

The Role of Philosophy and Mobile Communication in the Process of Learning, Understanding, and Individual Cultivation

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1 Abstract

Experiences both from teachers and from results from recent studies in the educational domain (e.g., PISA, etc.) show alarming signs of decay in the competency of *understanding* and *learning*. This corrosion finds its manifestation in various domains, such as a lack of the capacity to see and understand complex correlations, to penetrate deeper into the meaning/understanding of a phenomenon, etc.

This paper investigates the reasons for this decay from a cognitive and educational perspective. Possible ways out of these problems will be suggested by developing a meta-model for learning/teaching processes in a stepwise manner. It turns out that philosophy in its classical conception plays a crucial role in these processes. Furthermore, the role of mobile forms of teaching/learning in such a scenario will be investigated.

In the classical information theoretical understanding learning/teaching processes are realized as *linear* processes of information transmission; i.e., knowledge is transferred from one cognitive system to another via an artifact. It is evident that such a conventional drill-&-practice approach does not contribute a lot to the process of understanding, as its focus is mainly on learning facts (by heart). As a way out a *single-loop* (or first-order) learning model will be presented: an epistemological feedback loop between the cognitive system's knowledge and its environment is responsible for the process of learning and knowledge construction. The goal is to construct knowledge being the source of behavior functionally fitting into the environmental dynamics. Most educational processes are positioned on that level, which is closely related to the epistemological approach in the natural sciences. However, the learner will reach only

some understanding of the *function*, of the "how" of the phenomenon under investigation. He/she remains on a relatively superficial and unreflected level of understanding and knowing a phenomenon.

In a third step, the learning process/model is extended by a second feedback-loop, "*double-loop learning*": this second loop concerns the domains of premises and assumptions, on which single-loop learning knowledge are based. The purpose of this second feedback-loop is to reflect and change these premises as well as the learning-process itself. This is the classical domain of (practical) philosophy. These processes imply that the aspects of *reflection*, "*paradigmatic thinking and changes*", as well as "*deep understanding*" via taking multiple perspectives come to the fore and receive their required level of attention.

As a final step a third loop, "*triple-loop learning*", will be introduced; it concerns the most fundamental level of the person(-ality), his/her values, being, etc. and their role in understanding, learning, and the person as a whole. On that level mobile communication plays a crucial role as it acts as a continuous "companion" for individual cultivation in a kind of ubiquitous learning and shaping process.

2 Short CV

Markus F. Peschl

Markus F. Peschl (*1965) is professor for Cognitive Science and Philosophy of Science at the Dept. of Philosophy of Science, University of Vienna, Austria. He spent two years at the University of California, San Diego (UCSD, cognitive science, neuroscience, and philosophy department) and 1/2 year at the University of Sussex for post-doctoral research. Furthermore, he studied philosophy for 1 1/2 years in France.

His focus of research is on the **question of knowledge** (representation) in various contexts: in natural and artificial cognitive (neural) systems, in science, in educational processes/knowledge transfer, in social systems, etc. The philosophical, epistemological, anthropological, and cognitive foundations of the human person and his/her knowledge are at the center of his attention. He follows a radically interdisciplinary approach integrating concepts from the natural sciences, from philosophy, and the humanities.

He also works in the fields of personality development for highly talented/gifted students (persons with high ability), knowledge transfer with new media (alternative approaches to [e-]learning processes, "knowledge didactics", etc.), community building (CSCW) and social engineering, and curriculum development (e.g., cognitive science, "studium generale", etc.).

M. Peschl has published 6 books and more than 60 papers in international journals and collections. For further information see:

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