

# ACQUISITION OF PROFESSIONAL KNOWLEDGE: HOW DO TODAY'S POSTGRADUATES LEARN?

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## Abstract

The subject of our paper is professional knowledge and experience acquisition by young medical doctors and university instructors with two to five years of work experience. There are many theories that can be applied to knowledge acquisition and also a large body of literature both on developmental psychology and adult learning. Our research followed our previous research conducted in 2012 in the Czech Republic with 200 professionals and was originally motivated by research done by Cheetham and Chivers (2001), who identified non-formal factors essential for acquiring professional knowledge. We identified the most effective learning methods that enable professional learning, in these two groups of postgraduates.

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**Keywords:** Professional knowledge, knowledge acquisition, networking, teamwork

## Introduction

This paper focuses on professional knowledge acquisition by young professionals, medical doctors and university (professors) instructors, both men and women with 2 to 5 years of experience in their respective fields. The aim of this research is to determine the most effective learning method for young medical doctors and young university instructors.

Originally, our research was motivated by the research of Cheetham and Chivers (2001), who identified non-formal factors essential for professional knowledge acquisition. These authors came to the conclusion that continual learning, working with more experienced colleagues and

teamwork belong among the factors that have a considerable influence on professional learning.<sup>119</sup>

This research follows our previous research that we conducted in the Czech Republic in 2012 with 200 professionals – medical doctors and university teachers with more than 20 years of experience in their field. We focused on methods of their professional knowledge acquisition in the past 20 years of their career.

In our previous research we reached the following conclusions:

In the case of medical doctors, the majority of their professional learning happened in the workplace through being mentored and observing positive role models, working and learning from patients and teaching younger colleagues.

In the case of university teachers, most of their professional learning was obtained through networking, working with their students and sharing their professional experience with younger colleagues.

In both cases, life outside of work, which represents time spent with their family and friends, sport activities and pursuing hobbies, made their learning easier. They further confirmed that interesting aspects of their professions motivated their professional learning.

This paper focuses on an analysis of the two most effective learning methods together with the most effective supportive methods in the case of young professionals. For the purposes of this paper, we find it impossible to include a detailed analysis of other methods that have a significant effect on knowledge acquisition in the examined professions.

First of all, we considered it necessary to characterize the basic terms to be used, “professional knowledge”, “professional learning”, “tacit and explicit knowledge” and “professional competence”.

Professional knowledge is created in the mind of a professional. These are his abilities to use his education and experience in given working situations, enabling him to solve problems based on personal experience.

Professional learning mainly takes place in the workplace, because it requires direct contact with the working processes and problems. This specific learning does not necessarily contribute to the creation of a general professional knowledge base.

According to Darling-Hammond and Chung Wei (2010), professional learning may have a strong influence on a teacher’s skills and knowledge when the focus is on the essential content and nestled into the right community that supports their learning and the improvement of their work. If

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<sup>119</sup> Cheetham, Graham, Chivers, Geoff. 2001. How professionals learn in practice: an investigation of informal learning amongst people working in professions, *Journal of European Industrial Training*, Volume 25, Number 5.

these conditions are met and teachers receive feedback from their students, there is considerable progress in their professional learning.

Professional learning takes place on several levels a) at the level of the individual, b) at the level of the workplace c) at the level of the organization. Successful professional learning can be considered learning that is rooted in everyday work, based on the needs of students or clients and designed to meet the specific requirements of all its participants.<sup>120</sup>

Explicit knowledge can be expressed formally through speech, writing or pictures. Explicit knowledge can be transferred, stored and also stolen. Some authors, for example Mládková (2005), perceive explicit knowledge in the same way same as information that can be stored in information systems. It is possible to create new knowledge by combining explicit knowledge.

Tacit knowledge is always bound to an individual or a group of people. This type of knowledge is created and interpreted in the human mind. It is a combination of explicit knowledge, skills, experience, intuition, mental models and personal ideas. Tacit knowledge is very hard to express formally. A large part of tacit knowledge is subconscious.<sup>121</sup>

According to Bedrnová (1996), professional competence is a certain degree of readiness of a person to practice a certain profession. We commonly distinguish among four basic components of professional competence: health (physical), professional, mental and moral. In varying degrees, these components are indispensable for each profession. While important, education is not the sole factor responsible for shaping professional competence, but rather one of several components that are all in individually varying degrees indispensable for the performance of each profession.<sup>122</sup>

While there are still many discrepancies in how professional competence should be defined. Our conception is closest to the conception of Bedrnová.

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<sup>120</sup> Darling-Hammond, Linda., Chung Wei, Ruth. 2010. PROFESSIONAL LEARNING IN THE LEARNING PROFESSION: A Status Report on Teacher Development in the United States and Abroad in the United States and Abroad, Citation: Wei, R. C., Darling-Hammond, L., and Adamson, F. Professional development in the United States: Trends and challenges. Dallas, TX. National Staff.

<sup>121</sup> Mládková, Ludmila. 2005. Moderní přístupy k managementu, C.H.Beck, Praha, p. 10

<sup>122</sup> Bedrnová, Eva. 1996. Kompetence jako zdroj a základní projev optimálního uplatnění člověka v životě a práci, Vysoká škola ekonomická v Praze, unpublished habilitation thesis.

