

Bjarne Wahlgren, National Centre of Competence Development, University of Aarhus. Mail: Wahlgren@dpu.dk.

Educating professionals

How to develop a curriculum for professionals?

Abstract

The purpose of the professional bachelor's degree is to qualify the students to act competently in a subsequent job situation. Anecdotal experience and research have shown that limited transfer between what is learned during the coursework and the subsequent professional practice.

This article relates to actual development work, where a social worker education program is restructured and developed, with the aim of creating optimal transfer. The social worker must 'be able to co-operate, organize, coordinate, implement, evaluate and develop social efforts' in accordance with the curriculum. How does that look in practice?

Based on interviews with newly-educated social workers, I have analyzed which competences the social worker (hereafter 'he') uses in practice, how these competences are developed, and how the student learns to apply the competences acquired in the educational program.

Professional competence

A profession - whether we're talking about a teacher, an educator, a health worker, an administrator or a social worker - is generally characterized by the knowledge and skills needed to perform the profession: the knowledge base (Eraut, 1994/2009; Hoyle, 1995).

The aim of a professional education is to give the new professionals the necessary skills. The education must qualify the students to work within a profession. What competences are necessary and sufficient to operate in this field? How can competence development best be achieved?

From one perspective, the qualification takes place as a part of the professional practice. One only becomes a competent professional by acting in relation to the practical problems in the profession. From this perspective, competence development is closely linked to practice. Professional competence is developed through practical experiences of actions and problem solving in practice. It consists of the sum of the experiences gathered during practice. The professional competence is in this perspective developed mainly as informal competence.

From another perspective, a broad theoretical knowledge of the profession is necessary. Such a broad knowledge is a prerequisite to being capable of solving practical problems in a qualified way and to being able to develop new solutions. From this perspective competence development takes place through acquisition of knowledge and through training the use of this knowledge in a school-based context. The professional's competence is in this perspective developed mainly as formal competence.

The modern professional's actual competence development usually takes the form of interaction between school-based teaching and professional practice. The fundamental pedagogical issue in this connection is how such integration is realized. This raises two related questions:

- What kind of knowledge is needed in the school curriculum in order to qualify the students to act competently in a subsequent job situation?
- How can school-based knowledge be organized so that it can be transferred and applied in practice?

Transfer

Transfer of knowledge and experience from one context to another context can be found in many situations. You can talk about vertical transfer between education levels; about horizontal transfer between disciplines, e.g. between general and vocational subjects; and about transfer between education and practice. In this article I focus on the latter meaning of the concept.

The last 30 years of research on transfer has been particularly associated with a desire to be wiser about what works to create transfer and greater coherence between education and application. It is said that *'learning is of little value to organizations unless it is transferred in some way to performance'* (Yamnill & McLean, 2001) and the *'ultimate goal of training should be positive transfer to the workplace'* (Lim & Morris, 2006).

In the eighties, some models for transfer were generated. The models included a number of individual factors: factors linked to the teaching situation, and factors associated with the application situation in order to increase transfer (Baldwin & Ford, 1988; Holton, 1996). Research has since addressed these factors and their relationships with a view to understanding what has the greatest impact on transfer (and why). The theoretical models of transfer between education and workplace includes factors related to the learning programs and the curriculum (Alawneh, 2008; Baldwin & Ford, 1988; Russ-Eft, 2002; Tamkin, Yarnall, & Kerrin, 2002; Yamnill & McLean, 2001).

Research on transfer has shown that it is important that situations are included in the learning programs have a certain identity with the subsequent practice. Transfer training in different forms and a rich variety of practical examples practice can promote transfer (Wahlgren, 2009, 2010, Aarkrog, 2003, 2010).

How do the actual transfer problems appear in relation to the development of a modern professional competence?

Is there a transfer problem?

Over the years, there have been a number of studies which document the gap between professional training and practice. One study finds, for instance, that "it is clear that the overall impression which the college leaves in teacher consciousness is extremely modest" (Jacobsen, 1989). In a later study of (elementary school) teacher education, it is noted that the education is reflected in a work form rather than in analytical theoretical training (Elle, 1998). It is hardly an exaggeration to talk about a permanent transfer problem between professional education and practice. This problem is often described as a practice shock when the newly-educated professionals realize that their acquired skills are insufficient to cope with real-life problems (Hagen & Johansen, 2003).

