Professional Care Workers' Patterns of Occupational-Biographical Learning[8]

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Abstract: This contribution explores the ways in which employees in medical and health care practice professionally relevant learning and what kind of significance digital media receive in this context. Therefore qualitative interviews with employees in various fields of medical and health care were analyzed and three characteristic occupational-biographical patterns of learning were carved out.

Status Quo and Research Objectives

Medical and health care constitutes a field of work that makes high demands on professionals, as it requires that care workers act based on evidence, i.e. that they bring the latest scientifically proven knowledge into the working relationship with the person in need of care (Houser & Oman, 2010). In order to meet the requirements in their work field, care workers need to be both able and willing to research the respective knowledge, evaluate it, draw conclusions from it, and apply it to each individual case. For the employees, continuous further training is therefore indispensable. In Germany, such further training commonly takes the form of courses or seminars for which the participants need to be present; additionally, books or professional journals may offer informal occasions for learning. Yet the possibilities of making new ways of learning via digital media accessible have hardly been used so far. Even though there are individual initiatives which target the spread of e-learning in the vocational, advanced, and further training of nursing staff, digitally supported learning has not yet been systematically integrated in this field of work. At the same time, there is evidence to suggest that the implementation of evidence-based action is not without complications. In an international survey, Solomons and Spross (2010) review the cultural, organizational and technical barriers that stand in the way of knowledge-based care (cf. ibid, p. 115ff.). The conception of future target group-oriented and digitally supported learning scenarios therefore requires the analysis of occupational learning habits.

Background: Theories of Learning and Biography

In order to provide an understanding of occupational learning habits and to generate analysis criteria for the empirical survey, concepts of learning, as well as theories of biography serve as the theoretical framework for this study. The central question is which indications can be revealed for the construction of learning habits in connection to both work and media. The theoretical layer is provided by differentiations of moderate constructivist theories on learning and education, as well as by the structural theory of education (Marotzki, 1990) which refers back to Bateson's level of learning, the 'subject science of learning' (Holzkamp, 1993), and the heuristic

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[8] This contribution is a greatly reduced presentation of the Ph.D. thesis "Professional Care Workers as Agents in Digitally Supported Learning Environments: An Empirical Reconstruction of the Patterns of Occupational-Biographical Learning" (translated title; Kamin, 2013).

understanding of learning outlined by Illeris (2004). In order to account for the process perspective, theories on biographical learning (e.g. Alheit & Dausien, 2009) are considered.

Evidence for the emergence of learning habits can be found in Bateson's hierarchy of different types of learners (Bateson, 1942/81) which was inspired by Russell's type theory and has later been successfully applied to a structural theory of education by Marotzki (1990). According to Marotzki, habits are generated through the processing and structuring of punctuation principles. Marotzki maintains that this predominantly occurs in learning stage II when the individual reacts to a certain event by continuously resorting to the same preference from available behavioral repertoire (cf. Marotzki, 1990, p. 35f.). Here, Marotzki takes up on Bateson's notion of 'deutero-learning' (cf. Bateson, 1942/81, p. 225). His concept also offers suggestions how the punctuation principles which stabilize behavior may be changed, or rather, how new habits may emerge. This requires a move to the next higher learning stage and Marotzki emphasizes that such a move is only possible when irritations or crises occur, while the occurrence of a single critical or crisis-laden situation is not sufficient. Furthermore, he asserts that it is essential that the irritation which has occurred during the learning and working process is encountered with a sufficient amount of flexibility (cf. Marotzki, 1990, p. 38). In this respect, crises and flexibility may be seen as indicators for a change in learning habits.

In Holzkamp's 'subject science of learning,' too, links for the constitution of learning habits become transparent. In contrast to traditional theories of learning, which conceive learning in consideration of preconditions and consequential effects – such as the precondition 'teaching' and the effect 'learning' – the subject science of learning explains the phenomenon learning with recourse to one's reasons for learning and accordant actions. Such a mode of thought implies that learning cannot be explained as dependent on preconditions, but can only be grasped by breaking down the underlying subjective reasons and motives. When learning subjects undergo what he describes as experiences of discrepancy – i.e. a limited capacity to act or a conflict with the tasks they need to accomplish (cf. Holzkamp, 1993, p. 212) – his theory postulates that they engage in a learning loop. This experience may also be interpreted as a break of habits.

