Assignment 1: The Multi-Faceted Nature of Learning

- Constructionist Learning (Learning-by-making)

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1. Definition / focus

"It is easy enough to formulate simple catchy versions of the idea of constructionism; for example, thinking of it as "learning-by-making" (Seymour Papert and Idit Harel, Constructionism, 1991). Constructionist learning is focused on helping children learn, not on just teaching.

2. Strength

New knowledge will be achieved by self-directed learning, which is inspired by the conversation between children and new tools or media.

Constructionist learning provokes thinking, to get more and more people engaged in inventing the future of learning.

3. Weaknesses

Piaget and Papert believe that knowledge is actively constructed by children in interaction with their world. Based on this belief, we are tempted to offer opportunities for kids to engage in hands-on explorations that fuel the constructive process. We may do so at the cost of letting them "rediscover the wheel" or drift away when shortcuts could be welcome (Edith Ackermann).

4. Computer support for this type of learning

The involvement of computer into the concept of constructionism brings revolution to the arts of learning. LEGO and LOGO are the two famous projects. Because the purposes of LEGO/LOGO are for science and mathematics education, the computer intends to be an invisible part for learners.

5. Describe your personal experience with this kind of learning

I played with LOGO when I was a kid. I still remember how I calculated angles of a star and a spiral and drew them using Apple II. I also constructed a very complicated LEGO truck last year.

I have been working with two professors in two labs for construction kits.