

7,8,9,10 Beyond Laurillard

Lectures 7-10 are concerned with various things that go beyond the Laurillard model (in addition to the "management layer" dealt with in lectures 5-6). Handout 5 has brief notes on some of these, including discussion of peer learning, and the relationships between the Laurillard model, Perry's ideas, and the notion of Deep & Shallow learning. The latter 3-way comparison is also discussed in a web document on the course web site. This handout has notes on some more such topics.

Peer interaction

The Laurillard model does not have an explicit place for learner to learner interaction. One possible reply to this is that a large part of the role of the teacher in the model can usefully be played by peers: they can be the recipient of a re-expression by the learner of the topic, and they can give feedback on it (activity 3) and so prompt re-re-expression (activity 4). A more radical view would be that of Illich (1970) who seems to think that abolishing teachers altogether is feasible, replacing it all by ad hoc groups of learners.

Another issue is whether peers are not just cheaper but in some ways more effective than teachers in promoting learning. See Foot and Howe (1998) for a recent view, and also the PAL website: <http://www.psy.gla.ac.uk/~steve/localed/pal.html>

Constructivism

"Constructivism" is the single most frequently referred to theory in modern educational literature. The term itself refers to the philosophical proposition that people do not learn by having ideas transmitted to or implanted in themselves, but only by constructing them internally with or on things already in their minds. Considerable notes on this were contained in handout 6. Very briefly, the most important points to remember about it include: different authors mean rather different things by the term. There tends however to be important themes in common underlying this often unacknowledged diversity. Most fundamentally, it goes with a learner-centered focus, and a realisation that simply telling people is generally an inadequate view of teaching and learning. Next it goes with attending to connecting new ideas with the learner's ideas. In fact it may be useful to consider three aspects of this: connection to the learner's pre-existing conceptualisations, often wrong ones (misconceptions: there is a large educational literature on these); connection to the learner's prior experiences, and connecting to the learner's current or future experiences. The latter two are essentially what Laurillard's model sees as the relationship between the public, abstract conception and the private, personal, experiential aspect. Thinking about this in detail, it may be best to consider a 2 by 2 crossing of the public/private levels with actions vs. thoughts. Actions may be at the conceptual level as when we make theoretical calculations or deductions, or concrete actions on the world (as in the laboratory). And a learner's relevant prior ideas may be concepts or facts, general ideas or specific cases e.g. a misconception that mental illness is incurable, or a memory of a frightening encounter with a confused and agitated person on the street.

Social perspectives on learning

This course has an almost exclusively cognitive slant on learning. However it is important to realise that there are quite different perspectives, above all social perspectives (which are also absent from the Laurillard model). One of the more extreme is represented by Jean Lave (1988, 1991), whose model seems to be one of apprenticeship and social enculturation rather than of direct instruction: for her, learning isn't about grasping concepts or memorising facts, but about becoming a member of a (new) community.

Other important landmarks here, illustrating crucial social aspects of education, are Rosenthal's "pygmalion" effect, where he demonstrated that a teacher's beliefs about children's ability had a marked effect on their independently measured learning achievements; and Tinto's theory that university dropouts and retention are predicted by the "integration" of students into their peer group and academic department.

Metacognition

The term "metacognition" (Resnick; 1989) refers to understanding (the processes of) one's own thinking, and the wider idea in education is that if learners think about how they learn, they will do it better. However the best established result empirically is less ambitious: it is that learners who actively monitor how well they remember or understand something, learn better. An early result was reported in Hunt (1982), who simply got learners in each test not only to give the answer but then to state how confident they were of it. This could be interpreted as an internalisation into the learner of the cycle which in the Laurillard model involves both teacher and learner giving each other feedback. This relates to the large literature on giving learners feedback. In reality much feedback does not come from teachers: in some tasks, you get feedback from the task (an experiment works or not). Learners in fact have their own internal standards: when writing an essay, you constantly make judgements about how good each bit of your writing is. Snyder (1971) describes the different, and to some extent conflicting, sources of feedback any student gets in practice.

Dr. Fox

The so called Dr. Fox effect addresses the question: what difference does it make if the lecturer is good or bad? Does the mere manner in which a talk is delivered affect the outcomes? This has been studied in experiments where a lecture script is written and fixed, and an actor hired to deliver it to video in two contrasting manners: one "expressive" and one not. Participants then see one or the other video, and are then tested both for whether they found it good, interesting, well delivered etc. and for how much of the content they remember i.e. learned.

According to Marsh's (1987) review at least, the answer is: if participants are motivated in advance to learn (extrinsic motivation) then it makes a difference to the ratings they give but not to how much they learn; but if they do not believe learning the content is important to them, then expressiveness makes a substantial difference to learning as well.

Many possibilities remain as to what the causal factors are in more detail, for example:

- It's about directing the listener's attention at the time. Varied tone of voice, and appropriate direction to what is key and what is only elaboration or background is what matters.
- Does repeating points (middle, summary before and after) matter?
- Is it eye contact, sense of personal involvement?
- Is it simply the difference between reading a lecture, versus speaking impromptu to points on slides?
- Is it enthusiasm: i.e. do we only bother to learn if the speaker clearly believes the content is important and interesting?
- Do jokes make it easier or harder to learn?
- Is it the inclusion of examples and links to personal experience (as Laurillard's model would predict) that is in fact important here?
- Is time (duration) properly controlled? Many of these suggestions would take longer, and is it really just the length of the presentation that predicts probability of taking it in?

The best reference on this is Marsh (1987), or rather one section of that huge paper, which reviews this line of work. It refers to several other papers which I've also included in the reading list: most by Ware and Williams or Williams and Ware; but also by Coats and Smidchens. You might possibly however consider looking for any wider literature on the manner of giving lectures.

When reading any of these papers, good critical questions to keep in mind are the points above, and also whether the two versions really had the same information content; and what in a given experiment different "expressiveness" meant: eye contact, perceived enthusiasm, jokes, giving examples, different or better visual illustrations (slides) etc.

Technoscepticism

There is a widespread and long lasting belief in our society that applying computers to education will make it better. Many people, research units, academic conferences, and government funding initiatives are dedicated to this. However we should be aware of strong counter-arguments. These were stated clearly by Clark (1983) and in subsequent published debates with Kozma. Much of what is published about applying technology to education only describes what happens or measures whether participants liked it: few do comparative measurements of learning with and without the new technology. When these are done, Clark argued that either there was no effect or that not only was the technology changed but so also was the teaching method which by itself was enough to explain any benefits. He claimed therefore that there is no credible evidence of any benefit whatsoever for applying technology to education. Cuban (1990; 2001) gives a similarly sceptical account. See also Draper (1998) for a related argument.