

# FROM HIGHER EDUCATION TO PROFESSIONAL PRACTICE

A comparative study of physicians' and  
engineers' learning and competence use

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Linköping Studies in Behavioural Science No. 120  
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Linköping 2007

The focus of this thesis is on describing and analysing recently graduated physicians' and engineers' experiences of the relationship between the professional education programs and the respective professional practices. The aim is to explore the professionals' reasons for their educational and career choices, what they learn in professional education, the demands they encounter in the workplace, and the perceived needs and opportunities for learning and further development in their professional practices.

This study is based on a comparative design and the empirical data have been collected in interviews with physicians and master's level engineers in information technology.

The theoretical framework is structured around three parts, consisting of theories of professionalisation, theories concerned with the functions of higher education, and theories concerned with the concepts of knowledge, competence and qualifications. There is a close relationship between the process of professionalisation, the authority of the professions, the legitimacy of professional knowledge, and the higher education institutions.

The results indicate that theory and practice are intimately integrated in the physicians' professional education, whereas the engineers' experiences of the educational program are characterised by little overlap between theory and practice. Furthermore, the physicians emphasise the importance of theoretical specialist knowledge and socio-communicative competence while the engineers instead stress the importance of generalist competence. The educational knowledge base is relatively static for both physicians and engineers. However, whereas there is a correspondence between the educational and the professional knowledge base in the case of the physicians they are only a loosely coupled in the case of the engineers. This can be attributed to the changing nature of the engineers' professional knowledge base, which is characterised by constant change. The physicians regard their professional education as a rational preparation for the world of work. Although education does provide a general foundation for further professional development and learning, the engineers associate their professional education more with a symbolic ritual. For physicians, the formal credentials are a legal requirement to practise the profession. Education is regarded as constituting an important credential also for the engineers as it increases individual employability. The physicians tend to emphasise the use value of the educational program, while the engineers instead stress the exchange value of their educational program.

