Learnability

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ABSTRACT

This chapter discusses usability in terms of the concept of learnability, that is, what makes the content of an online learning site learnable? It considers three core issues underlying learnability: learning theory, instructional design, and curriculum choices. For learning, it proposes a model integrating comprehension, interest, and memorizing. For design, it distinguishes between representational models, illustrative cases, and simple facts. For curriculum content, it suggests focusing on structural issues and contrasts content design with process design. In looking to the future, it emphasizes information design as the true basis for learnability and places online instruction within the larger context of all instructional design.

NATURE OF LEARNABILITY

The usability of online learning programs can be broken down into two distinct issues: the usability of an online university site and the learnability of the course contents.

The first issue concerns the more usual Web site usability questions, such as how easy it is for new visitors to orient themselves and get a good overview of what the online university offers and what is involved for themselves in e-learning. Or again, we might consider how easy it is for the actual students to interact with the course materials while engaged in learning. These are the traditional issues of usability, important to consider but hardly the most interesting.
It is the second issue, that of learnability, that is the more pressing for designers and educators. The basic question is this: What makes the content of a site (or of some resource) learnable? Take any one of the many thousands of online learning courses currently available on the Web and ask yourself: Does this course seem difficult to learn (assuming you have the proper background for it)? What would improve it? What would the ideal online course in this area look like? These questions all underlie the learnability of the course.

What then is learnability? Could we say that it is defined by successful learning? That would mean that students who study the course thoroughly learn its content, as evidenced on a good test, for instance. Or could we say that a main criterion is ease of learning? That would mean that students experience good intellectual flow and enjoy the course.

Both of these factors, success in learning and enjoyment of learning, can be considered criteria of learnability. Are there others? That is the issue of learnability and that is what is explored in this chapter.

The Locus of Learnability

The skeptic will immediately insist that learning takes place within a learner and that it is that locus that mainly determines learnability—that is, the curiosity, intelligence, motivation and persistence of the learner. These are what make or break learning. The teaching materials can only go so far; the learner has to make a go of it, make it succeed.

While there is some truth to that view, it is certainly not the full picture nor the most useful picture. Consider traditional usability in Web sites or software products. There too, the user plays a role. If he is very dull-witted, or perhaps too pressed for time (showing a lack of interest), or just resistant to learning the basics (you know, jumping in and thrashing around—as often happens), well, there is little scope for success no matter how usable the site or program may have been made.

But we don’t give up on usability because of that. We acknowledge the limitations and make assumptions about both the state of the user and the context of usage, then proceed to design to those assumptions. It may not be comprehensive, but it is practical and that is a useful value.

The point is we do not blame the user for incompetence, for ill will or for the lack of success of our site or program. We maximize usability, realizing well enough that usability is certainly contextual. The same applies, as it should, to learnability: success in learning can be maximized through the product, over and beyond context issues (or in spite of them).

The product view of instruction is an important one, one that is emphasized in the discussion below. An alternate view is a process one: learning is a process and so is instruction, in the sense of manipulating the situation so as to facilitate learning. The process view is not to be denigrated, but a product view can incorporate processes and has definite design advantages. Learnability, it is argued, is best considered in this light.
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