infrastructure – the paper-based health record – with an electronic health record (EHR), because concurrent advances in information technology indicate that this can resolve many of the problems, e.g. accessibility and data validity, associated with the paper-based health record.

However, studies have shown that the introduction of HIT – e.g. the EHR – besides solving some problems, often brings with it a number of new problems, including some of an organizational nature (Ash et al., 2003; Berg, 1999; Edmondson, 2003; Høstgaard & Nøhr, 2004; Lorenzi et al., 1997; Van der Meijden et al., 2001). Research has also revealed not only pitfalls to be aware of but also success factors to be met in order for an EHR implementation to be successful (Ash et al., 2003; Berg, 2001; Kaplan & Harris-Salamone, 2009; Kaye et al., 2010; Van der Meijden et al., 2003). Some crucial – and well-known – organizational success factors are that the clinicians must obtain positive clinical benefits (Ash et al., 2003; Robertson et al., 2010; Simonsen & Hertzum, 2006) as a result of an EHR implementation and joint ownership (Bødker et al., 2004; Johnson, 2006; Lorenzi et al., 1997; Lorenzi et al., 1995; Pare, Sicotte & Jacques, 2006;) of the decisions made during the development process. A prerequisite for both is real participation in the EHR development process – not pretended or symbolic – enabling clinicians to exert real influence in decision-making (Berg, 2001; Bødker et al., 2004; Høstgaard, 2009; Kensing & Blomberg, 1998; Kushniruk & Turner, 2011; Lorenzi &

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