A recent study examines graduates' perceptions of the relationship between the skills that they learned during their training and the skills that they encounter in their positions as administrative economists (Thomsen, 2010).

The graduates in the study attach importance to both theoretical and practical knowledge. Almost 40% indicate that both these forms of knowledge are 'greatly' relevant in relation to employment, while almost half the graduates indicate that it is only 'somewhat' relevant. It is remarkable, but also expected, that significantly more graduates indicate that they have acquired 'theoretical knowledge' rather than 'practical usable knowledge' to a large degree during their studies, namely 32% versus 13%. It is equally noteworthy that graduates ascribe more weight to other competences than both theoretical and practical knowledge. Thus they indicate that 'the ability to comprehend and acquire new knowledge', 'the ability to collaborate across disciplines', 'the ability to work independently' and especially 'the ability to work in a structured way and to meet deadlines' is more relevant than both theoretical and practical knowledge. These methodological and social competences are thus identified by more than half of the graduates as being 'very much' relevant to employment.

It is thus more general and more personal competences that are granted most relevance compared to school-based or subject-based knowledge in relation to employment.

The graduates estimate that there are a number of these skills that they only have 'somewhat' acquired during their studies. These involve 'the ability to comprehend and define a complex, open issue,' 'the ability to work independently,' 'the ability to work in a structured way and meeting deadlines', 'the ability to plan and implement solutions' and 'the ability to professionally serve citizens and customers'.

It is therefore not surprising that, on the question of how the education could equip them to work better, graduates indicated "more theory in the education" only to a very limited extent. The vast majority point to more 'courses aimed at the labor market', more external guest lecturers and better vocational and career guidance.

Summing up, one can say the study shows that students find theory and knowledge about the labor market important, but that concrete methodical and more practice-related, personal person-bound skills are more important, and these should have a higher priority in the curriculum.

What promotes the transfer in a professional education?

What creates transfer in professional education? What elements of training seem to influence how the theory is associated with the practice? A study on *Students' Assessment Of Theory And Practice In Professional Education* (Jensen & Haselmann, 2010) finds a series of correlations between the content and form of education on the one hand, and students' positive perception of the relationship between theory and practice on the other.

The survey included 1,062 students at the end of their first academic year (second semester), after they have had their first training period outside the school. The respondents came from a variety of professional programs, including training for social workers, pedagogues, teachers and nurses.

The survey showed that there is only a limited correlation between students' backgrounds and their perceptions of the relationship between theory and practice. The idea that theory and practice are connected is thus created during the study and relatively early in the study. Not unexpectedly, the students who have benefited greatly from their practice in a workplace reported a good connection between theory and practice. The study also showed that it is important that students feel that there 'clear objectives for the internship' are set. This perception of connection is increased if the internship supervisor has 'knowledge of the theoretical content of the course', and if the internship supervisor 'organizes courses that promote reflection' during the internship.

The study also showed that factors associated with the form of teaching have an influence. Somewhat surprisingly, there is a fairly high correlation between students' experiences of their benefits from class teaching, and their experience of the relationship between theory and practice. The correlation is significantly higher than the correlation between their perceived benefits of group work, project work, study groups and individual assignments. The experience of a positive relationship between theory and practice seems to be amplified if the teaching takes place in 'a climate of open discussion. The survey provides no explanation for these results, but one can safely assume that team teaching which presents theory in relation to practice in an open discussion contributes to a sense of coherence.

The most important lesson from the study is that student's experiences of connection between theory and practice is especially strengthened in the light of a properly conducted training period, but the 'theoretical teaching', when competent and dialogue-oriented, contributes equally to a positive perception of that relationship.

