Learning for learning economy and social learning

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Abstract

Failure to meet the preferences and needs of users has been consistently stressed as a major cause of unsuccessful R&D for over 30 years. Yet little seems to change. An important element in this "producer–user paradox" is a lack of frameworks able to inform empirical research and the work that people do when they bridge designing, implementing, using and managing new technology. "Learning economy" and "social learning in technological innovation" appear promising as such integrative frameworks not least due to their emphasis on learning between producers and users. The present paper examines the value in the way learning is treated in these frameworks for empirical research and for the practitioners, and to this aim contrasts these frameworks to findings from a line of studies on learning between producers and users of new health technologies.

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1. Introduction

Failure to meet the preferences and needs of users has been consistently reported as being a major reason for unsuccessful R&D, particularly in high technology and software. In the 1970s a series of studies, including project SAPPHO, compared successful and unsuccessful innovation projects with regard to a range of different characteristics. Understanding of user needs was found to be one of the very few factors that was statistically significant and different characteristics. Understanding of user needs was found to be somewhat from studies of learning in behavioral sciences and in organizational learning (Lehenkari, 2006). This harks back to Jean Lave’s apt remark (1993, 8): “That learning occurs is not problematic. What is learned is always complexly problematic”. Indeed a mere emphasis on learning in ‘learning economy’ and ‘social learning’ would remain almost trivial: People acting in changing...
socio-economic changes can be expected to be involved in all sorts of recursive learning processes. The added value from learning in these integrative frameworks for researchers and practitioners may hinge on what more specific orientation about the objects, nature and organization of this learning the framework can provide.

To clarify the issue further, this paper first examines Lundvall’s work on producer–user interaction and the ‘social learning in technological innovation’ framework (Sorensen, 1996; Williams et al., 2005) and then contrasts them to findings from a line of study on interaction and learning between production and use of new health technology. Cast in terms of a research question, this means two interrelated concerns: How does the way DUI and SLTI treat learning affect the way these frameworks are able (a) to integrate a relevant scope of issues in producer–user relations? (b) to deal with learning as an empirical object of study?

2. Organized markets, learning economy and learning

Lundvall’s research reveals that many producers and users do not leave themselves at the mercy of markets, but, instead, develop sustained relationships with one or several selected user and supplier organizations, which allow the exchange of qualitative information related to user needs and technological possibilities (Lundvall, 1985, 1988; Lundvall and Vinding, 2005). He asserts that such “organized markets” go against assumptions in standard microeconomics where “agents – firms and consumers – are assumed to behave as maximizers of profits and utility”. And where “the only information exchanged relates to products already existing in the market and it contains only quantitative information about price and volume” (Lundvall, 1988, 349–350).

The result is a “focus upon a process of learning, permanently changing amount and kind of information at the disposal of actors… [a] focus upon the systemic interdependence between formally independent economic subjects” (Lundvall, 1988, 350 emphasis in original). Lundvall here refers to “learning by doing”, which was originally offered as an explanation of why the cost of manufactured goods tends to decline significantly due to the accumulation of skill in producing them (e.g. Arrow, 1962; Wright, 1936), and “learning by using”, the users’ increasing skill in and/or understanding of using the product, leading to, for instance, less maintenance, new uses and improved products after becoming “embodied” through redesigns (Rosenberg, 1982). Innovation is maintenance, new uses and improved products after becoming understanding of using the product, leading to, for instance, less maintenance, new uses and improved products after becoming “embodied” through redesigns (Rosenberg, 1982). 2

The emphasis in original). Indeed, the present author is not aware of Lundvall’s or his co-researchers’ work trying to do this. Likewise, interaction, firm, organization, use, production remain for the most part assumed on the basis of earlier theory (e.g. Lundvall and Vinding, 2005). Taking these for granted may, however, neglect complexity involved as innovations tend to feature highly uncertain, shifting and only emerging relations and actors (Sorensen and Williams, 2002; Van de Ven et al., 1999), as becomes evident from the SLTI framework. This is where we turn next.

3. Social learning in technological innovation: the processes and contexts of developer–user interactions

Social learning in technological innovation (SLTI) “seeks to explore empirically and in detail the operation of learning economy… as a process of negotiation, subject to conflicts of interests amongst players with rather different capabilities, commitments, cultures and contexts” (Williams et al., 2005, 8). It draws from the social shaping of technology approach in placing particular design episodes within multiple, overlapping cycles of development and appropriation and focusing on the coupling between technological and social change (Rip et al., 1995; Sorensen and Williams, 2002; Williams and Edge, 1996). SLTI has further drawn on a range of research fields to understand the difficult and contested processes of learning that are integral to innovation (Rip et al., 1995; Stewart and Williams, 2005). These include cultural studies of artifacts and marketing, engaging with the consumption of goods and services; innovation studies stressing non-linear and heterogeneous innovation processes; and work on organizational learning and the reflexive activities of players in the innovation process (Williams et al., 2005). The framework views the develop-
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