
Chapter XI

The Collaborative Critical Incident Tool: Supporting Reflection and Evaluation in a Web Community

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ABSTRACT

We describe an evaluation tool used by teachers and researchers to study the impact of computer-mediated collaborative and communication technologies used in K-12 education. Standard usability engineering methods and tools focus on individual users at a single workstation. Networked collaborative systems, however, present the challenge of

multiple users interacting at a variety of times and places. We developed a Web forum tool to capture and display user critical incident reports and threaded discussions of these reports by users, evaluators and system developers. Our Collaborative Critical Incident Tool (CCIT) is effective at evoking detailed usability evaluation information, as well as reflective analysis of usability issues from diverse points of view among stakeholders in the system.

Introduction

In this chapter we describe an evaluation tool used by teachers and researchers to study the impact of computer-mediated collaborative and communication technologies used in K-12 education. Standard usability engineering methods and tools focus on individual users at a single workstation. Networked collaborative systems, however, present the challenge of multiple users interacting at a variety of times and places. We developed a Web forum tool to capture and display critical incident reports and threaded discussions identified and reported by users, evaluators and system developers. Our Collaborative Critical Incident Tool (CCIT) is effective at evoking detailed usability evaluation information, as well as reflective analysis of usability issues from diverse points of view among stakeholders in the system.

Evaluating the quality and effectiveness of user interaction in networked collaborative systems is difficult. There is more than one user, and typically the users are not physically proximal. The “session” to be evaluated cannot be comprehensively observed or monitored at any single display, keyboard or processor. It is typical that none of the human participants has an overall view of the interaction (a common source of problems for such interactions). The users are not easily accessible either to evaluators or to one another.

There is no simple solution to the evaluation problem for networked collaborative systems. To a considerable extent, evaluation work in this domain focuses on investigations of techniques in isolation (for example, substitution of multi-user widgets for single user widgets; Begole, Rosson, & Shaffer, 1999) or on rather coarse, aggregate assessments of systems (for example, quantitative measurement of volume of accesses as an indicator of user acceptance; Rosson, Carroll & Messner, 1996). It would be useful to supplement these sources of evaluation data with detailed, qualitative reports of personal usage

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