

Comparing Conflicting Perspectives on a Diffused Technology

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In this poster we explore the question of why, over time, a “learning technology” diffused and acquired new users in a university community (Rogers, 1995). Our approach contrasts two types of explanations for diffusion. The first one—largely implicit in much learning sciences research—is the view that diffusion happens because new users recognize the demonstrable ability of a technology to support new and valued learning. The alternative view we present sees diffusion as a more multi-dimensional process, one that in the case study we present is largely independent of demonstrable evidence for a tool’s educational value. Based on this case study, we propose an alternative approach to understanding the diffusion of educational technologies.

A brief explanation of the tool

Reflector, is a web-based tool that allows students to collect and annotate electronic “artifacts”. Students can then create multiple electronic portfolios from their artifacts. Instructors have the ability to set up a “portfolio project” as a framework for students to use. Feedback can be given through the tool on portions of a portfolio. Within a portfolio most text, which is not in an artifact, is called a “reflection”. An artifact might be used in multiple portfolios (or even multiple pages within a portfolio), but a reflection is generally unique to that portfolio and page. Portfolio projects, set up by instructors or counselors, contain questions or instructions often called “prompts” meaning they prompt students to select an artifact or compose a reflection.

Two perspectives: A case of diffusion and then the students’ view

On the campus of a large west coast university Reflector is introduced at the beginning of an academic year. Its release has been anticipated and immediately a variety of groups across campus begin using it (academic, career counseling, academic planning, etc.). For months a team of researchers, developers, and program coordinators plan its introduction into a freshman seminar. Prior to its release it is the focus of a monthly forum on educational technology where designers and developers present the tool to the university community. A dean, in front of a large group of instructors, enthusiastically endorses it. Thousands of students and hundreds of instructors quickly make Reflector a part of their academic activities. By the end of the school year it has been taken up by more groups, and it is the focus of a yearly forum on educational technology. Many of the groups plan to continue using the technology. In short, the tool is well on its way to successfully diffusing into the educational community.

We get a different perspective if we look at students in a freshman seminar designed to help introduce them to university life. They are given a weekly assignment to use Reflector. While some students use the tool’s features to their own benefit, most are ambivalent about its utility. They complete the tasks because they are assigned, but see little value in the tool. Many consider using the tool to be “busywork” and put little time or concerted effort into it. Some had even stronger views: “Do not use this next year. I do not want the upcoming freshmen to have to deal with this nonsense like I [*sic*] did.”

Our analysis of diffusion follows various representations of the tool that have emerged throughout Reflector’s development. These representations serve at least two roles: (1) to project an ideal, as yet unrealized use for the tool and thereby to enroll allies to its cause (Latour, 1996) and (2) to serve as precursors to the material form that Reflector will take. The sort of analysis we are pursuing is common in Science & Technology Studies focused on how programs of research and scientific technologies diffuse. We argue that an analogous approach is useful here for examining the complex ways that educational technologies find their way into widening use.

Latour, B. (1996). *Aramis, or the love of technology* (C. Porter, Trans.). Cambridge, MA: Harvard University Press.
Rogers, E. M. (1995). *Diffusion of Innovations* (Fourth ed.). New York: The Free Press.