In a review of current development work which aims to find forms that bridge the gap between theory and practice, experience from a range of pedagogical approaches is presented (Brok, 2010). The review includes four professional degree programs, namely training to be teacher, social educator, nurse and engineer. It is noteworthy that currently the theme of connection between theory and practice is the most common theme in the experimental projects and so a current burning issue in the development of the professional educational programs. The study does not present a clear picture of the results (until now). However, there seem to be positive results with organizations that maintain an ongoing interaction between theory and practice. It may be in the form of 'trainee' cycles, written reflections on practical matters (portfolio methodology) or it could student involvement in development projects. The issues investigated also include

counseling and mentoring related to practice, as well as experimentation with various forms of simulation and games involving the 'reality' of school-based teaching.

The review notes that there is no clear or unequivocal application of 'theory' and 'practice' by the users of these concepts. The review also draws attention to the difference between 'speech-founded programs' (pedagogue and teacher) and 'act-founded education' (nursing and engineering). In the latter there is a much closer link between the educational institution and practice than in the former. The coupling consists of simulation and training, guest lecturers and longer internships.

The social worker – what competences are needed?

To gain a more concrete picture of the problem, we will examine a particular profession, namely social workers. The pictures drawn on a survey of newly graduated and employed social workers. The study is based on a series of in-depth interviews about what they use from their education in their current occupation. The survey also investigates what issues they have lacked during their education as social worker.

The answers to the first question can be placed in four categories: factual knowledge and skills, methods and techniques, general methodology and personal competence.¹

The first category of factual knowledge and skills encompasses knowledge of the law and the ability to apply it correctly. In an institution with social educators, psychologists and health professionals, the social worker has knowledge of the law that is better and more up-to-date than the other professional groups. This kind of knowledge was regarded as very useful.

The second category includes methods and techniques. It can be exemplified by interview techniques with clients. In their daily work, the social worker often applies the insight and training in talking with people that has been developed at the school. Knowledge and insight in how to initiate conversation, how to create trust, how to move around while maintaining a problem, and not least how to maintain a professional role in the conversation, was regarded as important. This category also includes specific procedural techniques and problem-solving models. For example, skills in treating a case systematically: how to describe the problem, analyze causes, and then come up with solutions.

The third category includes a general view of the social worker function, specifically called the holistic view in the management of problems and cases. This competence includes the ability to see each person in a social context: the ability to see the concrete problems as part of a larger whole, where a number of factors must be assessed and compared in an overall analysis. A person's substance abuse problem should, for example, not be seen in isolation as a problem tied to a personal failing, but in relation to the person's total life situation.

¹ These categories correspond to the categories used in an English project on professionalization. The categories used there are 1) Subject knowledge related to knowing and propositional knowledge, 2) Subject-specific skills related to doing and procedural knowledge, 3) Generic skills related to project management and academic knowledge, 4) Personal qualities related to being and becoming (Willis, 2009).

The fourth category is personal competence. In the interviews, it was referred to as the ability to reflect upon oneself and the role one has as professional. How can one simultaneously maintain a commitment to work and a distance to people who one does not sympathize with? How can one maintain competence development as part of one's daily work?

The four categories represent four different types of competence. The first type consists of *knowledge* of a field (such as law), and ability to *apply this knowledge* in specific contexts. The second competence consists of the mastery of a social anchored technique, where the emphasis lies in the *social* dimension. The third competence is a comprehensive or general approach *to solving social problems*. The fourth competence is the personal dimension in relation to *the understanding of the professional role*.

The four types of competences have an increasing degree of 'intangibility'. It is relatively concrete - though not necessarily easy or straightforward - to acquire the necessary law competence. Similarly, it is possible to acquire skills in case work, including interview techniques - although there are some who master the technique better than others. It is also possible to describe the content in this competence. It is less concrete to handle such a thing as holistic thinking in relation to problem-solving. The principle of a holistic approach can be formulated as a principle in considering the social context in relation to problem-solving. But the actual practice of that principle in relation to the actual problem solving process seems less easy to describe. It is a matter of feeling for what might be the appropriate totality in the specific context. The last of the four competences mentioned: insight into one's own professional role, is probably the least concrete. It is not easy to describe what such an understanding means, or when one has acquired such a competence.