The Danish didactics researcher Knud Illeris acts on the basic assumption that there are two different processes of learning. He describes an external process of interaction between the learners and their social environment and a psychological process of acquisition (cf. Illeris, 2009, p. 9). Moreover, he denominates four different modes of learning: cumulative, assimilative, accommodative, and transformative learning (cf. ibid., p. 12ff.). In line with his argumentation, the transfer of knowledge from one context to another may be understood as a change in learning habits. Here, the fundamental processes of learning that he has outlined – interaction and acquisition – (cf. ibid., p. 9) offer analysis criteria for the performance of learning habits.

In conclusion it can thus be noted that depending on the concept, the emergence and constitution of learning habits are theoretically framed differently, which leads to multiple analytic criteria. Such a perspective also offers the chance to carve out different nuances of 'learning.'

In order to gain insights into learning processes it is vital to adopt a perspective that also acknowledges the processual character of learning, since this is largely neglected in the models of learning reviewed here. In this respect, biographical research conducted in the field of educational science may serve as a point of connection, for learning is here understood as the active examination of experiences made throughout the course of one's life and the construction of meaning (cf. Meyer-Drawe, 2003, p. 187ff.). Additionally, learning is embedded in the context of family and social environment, which entails that work, too, is embedded in this context (cf. Tully & Wahler, 2006, p. 60). Research in the theory of biography suggests that learning experiences in

childhood and adolescence prove to the significant for learning in adulthood: dispositions and patterns of habits seem to be modifiable only under certain conditions. The empirical analysis hence focuses on the tensions between continuity and discontinuity of learning dispositions in the course of one's biography.

Research Design and Methodology

Due to the explorative character of this study, a qualitative research design has been selected. Data were collected by means of semi-standardized interviews that comprise both biographical narrative interviews and problem-centered sets of questions (Witzel, 1982; Mayring, 2001). A total of fourteen qualitative interviews with employees in various fields of nursing and care, as well as adjacent fields of social work have been analyzed and evaluated. Among the central questions that the interviewees were asked were questions about the nursing staff's attitudes towards life-long occupational learning and their practices of formal and informal occupational learning. The survey also clarified the current integration of digital media in these processes, as well as which general conditions supported informal learning and which significance was attributed to the staff's educational biography. The evaluation strategy was based on the methodology of Grounded Theory (Strauss/Corbin, 1997) and the paradigm of the interpretative documentary method (Bohnsack, 2003). The framework of Grounded Theory served as a general research style used to first of all account for the individual research steps and, secondly, to document them. In the iterative process of data collection, data analysis and theory generation, the research steps of selecting initial cases, devising tentative hypotheses, selecting further cases, and developing advanced theories alternated (cf. Przyborski & Wohlrab-Sahr, 2009, p. 177). The raw data were then evaluated with the help of the four-stage principle of analysis of the documentary method. Since the analysis encompassed expressive and reflective interpretation, as well as a subsequent discourse description, a more nuanced interpretation of the data was possible. Moreover, the heterogeneity of the group of interviewees afforded not only the interpretation of each individual case and the comparison of all cases, but also allowed for a cross-milieu comparative analysis. This analysis served as the starting point for the identification and generalization of orientation patterns and established the basis for the concluding typification. Both approaches were eventually merged in a basic typicality of occupational (medial) learning in medical and health care. Such a research practice aimed at the development of clarifying hypotheses from empirical data and the identification of theoretical concepts is considered a third form of reasoning – 'abduction' (cf. Strübing, 2008, p. 45).

Findings: Occupational-Biographical Patterns of Learning

In the empirical analysis three comprehensive occupational-biographical patterns of learning could be identified: the occupational-biographical learning pattern with a pronounced orientation on the professional demands, the occupational-biographical learning pattern of learning in a structured setting, as well as the occupational-biographical learning pattern of learning with and in a social environment.

The pattern exhibiting a pronounced orientation on the professional demands points to the exceptional relevance that the caring profession has in the overall context of the professionals' lives. The analysis of the data gathered in the interviews suggests that the profession with its demands ranks as one of the highest reference points of the interviewees' biographical constellation of the concepts of their lives. This characteristic orientation also affects professional learning: Professional learning in adulthood strongly depends on the staff's attitude towards their

profession, an observation that could be outlined by means of the professionals' different strategies of action and biographical interpretations. These professionals show a decided willingness for professional learning which in turn affects media-supported learning. The professional demands may then be considered an incentive for the acquisition of media, because the care workers will only apply new ways of learning if professional relevance makes it necessary.

