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ABSTRACT

This paper explores the relevancy of apprenticeships for professional training. While often neglected in current educational theory, apprenticeship training is common in the arts and in the mentoring and supervision of professionals. The apprenticeship model may provide solutions for some of the problems of the current educational system such as the lack of practical knowledge provided by a predominantly abstract education, the lack of a positive learning environment, difficulties with pupil motivation, selection of students for further education, and problems of discipline and authority. The apprenticeship model overcomes the gap between theory and practice by embedding learning activities in a natural context, leading to mastery of the skills, knowledge, and values of a discipline. The main components of apprenticeship training are: (1) production in a community with common skills, knowledge, and values; (2) professional identity; (3) learning through practice; (4) evaluation through practice; and (5) formal and informal apprenticeship. Apprenticeship training, after a period of decline, has reappeared in science, art, and the spiritual traditions. Finally, apprenticeships are appropriate in a postmodern condition characterized by: the decentering of knowledge and an understanding of the individual as a network of relations; the shift from a conception of knowledge based on universal laws to knowledge as embedded in specific language games and in local contexts and not automatically transferable across contexts; reliance on tacit knowledge and intuitive experience; and pragmatic knowledge. (Contains 17 references.) (ND)

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AN EDUCATIONAL REHABILITATION OF APPRENTICESHIP LEARNING?

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AN EDUCATIONAL REHABILITATION OF [⊗] APPRENTICESHIP LEARNING?

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The relevance of apprenticeship for professional training and for schooling are discussed. Main aspects of traditional apprenticeship are outlined and some reasons for the modern decline, as well as the current reappearance, of apprenticeship forms of training are discussed. In particular a correspondence of the implicit conceptions of knowledge in apprenticeship to postmodern philosophical analysis of knowledge is pointed out.

While rather neglected in educational theory today, a closer look at apprenticeship appears warranted, as apprenticeshiplike forms of training are common by elites as artists and in the mentoring and supervision of professionals. The present approach is analytical, on the basis of literature of apprenticeship outlining some main educational structures and relating them to changes in a postmodern condition.

Apprenticeship as an educational challenge

When the apprenticeship model has come in educational focus in the last few years, this may in part be due to a search for practical solutions to current educational problems. The apprenticeship model can serve as an inspiration for solving some of the problems of the current educational system - such as a praxis chock, the lack of learning environment, difficulties with pupil motivation, the dominance of selection over teaching and problems of discipline and authority.

By the transition from education to work today there may take place a *praxis-chock*. High school pupils, as well as the university students, may find that a predominantly abstract education has not prepared them for the practice of the jobs and professions they are entering. If practical knowledge were primarily based upon explicit, context-independent rules, the transmission from school to work should not be particularly difficult. If, however, important aspects of professional knowledge are implicit and embedded in local forms of practice, they will be difficult to transfer from one context to another. The apprenticeship model has to a large extent surpassed the theory-practice gap by embedding learning in practical activities in natural contexts. This leads to an often tacit mastery of the skills, knowledge and values of a discipline.

Modern education is characterised by *individual competition* and often by the lack of a positive learning environment. In contrast hereto, apprenticeship training takes place in a productive working community. Journeymen and other apprentices are sources of learning rather

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than competitors for a limited number of high grades. By apprenticeship the organisation of production and the social community serves as an environment promoting learning.

In classroom learning today it may be difficult to *motivate* the pupils to learn. By apprenticeship the learning of the practical tasks is a means to the mastery of a trade. The relevance of a particular task to the goal of becoming a master is transparent, and the acquisition of the skills, knowledge and values of the profession important for establishing a professional identity.

In the public school system evaluation has a primary role in the *selection* of pupils to a limited number of positions for further education. Pupils with close to top grades in school may even take the same class twice to improve their grade point average in order to get into a university program with restricted admissions. Once admitted to an apprenticeship program, evaluation to a large extent occurs through a self evaluation, this be of motivation and ability to continue through the hardships of mastering a trade, including the drudgery of e.g. carrying bricks, sweeping floors and fetching beer; as well as with the spontaneous feedback of the functioning and demand of the products made.

With the apprentices themselves selecting the master to learn with, some of the problems of *authority* and discipline, prevalent in the current educational system may be reduced. There is a voluntariness on both sides, the novice selects a master, and the master selects his pupils. The master is a person who masters and transmits the trade the apprentice wants to qualify himself for.

