

# Communities of Learners in Paleography and ICT

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## INTRODUCTION AND BACKGROUND: KNOWLEDGE AND LEARNING—FROM INDIVIDUAL TO SOCIAL STUDIES

Mankind studied and analyzed knowledge and learning since its first history and two main ways of thinking imposed very early: idealism, interpreting reality as the construction of human mind, and empiricism, looking at knowledge as the effect of the human-reality interaction. Recently three ways of interpreting thinking and knowledge intervened in changing the above perspective: *relativism* (it is impossible to objectively, universally, and absolutely know), *critical theory* (knowledge is mediated by social, political, cultural, economical, ethnical, and gender agents), and *constructivism* (knowledge is built by individuals and groups, and it is socially and experientially founded).

Among the above theories, constructivism played a great role in interpreting both individual and social learning and had a great influence on hypotheses explaining knowledge construction and evolution in communities, including communities of practice. The bases for today's constructivist theories can be found in many studies. Dewey (1949), for example, was the first scientist looking at the teaching-learning process in a pragmatic way. The inquiry was for Dewey the essential element of the subject-reality interaction; the experimental method had to guide teachers' work and students' learning, and at the basis of the knowledge process, there had to be the theory of research. Individuals' knowledge was continuously developing from common sense (traditions, popular misconceptions, etc.) to scientific knowledge. Main consequences of Dewey's educational project were activism with school-laboratories and active schools.

Dewey's ideas were collected and amplified by Kilpatrick, who introduced the project as a general

method of learning (i.e., problem-finding had to be used together with problem-solving in everyday teaching).

The hypotheses of Dewey and Kilpatrick were born in North America, but soon spread in Europe, where they found a rich soil and differentiated in at least two threads. Binet, Decroly, and Claparède privileged the psychological aspects of activism; on the contrary, Freinet and Freinet favored its social aspects (Varisco, 2002). "Modern School" was the name that Freinet and Freinet gave to their educational project; they hypothesized the creation of a cooperative school within which the social techniques and practices—like typography, correspondence, and cooperative catalogues—had a special relevance (their experiences had counterparts in many countries, and the case of don Milani in Italy is just an example for them).

## CONSTRUCTIVISM AND INDIVIDUAL KNOWLEDGE CONSTRUCTION

Piaget and Ausubel, who are usually considered precursors of constructivism, hypothesized an active role of the individual in the cognitive process. Piaget (1971) suggested the theory of genetic epistemology to interpret the philo-ontogenetical evolution of the subject and stated that learning is the result of a continuous process of assimilation and settlement. Ausubel (1990), on the other hand, suggested two main types of learning: the mechanical and the meaningful learning, both depending on previous knowledge and on the ways the subjects build new knowledge—that is, there is a meaningful learning when: (a) the topic to be learned is logically meaningful; (b) the subject has special knowledge elements (subsumers) making easier the insertion of new knowledge in the reference frame of previous knowledge; and (c) the subject is willing to correlate

what he/she is learning with what he/she already knows, in other words he/she is motivated to learn.

Strictly speaking, for Piaget and Ausubel, if the subject has an active role in the cognitive process, social and cultural interactions have less or no relevance. The scientist who recognized the importance of the historical-cultural matrix into the phylogenetical development of knowledge is Vygotskij; he went over the development-learning dichotomy and hypothesized a relationship between spontaneous learning and reactive learning, or in other words, between spontaneous ideas and scientific explanations. Vygotskij started from the hypothesis that spontaneous learning (due to experience) happens before school learning (which is social) and stated that education was effective if: (a) it anticipated an individual's development, and (b) it filled the ZPD (Zone of Proximal Development). When a subject acts socially in the solution of a problem that he/she is not able to autonomously solve, then he/she gets hold of new cognitive instruments (Vygotskij, 1980). Leont'ev (1977), disciple and successor of Vygotskij, introduced the idea of activity—under a well-defined form, structure, and condition, all depending on social interactions—as an action mediated by purposes; the activity substitutes the words as early knowledge units and early structural elements of human knowledge.

## **SOCIAL CONSTRUCTIVISM AND COMMUNITIES OF LEARNERS**

In the 1980s, in the cultural-contextual psychology area, many scholars analyzed cognitive and learning practices outside the school context. The activity theory of Leont'ev found application in many studies (i.e., cultural anthropology research) and produced the situated-cultural (sometimes called situationist) approach to learning, which explicitly applied to communities of practice.

Regarding the communities of practice, the Laboratory of Comparative Human Cognition (LCHC, 1982) and Cole (1996) introduced the context in the analysis of learning experiences and hypothesized the presence of a shared elaboration system, connecting the individual learning experience to the corresponding performance by means of special schemas, in contrast with the contemporary idea of

a unique and absolute cognitive style, emerging from the culture the subject belongs to. One of the most relevant aspects of the situated-cultural approach to learning was represented by the concept of membership. Lave and Wenger (1991) analyzed membership and especially LPP (Legitimate Peripheral Participation), and stated that all members of a community had the same rights and were legitimated in participating to all resources and practices of the community. Further studies on the communities of practice led Wenger (1998) to his theory of social learning essentially based on the idea of identity; it consists of identification and negotiability between a subject and a community, and fulfills in different modes of belonging: engagement, imagination, and alignment.

Regarding learners' communities, often identified with school classes and groups of students, many studies focused on the analysis of the differences existing between in-school and extra-school learning. Brown and Campione (1994), on the other hand, defined the elements marking a community of students, or what they called CoL (community of learners). A CoL is made by students, teachers, tutors, and experts, who are organized in a community within which previous knowledge is analyzed, verified, and discussed, and new knowledge and theories are built. Soon after, the same authors modified their idea of CoLs and proposed the concept of FCL (Fostering Communities of Learners) (Brown & Campione, 1996).

The above ideas were adopted by many scientists in recent studies where computers and information and communication technology (ICT) were used to support learning, and as an example, the experiences of Scardamalia and Bereiter (1996) and Linn and Hsi (2000) are recalled here.

## **ICT AND THE PALEOGRAPHERS' COMMUNITY: A CASE STUDY**

The experiences described in this article (made by the author in cooperation with M. Palma, Professor of Latin Paleography at the University of Cassino) are a good example of the changes ICT can induce in traditional and well-settled human activities. They are based on the use of the Internet and especially of the Web for the creation of communities of study

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