A second comprehensive pattern that can be identified is the occupational-biographical learning pattern of learning in a structured setting. Medical and health care professionals need a defined framework that lends structure and orientation to their professional learning. Since this is conditioned by the hospital organization, the staff can only act within the fixed structure so that learning requirements are reduced to this exclusive framework. As a result, professionals prefer learning offers which take place in a defined structure, such as attendance at designated advanced and further training seminars. What is more, role models on the one hand and normative assertions, such as the hierarchical structure of the hospital, on the other hand offer structure and points of orientation regarding the requirements for occupational learning. Digitally supported learning offers, however, hardly feature these attributes. Learning in a virtual environment will therefore not provide these medical and health care workers with the structured framework they need, because the learning pathways online are more open and less predetermined and structured than those that are limited to the use of print media, while the learners require established paths or structures online (cf. Alexander, 2004). In addition, the organizational framework complicates the free design of options for use, so that learners resort to routine paths of learning. This pattern illustrates that professional socialization and self-conception have a significant impact on (medial) professional learning.

A third coherent occupational-biographical pattern which may be carved out is the learning with and in a social environment. The learning patterns elucidated so far make clear that with respect to the constitution of learning habits, the focus does not primarily lie on content or didactic aspects. Instead, the tensions between individual and institutional determinants of learning processes play a decisive role. The study has shown that the institutional context in form of the social environment is pivotal for learning with the help of media. Such a social environment may be provided by family members, friends, or colleagues (cf. also Selwyn, 2005, p. 128f.), while occupational learning primarily takes place amongst colleagues. In this environment, a high frequency of learning actions can be observed. Furthermore, patterns of orientation could be identified, such as the importance of mutual exchange. These document that medical and health care professionals learn from and with each other. The framework of advanced and further education seminars is expanded through the exchange on the fringes of the event. Learning in the process of working often takes place through the orientation on role models in the professional environment. These contexts may therefore be considered social aggregates. The necessity of such a social environment may thus explain the reluctant and hesitant use of digitally supported learning methods.

With regard to the constitution of professional habits of learning with digital media, the empirical analysis ultimately reveals tensions between institutions and individuals. Demands on digital learning offers do not apply to all learners equally, but are dependent on their occupational-biographical experiences, on individual learning competencies, and on socioeconomic factors (cf. also Gorad, Selwyn & Furlong, 2006). For the occupational groups under analysis, the study sheds light on the fact that occupational learning is significantly influenced by both the perceptions of the individuals' professions and the professionalizing strategies and organizational framework requirements involved. One may thus speak of a dialectic relation between structure and agents in

the process of teaching and learning (Wittwer, 2006, p. 194). This interplay of individual as well as institutional factors thus significantly directs the individuals' use of digital media. As a consequence, professional care workers need to be understood as agents in individually constructed and, at the same time, institutionally defined learning environments.

Implications for Media-Pedagogical Adult Education

For the practice of further education and occupational learning in this field of work the findings of this study imply that the occupational-biographical learning patterns identified here need to be integrated into digitally supported learning settings.

Spaces of possibility for the critical and reflective work with media – beyond a support-oriented qualification geared toward instrumental skills – may be realized if a framework is established that allows professionals to change their learning habits. For that purpose, measures are necessary that do justice to the interplay between the individuals' occupational and media biographies identified in the empirical analysis and that establish a professional framework in which learning is enhanced.

In practice, this means that impulses which lead to a new attitude toward learning, such as the replacement of defensive in favor of reflationary reasons for learning (cf. Holzkamp, 1993, p. 190ff.), are merged and harnessed for the use of digital media. Moreover, prospective media-supported learning settings need to foster the professionals' cooperation and participation by drawing on the employees' own educational resources. When it comes to the conception of advanced and further education, as well as to the design of future learning scenarios for the target group, it should be acknowledged that the staff's participation brings to the fore covert biographical potential and thus an essential resource for the organizations.

The German Federal Ministry of Education and Research is currently putting to test such a possible scenario. The project "Media Coaches for the Medical and Health Care Profession: Developing, Testing, and Establishing a Qualification Concept ('MeCoPflege'; translation)" aims at anchoring media education in the vocational, advanced, and further training of care workers and intensifying the use of digital learning media. A qualification concept hence serves to enhance the media competency of educators and trainers as well as professional care workers who may serve as multipliers. This concept comprises three components: First, the participants attend a 300 hour-long blended-learning seminar, in which they acquire media literacy. In addition, a media-technical infrastructure is implemented in the participating hospitals and nursing schools in order to ensure access to digital technologies and their resources. Moreover, an online platform geared to the practitioners' needs is established. The platform called moodle.mecopflege (http://moodle.mecopflege.de/) includes an archive of cases, a glossary with professional terms, and downloadable learning materials on specific topics. In the future, MeCoPflege will show how the tensions between individual und organizational influences, requirements and needs will be minimized.

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