What do the actual interviews tell us? They show that professional competence is wide and multidimensional. But they also show that it is a limited part of the curriculum in the social worker education is directly applied in daily social work practice. They clearly show that school-based theoretical knowledge is not part of the explicit basis for action. But they also indicate that this knowledge is not deemed unimportant – although it did not emerge in the social workers' own reasons for acting.

The study shows that some competencies that are acquired in the educational program are applied in the job situations, and others not – or at least not consciously. The interviewees had great difficulty in identifying skills other than those mentioned.

It is likely that a number of other skills that are acquired in the educational program are included as part of the overall social work competence. It could either be separately or in interaction with, or as a part of, the stated competences. It was nevertheless not possible for the interviewees to identify the usefulness of other elements from their education program that they had (intentionally) applied in their work. Taking into account the relatively long and intensive interviews, and that the graduates were relatively newly-educated it was surprising that they did not find more elements useful.

The social worker – how to improve their competence development?

How does one establish an optimal competence development for the social worker? How can school-based knowledge be organized so that it can be transferred and applied in practice?

Looking at the actual data from the interviews with the social workers, it appears that the training has provided knowledge of legislation and a certain amount of practice in using it. Skills such as interview techniques were acquired during the education program. They have learned that social problems must be solved in a wider social context. They have practised their roles as social workers. But none of the skills have been acquired under the educational program to such a degree that the interviewees perceive a mastery of them. One cannot expect that education in itself will develop skills to expert level. However, one can expect a competence to be developed to such an extent that it can be used operationally, and can allow for further development.

At that reason the graduates call for - in hindsight - a higher level of practical competence in the education program. They indicate that they want more training in the written handling of cases and processing, more training in handling difficult conversations with clients and external users, and more training on how to survive the social pressure that the real life exposes them to.

What role do the theories play in this professional training? The main impression from the study is that the professionals do not reject the importance of theories. Even though they have difficulties in reproducing the content of the theories in a conversation, and even though they have even more difficulties using theoretical models to explain the specific problems they are dealing with in their practical actions, they agree that the theories are an important part of the professionalization process.

It seems that the theoretical component of the education plays a role in developing their professional identity. This identity, firstly, provides psychological ballast in the daily working life through increased self efficacy. Secondly, the theories provide what the graduates somewhat vaguely call 'a better understanding of their situation'. The theory allows them to understand their work as part of a political game, as a game of power, for example. Thirdly and perhaps most importantly, the training, the academic culture and the theories contribute to a perception of being a part of an academic community that one is acting on behalf of.

Yet it seems important that the theories should be acquired functionally in relation to concrete problems - not related to a theoretical discourse *per se*. As one student is quoted as saying in an interview: 'The theories must make sense right away'. The theories must be applicable and there must be training in their use during the course.

What questions are raised?

From a curricular perspective, it is a central point that there must be coherence and progression in an education. There must be an interaction and coherence between the different elements in the educational program, and there must be a connection to the working life outside the educational institution. Overall, the training must create a competence in the student which enables him to perform the functions that the education qualifies him for.

A professional university program must be considered in relation to the profession. The curriculum consists of a number of subjects. The questions from the educational institution's perspective are what subjects and what courses should be included in the curriculum, how should the content and form of these subjects be and how the components should interact. From the educational institution's perspective, it tends to be the subjects and disciplines that constitute the education. There may, therefore, be a danger that the

education systems 'freezes' or 'stick to' well known disciplines and to some extent in a competition between different academic disciplines.

From a practical perspective, the world looks different. Here are the main issues which tasks are going to be solved, and what skills are necessary for the solution of these tasks. The competencies are, as I have shown in the examples above, too rarely linked to subjects, but to problem-solving tasks instead.

In the present material, we see a gap between the institutional curriculum thinking and the practical competence thinking. The professional graduates use only a small part of what they learned from their education in their practical work. The gap may be due to several factors, which raises some important research questions.

The first question relates to the graduates' awareness of their practices. When it can be concluded that they can only explain their use of what they have learned to a limited extent, is it because they are unable to verbalize this? Is it the case that the training has made significant changes in the graduates' identity and their way of acting, but that these traces can't be readily verbalized? Is there a tacit knowledge that graduates are unable to verbalize? This raises some methodological research problems: How does one measure the impact of the professional educational program?

