

Are Teachers Superfluous?  
The Deep End of Constructivism

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If teachers were completely superfluous in learning, then everybody would have to learn everything in history (and figure it out) all by themselves. It is easy to imagine that the effort of initial learning is bigger than assisted learning, particularly once abstract language and concise, optimized models are available.

Thought experiments: Many students may understand Einstein's theory of relativity after reading a book or hearing a lecture. But given only basic understanding of classical physics, it is highly unlikely that particular students will ever discover these ideas by themselves. Then one may ask where the basic understanding of physics should come from, if it is not taught. What we know, in each area of expertise, includes the complete cultural developmental trajectory of all our experience. This trajectory includes all the exceptional geniuses whose results we have the privilege to benefit from. Even the early mythological stages of our culture are still preserved in stories for children, and make good age-adequate educational tools. But when it comes to formal understanding (academics), the role of a teacher should be clear. If nobody teaches one how to write, one will have a hard time finding out on your own what these weird hooks (letters) are for. One may have to renegotiate a new consensus for writing with one's peers that may take a couple of generations to crystallize. If the corpus is little, one may be able to read all about a subject. If the corpus is vast, the mere process of selection is difficult, and it is difficult to make sure that one's coverage is adequate, unless, of course, somebody wrote

a textbook doing exactly that. But then, I argue, that textbook is a virtual teacher. For an interesting (modern) view on cultural trajectories of meaning I recommend Peterson (1999).

Regarding skills: From my experience in pool billiards, it is true that some people may become top level players and are completely self-taught. Imitation appears to play a big role in the process, and imitated people are arguably teachers (or better: masters). However, luck is required that they do some of the things intuitively correct, at least close to the optimum. If they don't (and that appears to be the majority of cases), then they will hit a ceiling. Once they hit it, they have habituated bad and faulty technique. It takes years to overcome bad habits even with a teacher, and some will drop out in the process. In today's school settings people argue about shortening curricula one year to get people up to speed sooner. Thus, time constraints appear to be an issue in competitive societies. Waiting for insights to happen spontaneously does not appear to be a decent strategy at a social scale.

Thus, there is a point that people can in principle learn things unassisted. However, concluding from the above considerations, the strategy does not appear to be efficient on a large scale.

## References

Peterson, J. B. (1999). *Maps of meaning: The architecture of belief*. New York: Routledge.