Virtual Learning and Teaching Environments

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INTRODUCTION

Without a well-thought-out didactic concept, the best surface design isn't of any help.

This article contains results from an empirical study I conducted independently. It was developed in the context of the umbrella project "gender and information technologies" in the context of the Vifu (virtual international women university), a project financed by Germany's Federal Ministry of Education and Research (BMBF) and carried out at the Center for Interdisciplinary Research on Women at the University of Kiel. This empirical study provides insight into the field of "virtual learning and teaching". It is based on an expert survey and reflects the specific experience instructors had with virtual seminars. The study focuses on the following question:

What convergences and divergences can be identified in experts' specific experience with forms of virtual teaching?

I proceeded from the assumption that intercultural and gender factors affect the design, structure, and implementation of virtual learning and teaching environments. This assumption shaped the study.

Experts were generally defined as all persons who have practical experience in virtual teaching, especially in the research fields of gender and computer sciences. Since virtual learning and teaching environments is a new, experimental field, none of the interviewed experts had more than two to three years of teaching experience in this area. Some of them have programmed and developed the online module themselves.

Most of the fourteen interviews were conducted face-to-face, three of the interview partners were sent a questionnaire by e-mail. With them I conducted "semi-standardized interviews" (Mayring, 1996) and all were evaluated with the core sentence method. Core sentences are "natural generalizations" used by the interview partners themselves (Leithäuser & Volmerg, 1988; Volmerg, Senghaas-Knobloch, & Leithäuser, 1986). These are statements that make a point succinctly, reducing entire paragraphs to a single statement. In contrast to the deductive method, the inductive method I used has the advantage that the meaning of the "spoken word" is not lost. It is particularly useful in the development of hypotheses.

FINDINGS

Virtual Learning and Teaching Environment as Science in Action

It has always been that way here. Each project must have two people pushing it ...

Virtual teaching and learning are still fields of experimentation. It is surely not incorrect to claim that all noted interview partners have done pioneer work emphasizing the area of "virtual teaching." One citation taken of an interviewee can thus be considered representative for the situation found in virtual teaching:

... we were well among the first who at all had a virtual college. There was a college [XXX],[1] *a virtual college, two years ago, already three years ago, when the net had just gotten started. So we immediately had a huge project since someone was interested in it here. It has always been that way here. Each project must have two people pushing it, carrying the project, and the other fellow workers then more or less work through the daily loads ...*

Against this background, the network of scientists involved in virtual teaching is to be classified as 'weak,' even if several experts directly cooperate with each other.

The term *science in action,* coined by Bruno Latour (1987), should thus convey the essence of what the surveyed community expressed. In the end, it is all about "science having not become cold" yet. A research and work area which is still in its preliminary stages has been described as a science in action by Latour. The actors and their related technical apparatus are thus to a large extent still in the so-called hot phases, the "science in the making" or "science in action" stage. The capacities are (still) above all oriented inwards. It is not until the stabilization phases (translating interests) that the activities are outwardly intensified (Latour, 1987). These "translations" consist of translations of one's own interpretations into others' taking place in the course of the establishing of scientific and technical constructions. In a successful interpretation, one's own interests are translated into those of others, in whose interest it is also to support one's own interpretations, approach, or technical innovation. Latour's concept of "translating interests" is not only limited to the phase of stabilization. Since this translation process, however, only unfolds its full impact in the phase of stabilization, the localizing from my point of view seems legitimate. With reference to the virtual teaching environment, the actors can not be analytically separated from their financial, technical, and societal structuring potential. They must rather be situated in their interlaced structural diversity—which Latour would describe as hybridity.

It is to be expected that with the expansion of the field of virtual learning intensified—internationally oriented—networking and differentiation will take place. The interviewees' responses thus provide a similarly detailed, as well as lively, snapshot at a certain point in time of the research field of virtual learning.

Technology development can therefore be seen as a social activity which is influenced by existing social structure, gendered values, and cultural practices. Virtual learning proposals should be given attention to make them more user oriented. Gender mainstreaming and diversity strategies in this context have a big impact, because technology is not a fixed product, but an configurable open process (Schelhowe, 2001; Zorn, 2004).

Gender and Culture as Moments of Selection

... computers are much more gendered in the domestic environment than they are in the work environment ...

Internet competency should be mentioned as an important aspect in the context of virtual learning environments (Kreutzner & Schelhowe, 2002). For example, one expert was amazed that some participants "couldn't even manage to enroll in a virtual seminar on the internet." This procedure may be considered standard practice by Western academics, but it poses a problem to individuals from other social backgrounds and cultures. In order to avoid misconceptions, we must emphasize here that an individual's inability to carry out what appears to be a "simple procedure," such as enrolling for a course, can by no means be attributed one-dimensionally to social causes, (e.g., that the person is considered) (in a "deficit-oriented approach") to belong to a group characterized by "deficient internet competency." Quite often, the reason simply is a participant's insufficient computer resources or other infrastructural impediments. Thus it is not at all clear what instructors can be expecting from students as basic "internet competency" or as a "technological standard."

An important aspect of gender has often been overlooked: the existence of a computer in the household by no means guarantees access for women! The following quote sheds light on how closely technical infrastructure conditions for example are related to the category of gender:

... computers are much more gendered in the domestic environment than they are in the work environment, and this is based on empirical evidence from our students, men and women, about what they can do and the access that they have over computers. So, for example, men and women who have access to computers in the work place in general have a very similar kind of access. Women are a little bit more restricted, but not terribly. The restrictions tend to be the same,