The second question is how different disciplines interact and develop a professional identity. What is it that makes the graduates experience and report that they can apply their school-based theoretical knowledge, when it is so difficult for them to explain how they use this knowledge? Why do they report a utility of these theories when they have difficulties in explaining their usefulness? This raises some psychological learning problems.

The third question is how the teaching of the different disciplines can be organized so that the various subjects and courses both retain their identity and internal logic while being functional in a practical application context. This raises some pedagogical and curricular problems.

April 2011

Bjarne Wahlgren

References

- Alawneh, M. (2008). *Factors Affecting Training Transfer: Participants' Motivation to transfer training, Literature Review*: Pen State University.
- Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: a review and directions for future research. *Personal Psychology*, 26(1), 63-105.
- Brok, L. S. (2010). *Brobygning mellem teori og praksis i professionsbacheloruddannelserne - En udredning af aktuelle igangværende forsøg og tiltag i fire professionsbacheloruddannelser*. Copenhagen: AKF, Anvendt KommunalForskning.
- Elle, B. (1998). Lærer-stykker - Om Praksis og teori i lærerjobbet. In J. Bjerg (Ed.), *Pædagogik - en grundbog til et fag*. København: Hans Reitzels Forlag.
- Eraut, M. (1994). *Developing Professional Knowledge and Competence*. London and Washington: Falmer Press.

- Eraut, M. (2009). How Professionals Learn through Work. In N. Jackson (Ed.), *Learning to be Professional through a Higher Education e-book*: University of Surrey.
- Hagen, U., & Johansen, A. (2003). *Nyuddannede socialrådgiveres møde med praksis*. København: Den Sociale Højskole.
- Holton, E. F. (1996). The Flawed four-level evaluation model. *Human Resource Development Quarterly*, 7(1), 5-21.
- Hoyle, L. K., John, P.D. (1995). *Professional Knowledge and Professional Practice*. New York: Cassel.
- Jacobsen, B. (1989). *Fungerer læreruddannelsen? En undersøgelse af 1966-læreruddannelsen, belyst ud fra den uddannede folkeskolelærers situation*. København: Undervisningsministeriet.
- Jensen, T. P., & Haselmann, S. (2010). *Studerendes vurdering af teori og praksis på professionsbacheloruddannelserne*. Copenhagen: AKF, Anvendt KommunalForskning.
- Lim, D. H., & Morris, M. L. (2006). Influence of Trainee Characteristics, Instructional Satisfaction, and Organizational Climate on Perceived Learning and Training Transfer. *Human Resource Development Quarterly* 17(1), 85-115.
- Russ-Eft, D. (2002). A Typology of Training Design and Work Environment Factors Affecting Workplace Learning and Transfer. *Human Resource Development Review*, 1(1), 45-65.
- Tamkin, P., Yarnall, J., & Kerrin, M. (2002). *Kirkpatrick and Beyond: a review of training evaluation*. Brighton: The Institute for Employment Studies.
- Thomsen, R. M. (2010). *Dimittendundersøgelse administrationsøkonom uddannelsen 2010*. København: Professionshøjskolen Metropol.
- Wahlgren, B. (2009). *Transfer mellem uddannelse og arbejde*. København: Nationalt Center for Kompetenceudvikling.
- Wahlgren, B. (2010). *Voksnes læreprocesser - Kompetenceudvikling i uddannelse og arbejde*. København: Akademisk forlag.
- Willis, J. (2009). In Search of Professionalism. In N. Jackson (Ed.), *Learning to be Professional through a Higher Education e-book*: University of Surrey.
- Yamhill, S., & McLean, G. N. (2001). Theories Supporting Transfer of Training. *Human Resource Development Quarterly*, 12(2), 195-208.
- Aarkrog, V. (2003). *Mellem skole og praktik. Fire teoretiske forståelsesrammer til belysning af sammenhængen mellem skole og praktik i erhvervsuddannelserne*. København: Danmarks Pædagogiske Universitets Forlag.
- Aarkrog, V. (2010). *Fra teori til praksis - Undervisning med fokus på transfer*. København: Munksgaard.