

Learning

How well is current thinking about software development suited to the constructionist goal of establishing an intimate link between development and domain learning? What can be learned from parallel research in educational technology?

Procedural thinking within a computational framework is ill-suited to a constructionist stance, as is corroborated by problems encountered in developing effective educational technology.

Programming and Constructionism

Victor on constructionism ...

- Victor rightly associates making connections in experience with the notion of **constructionism**
- In *Learnable Programming*, he stresses the contribution of Papert's work (with Logo in particular)

EM is sceptical about procedural programming as a vehicle for constructionism ... Behaviours are experienced *moment-by-moment*

Constructionism ...

Constructionist learning "learning can happen most effectively when people are also active in making tangible objects in the real world" (Wikipedia)

Concept introduced by Seymour Papert:

"From constructivist theories of psychology we take a view of learning as a reconstruction rather than as a transmission of knowledge ...

... we extend the idea of manipulative materials to the idea that learning is most effective when [it's] part of an activity the learner experiences as constructing a meaningful product."

Relevance for computing ...

Papert has been a huge proponent of bringing IT to classrooms, as in his early uses of the Logo language to teach mathematics to children.

Constructionist learning involves students drawing their own conclusions through creative experimentation and the making of social objects.

The constructionist teacher takes on a mediational role rather than adopting an instructionist position.