The aspects of apprenticeship which have been discussed here constitute an integrated social praxis, and cannot automatically be isolated and transposed to other forms of education. The traditional apprenticeship model remains though as a challenge and an inspiration for the modern educational system.

Main structures of apprenticeship training

Community of production. Apprenticeship takes place within a social organisation, and, in its traditional form, as craft production in a community with common skills, knowledge and values. Apprenticeship is not focused on the teaching of individuals, but on the production process, where the apprentices' work are essential for maintenance of production. The apprentice acquires through what Lave and Wenger (1991) terms "legitimate peripheral participation" gradually the essential skills, knowledge and values of a craft moving from the periphery to become a full member of the trade.

Professional identity. The learning of a trade's many skills are steps towards mastery of the trade, and they are constitutive of establishing a identity as a craftsman. Apprenticeship involves the internalisation of the norms and values of the profession, with the rituals taking place at successive stages of an apprenticeship serve as ceremonial manifestations of a craft's norms and values, and as external frames for the development of a professional identity.

Learning through practice. Apprenticeship entails a stable and differentiated social structure where it is possible to observe the work of the master, the journeymen and the other apprentices. In most forms of apprenticeship there is little observable direct teaching. Apprenticeship training involves a variety of forms of learning, such as observation, imitation and identification, learning

by doing and tacit learning, learning through supervision and mentoring, learning through structures of the environment and learning from peers, learning through cases, exemplars and narratives of the trade.

Evaluation through practice. An apprenticeship is concluded by a formal test for obtaining the certificate of a journeyman. The major form of evaluation takes place during the training through a continual testing by doing, by making the products of the trade and receiving immediate feedback from their functioning and from customers, by novices comparing their products with the master's products.

Formal and informal apprenticeship. We should here distinguish between a formal apprenticeship, where there is a written contract between master and apprentice with mutual obligations, and an informal apprenticeship where the apprentice so to say grows up into a trade, such as the Maya midwives discussed by Lave and Wenger (1991). Also the learning of the mother tongue may be regarded as taking place through an informal apprenticeship.

Decline and reappearance of apprenticeship

Learning through apprenticeship has remained outside modern educational theory. Apprenticeship has been regarded as some anachronism from the guilds of the medieval ages, as conservative and authoritarian, as an economic exploitation of the work power of the apprentices, or as mere craftsmanship without theoretical knowledge. In the last few years there has, however, been a renewed interest in apprenticeship as an educational form. This has been in anthropological studies of learning as a social praxis (Lave and Wenger, 1991; Chaiklin & Lave, 1993), and in reforms attempting to bridge the gap between the classroom and the work place (Bailey, 1993; Hamilton, 1990; Resnick & Klopfer, 1989; Schoen, 1987). Apprenticeship may be a model for solutions of some current educational problems, such as a "praxis-schock" by the transition from institutions of learning to the work place, and motivational problems in school.

Apprenticeship in science, art and the spiritual traditions

In the education of scientists there is today a recognition that this is furthered less by formal teaching in ph.d. schools than by the novice researchers getting hands on practice by participating in active research groups. In an analysis of validation as the social construction of scientific knowledge Mishler (1990) maintains that research scientists turn out to resemble craftspersons more than logicians. Competence depends upon apprentice training, continued practice and experience-based, contextual knowledge of the specific methods applicable to a phenomenon of interest.

Transmission of knowledge involves personal contacts with researchers and observation of their practices. Thus an intellectual autobiography by Gadamer "Philosophical apprenticeships" (1985) describes the main philosophers he studied with, based on the premise that apprenticeships are conditions of learning in which traditions can be passed from hand to hand.

Education of artists often takes the form of informal apprenticeship with eminent artists, confer also how often artist biographies emphasise the artists the young artist has studied with, e.g. Pierre Boulez "Stocktakings from an apprenticeship" (1991). Film directors are today less produced by film schools than by the novice filmmakers seeking out eminent moviemakers,

hanging around at the set shooting a film, conducting various menial tasks, to gradually be accredited more responsible assignments and eventually shoot shorter films on their own.

The importance of learning through identification in a personal master apprentice relation has been discussed by Ziehe and Stubenrauch (1983), using the example of a school for clowns. This involves a working community with trust in the authority of the teacher, and where critical evaluation may be given in a positive environment. There takes place a gradual transition from a personal identification to a structural identification, where it is no longer the total personality of the other, but his relation to the topic of work and learning, which is decisive. Learning is then not merely an imitation of the other, but a learning based on the relation of the other to the content of learning.

