Chapter 12
Usability Evaluation as Idea Generation

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Abstract This chapter discusses how to understand the purpose of formative usability evaluation. We raise concerns about common ways of understanding usability evaluation, and propose a complementary view of usability evaluation as idea generation. Implications of this view for researchers and practitioners are discussed, and it is argued that seeing usability evaluation as idea generation may help move research in evaluation methods forward. In addition, we suggest practitioners some benefits of viewing their work as idea generation and some concrete techniques based on this view.

12.1 Introduction

The activity of usability evaluation is broadly concerned with investigating the usability of information technology. We focus on formative usability evaluation, where the aim is to affect the development of a product. A host of methods for performing usability evaluations has been proposed for this aim (e.g., Cockton, et al. 2003a; Dumas 2003), and a substantial literature discusses the relative benefits of these methods based on empirical comparisons of their performance (Nielsen 1992; Bailey, et al. 1992; John & Marks 1997; Cockton, et al. 2003b). The methodological challenges in such comparisons, however, have proven substantial (Gray & Salzman 1998).

The assumption behind this chapter is that activities in the field of usability evaluation—in particular, which methods are proposed, how methods are compared, and how evaluations are done in practice—are determined to a large extent by what is seen as the purpose of usability evaluation. For example, if we see the goal of usability evaluation as identifying defects in software, then evaluation methods that help evaluators find many usability problems are of importance: we might understandably compare evaluation methods by counting how many problems they each identify, and we should author usability reports that mainly list usability problems. If, however, we see usability evaluation as an activity that is intended to influence software design, then we may be more interested in whether designers and developers can understand the problems an evaluation method helps identify, and consequently try to quantify the impact of evaluations on development activities.
Based on this assumption, we explore a complementary view of usability evaluation. Our motivation for doing so is twofold. First, research in usability evaluation has been troubled by methodological difficulties and deficiencies (Gray & Salzman 1998; Hartson, et al. 2001). Among other things, finding a valid dependent variable in comparisons of methods is hard, and techniques for focusing on a method’s downstream utility (John & Marks 1997) are rare. The second motivation is more pragmatic. The ability to get ideas (rather than merely list usability problems) appears highly relevant for usability practitioners and the developers/designers that they work with. Yet, as we will argue, it has not been a focus in work on evaluation usability methods; this may be one reason why usability evaluation has had a limited impact on software development (Hornbæk & Stage 2006).

This chapter proposes idea generation as one view of the purpose of formative usability evaluations; we refer to this as the idea-generation view. The idea-generation view contends that usability evaluation is a process aimed at giving evaluators, developers, and designers ideas about users, users’ tasks, and the application being evaluated. We argue the case for the idea-generation view, and draw some implications for research and practitioners. This chapter does not aim to validate the usefulness of the idea-generation view or of the implications drawn. Our intent is mainly to explore whether useful new directions in usability research may be gained from considering usability evaluation as idea generation.

The next section outlines what seems to be the most common way of understanding the purpose of usability evaluation, and discusses its limitations. Next, we describe in some detail the creativity and idea generation literature, and discuss the idea of considering usability evaluation as idea generation. The following two sections present some tentative implications for usability researchers and practitioners, respectively.

12.2 The Purpose of Usability Evaluation

The point of departure for this chapter concerns the purpose of usability evaluations. While an evaluation may be done in a particular context for a variety of purposes, we discuss next what appears to be the main view in the literature and its limitations. The following section aims to motivate further the need for an alternative or complementary view of the purpose of usability evaluation.

12.2.1 Usability Evaluation as Defect-Identificaton

A variety of definitions of usability evaluation and its purpose exists; let us illustrate these through a selection of quotes from prominent writings in usability research. One common definition is that usability evaluation aims to ascertain the usability of a particular computer system (Karat 1998). for example, presented the view that “a usability evaluation method is a process for producing a measure of usability.” (p. 682) Dix, et al. (2004), in writing about evaluation in general, stated that