

# Artifacts at Work: Internship, Learning and Technology

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## ABSTRACT

*This study focuses on nursing students' internships and how the students are handling the tension created by expectations and dilemmas when using medical records (MRs) in practice. The overall aim of this study is to develop knowledge about what is required by nursing students in order to coordinate and sustain knowledge through the use of MRs. The theoretical approach to learning that has been adopted implies that learning takes place in social activities, and empirically this means that the study of learning and professional knowledge is a matter of studying activities where, for example, technologies are put into practical use, where experience and knowledge are brought to life. The data consists of observations of five nursing students during their second year in nursing school, interviews and ten video-recordings from shift reports. The result shows that nursing students regularly use MRs as a source of information and that they are struggling with transforming that information into action-oriented knowledge. The conclusion is that information systems such as MRs need to be understood and defined by teachers as materials and devices created or adapted to solving practical problems, and should be treated thereafter. Providers of education need to take into account the different types of intellectual or practical knowledge that professionals like nurses are expected to have, where the use of technology cannot be separated from, but need to be integrated into other aspects of knowledge.*

*Keywords:* Communication, Internship, Learning Medical Records, Professional Knowledge

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## INTRODUCTION

This study aims to develop knowledge about what is required by nursing students in order to coordinate and sustain knowledge through the use of medical records (MRs) during their internship periods. Internship is a common form of Work Integrated Learning (WIL) that has been encouraged by several learning theories, such as situated learning (Lave & Wenger, 1991), sociocultural theory (Säljö, 2005) theories of distributed cognition (Hutchins, 1995) and where the goal is to give students valuable

opportunities to apply theoretical classroom knowledge to practice and vice versa. In internship a "learning contract" is often used to define the roles and obligations of the three parties concerned, which are the employer/practice, university and the student (Costley et al., 2008). Here the only connection between the university and the employer/practice is the student. But the contract between the university and the student remains the same as that for any other course that the university provides whilst the student completes the designated assessment. However, the requirement to have a period of

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work-placed learning is an additional part of the contract that puts great demands for all parts to handle.

Internship is often seen as an increasingly important tool for student learning at vocational training programs, and in Sweden most of the universities invest considerable resources in coordinating and managing internship programs for health care students. Most commonly, internship is organized as several separate periods during the educational trajectory and they are expected to provide knowledge and skills that students need for their future profession and future requirements in a changing environment and market. This requires a clear and systematic integration of theory and empirical knowledge, which can be seen as conflicts of interests but it can also be seen as complementary opportunities.

In all vocational programs it is important for students to learn the requirements and complexities of a particular profession as they observe, ask questions and gradually participate in activities. The curriculum encourages the students to examine their workplace experiences and to think deeply about the application of their classroom learning in workplace contexts. From that perspective, internship can be seen to inspire students to learn through reflection and thereby help them reflect on the transition from the classroom to the workplace (Howard, 2009). Internships are thereby, as argued by Akkerman and Filius (2010), meant to ground a theory in practice and for the students to learn new lessons from the field of work in all its complexities and support their professional development and disciplinary competence. However, despite these intentions, health care is a typical example of a highly dynamic environment that consists of continuous decision making, evaluations and planning, and endless interaction with patients, relatives and colleagues, where students are meant to reflect on information while they are trying to cope with both the work activity system and the educational activity system (Tuomi-Gröhn & Engeström, 2003). One presumable gap between theory and practice occurs if students do not have time or space for

meaning making or reflection. If this happens, the internship may transform from a period of learning into a period of attempting to satisfy local workplace demands.

That internship can bridge between different forms of knowledge systems and thereby contribute to synthesizing knowledge can easily be taken for granted. However, that requires educational coordinators at a university level to adapt to developments in the professional sphere, and to challenges and requirements presented by society currently as well as in the future. Among other things, the challenge lies both in supporting and challenging the students' creativity, scientific and critical thinking, and in contributing to an innovative and more flexible way of working. Reaching these educational goals presupposes a clear and systematic integration of scientific theory and experience based knowledge, the latter most certainly connected to present, and if at all possible, future societal requirements. This can sometimes be seen as a conflict of interest, but it can also be seen as complementary opportunities.

## **INTERNSHIP, LEARNING AND TECHNOLOGY**

In modern health care, one of the most important tools for handling information, planning, organization, coordination and evaluation of care is the Medical Record (MR). Compared to paper based journals, MRs offer increased access to information about patients and care work, both between different professionals and across hospital wards (Tang & Carpendale 2007; Østerlund, 2008). This increased access to information has made it easier to juxtapose information from different knowledge domains. But at the same time it means there is a need for knowing how to handle information, understand indexicality and transparency as well as to transform information into knowledge in every day work.

The emergence of digital technologies in workplaces is leading to a growing need of knowledge about systems to support new

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