Within Asian spiritual traditions, and in the martial arts, training takes the form of strict apprenticeships. Kurosawa's film "The seven Samurais" pictures well the hardships as well as the strong emotional ties of the young novice accepted into the group of warriors. In "The Tibetan book of Living and Dying" (1992) Sogyal Rinpoche emphasises the master-disciple relationship as essential by the living transmission of truth in the major wisdom traditions. He points to the need to understand the nature of what he terms "the alchemy of discipleship", and emphasises the truth of the teachings, the tradition and lineage of the master, as well as the compassion of the teacher and the devotion of the student. According to Buddha's teachings enlightenment and liberation cannot be attained without relying on a master, and as important as the person of the teacher may be, it is the truth of the teaching which is all-important. Buddha thus warns to "Rely on the message of the teacher, not on his personality".

In the light of the broad specter of educational levels and areas with apprenticeship training today the expression "decline of apprenticeship" should be specified to cover to a certain degree to the traditional crafts, whereas in education of professional elites and in the creative and spiritual domains apprenticeshiplike forms of education are focal in the passing on knowledge from one generation to the next.

Apprenticeship in a postmodern condition

At first glance it may appear absurd to relate the current interest in the medieval training form of apprenticeship to a postmodern condition. One aspect of the postmodern condition is, however, a renewed interest in the medieval ages, perhaps as a reaction to the individualism of the Renaissance and the rationalism of the Enlightenment, manifested among others in Eco's novels.

Modern psychological studies of learning and education have had strong individualist and rationalist trends (Kvale, 1976; Schoen, 1987). A technical, rational, conception of learning and knowledge has been dominating. In recent postmodern philosophy, as developed by Baudrillard, Lyotard and Rorty, more comprehensive concepts of knowledge, have been developed, with an expansion of rationality, where a technical rational knowledge is only one among many forms of knowledge (Kvale, 1992). Here some aspects of postmodern knowledge shall be related to the implicit conceptions of knowledge in apprenticeship training.

Decentering. In apprenticeship training knowledge is not something in the heads of individuals but dispersed between individuals and the structures of the work situation. Within postmodern philosophy there is a decentering of knowledge, and an understanding of the individual as a network of relations. A structural and relational approach to learning is today found in

occupational psychology with the attention to organisational learning, in systemic therapy, which involves a de-individualisation of pathology and an attention to the systematic interactions of a family, and in the anthropological studies of the social structures of learning environments.

Local knowledge. The knowledge in craftsmanship rests on local forms of practice, where expertise rests upon a context dependent understanding and involves only to a lesser degree general rules. Within postmodern philosophy there has taken place a move from a conception of knowledge as based on universal laws to a conception of knowledge as embedded in specific language games and in local contexts, a knowledge not automatically transferable across contexts. We may here add the focus on narrative knowledge and also on exemplars and cases.

Tacit knowledge. Professional knowledge shall function in unique, uncertain, and conflictual situations of practice, which may be difficult accessible through a technical knowledge based upon explicit and general rules. Professional expertise may to a large extent rest upon connoisseurship and qualified judgments which may not be based upon explicitly formulated rules (Eisner, 1991). Dreyfus and Dreyfus (1986) five stage model of skills from novice to expert emphasise the role of intuitive expertise, of situational and involved knowledge. With a postmodern expansion of rationality there is today an emphasis on "tacit knowledge" and intuitive expertise, where useful knowledge needs not necessarily be formulated in explicit rules or even be expressed verbally. As a contrast to the predominance of verbal knowledge we may also add here the current focus on oral and visual knowledge.

Pragmatic knowledge. Abstract school knowledge is not easily transferred to, or applied to, practice in the work place or in everyday tasks. In a pragmatic conception practical knowledge is not the mere application of theoretical knowledge, but contains a practical insight of its own. In a postmodern conception, knowledge has become the ability to perform effective actions, justification of knowledge is replaced by application of knowledge.

Conclusion

The tentative correspondence of apprenticeship training and of postmodern knowledge, suggested here, may be one among several reasons for the current interest in apprenticeship. While rather neglected in modern individualist and technical rational educational theories, apprenticeship training and professional knowledge, may become theoretically reflected on the basis of postmodern analyses of knowledge.

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