## 1. Networking

Networking is often spoken about in connection with effective communication. Networking can contribute to the optimal performance of an individual or an organization through the formation of communication networks. Networking is the gradual building of nets of contacts, people and organisations that can mutually benefit each other. It is the process of building and developing personal and professional contacts among people with the aim of acquiring personal recommendations, advice, information, support and energy.<sup>123</sup>

The value an individual or a group can gain from social networking is called “social capital”. The aim of networking is to gain new information or knowledge, solve some problem or share insights into problems. It is a cheap and quick way for solving problems and achieving goals, and connects people with similar problems, interests and objectives. Networking brings many minds, ideas and viewpoints together. It helps to build strong relationships, partnerships and friendships and fosters the solidarity of committed people.

Contacts mostly serve to exchange information and share knowledge. They bring new opportunities for individuals and also whole organisations. A net is not a static unit. It is an open, dynamic system, which new members can enter and utilize to create connections. Upgrading created networks with new contacts does not mean just adding one more member, but rather a new member with his own personal networks, which can potentially become accessible to the group as a whole.

The network is a vital organism; as new contacts come up, old ones die away and the connections are always changing. Weak ones can be strengthened through trust and vice versa as a new member interacts within the network and connects with other network members, the connection becomes stronger.

Research shows that high numbers of weaker connections bring more benefits. They ensure linking with other networks, access to information, sources and opportunities that are normally inaccessible within the existing network. For instance, they can increase the likelihood of finding a new job or career advancement.

On the other hand, there are strong connections, such as those with family, friends or others strong relationships that are strongly bound within our network. The stronger the bond, the more emotions are involved, and the stronger the feeling of intimacy and sense of community.

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<sup>123</sup> Bedrnová, Eva, Jarošová, Eva and Nový, Ivan, 2012. Manažerská psychologie a sociologie, edited by Management Press, p. 323

Entering networks may not be easy, but it can be made easier when there is:

- an existing personal relationship with a member or members in the network (e.g. a friend or relative)
- previous work experience with an existing member (e.g. a former colleague, client)
- a recommendation – mediation by a third party contact from someone, who knows a member within the network.<sup>124</sup>

It is natural that as contacts and collaboration within the network increase, the cohesion of each component and mutual trust increase as well.

The quality of relationships and trust is also dynamic and these relations can become personal, thereby rooting the trust in personal qualities of members.

Trust is extremely important and if a person has the ability to inspire confidence even in unfamiliar people it is much easier for him to forge new relationships and enter new networks. It is also very easy for a member to lose this credibility by not fulfilling the obligations expected from him.

That is why networking should include a sense of reciprocity. A member can not only use the network but should also be willing and able to offer something to the network in return. For example, this could mean doing a favour for another member that can be returned in the future.

Networking requires an active, conscious and systematic approach to establishing new contacts and maintaining current ones.

It is advisable for a person to take part in conferences, seminars and cultural events where there are possibilities to meet with people who hold the same objectives. At these formal and informal events it is possible to not only make new contacts, but also cultivate existing ones.

The aim of networking is not to make as many new contacts as possible, or to obtain as much information as possible, but to maintain contacts and cultivate good relationships among people.

It is a long term process, so the results do not have to come right away. It requires openness, helpfulness, willingness to communicate, sharing and collaboration rather than competition.

Networking can serve different objectives. We can distinguish between personal and working objectives. We often use personal contacts to achieving work objectives and vice versa. Personal objectives that can be accomplished through networking are represented, for example, by successful university graduation (e.g. schoolmates helping each other with

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<sup>124</sup> Bedrnová, Eva, Jarošová, Eva and Nový, Ivan, 2012. Manažerská psychologie a sociologie, edited by Management Press, p. 325

references on requirements for different subjects and exams), choosing a school for children and establishing and building good neighbourly relations.

Working objectives are represented by the goals contained in the job description of a job position or the work objectives of a specific person, for example looking for a new job, developing one's own expertise and career, starting one's own business and so on.

The networks vary depending on the professional field of a man. Especially for professions where there is continual field development and new findings are always coming up, it is necessary to have a diverse network of contacts for keeping their knowledge up-to-date.

## **2. Teamwork**

A team is a specific type of working group. Although in practice these two terms are being confused with one another, it is possible to find essential facts that in general differentiate teams from working groups. A team can be characterized as an internally informal and unstructured small group of people, who participate together in a joint exercise within a certain time frame.

Bedrnová, Jarošová and Nový (2009) identified essential features that distinguish a team from a working group:

1. The absence of an internally formal internal organizational structure of the team. The only manifestation of a certain inner formal organization is the appointment of a team leader. The rest of the inner functional characteristics of the team arise in an informal way, usually spontaneously during its own activity.
2. Collective performance and responsibility for its results. Typical examples for teams are collective solution seeking, collective decision making and, subsequently, collective responsibility.
3. Time constraints on the existence of the team. It is typical for the team that it is established to resolve some problem resolution or process a single project.<sup>125</sup>

Given the very intensive personal contacts among the people inside the team and the informal structure in combination with increased work responsibilities, it is natural that team members continue to meet and look for new opportunities for further cooperation.

Well orchestrated and successful teams are an exceptional asset to every organization. Teambuilding is recommended mostly for the resolution of complicated problems, as well as for interdisciplinary, unstructured and ambiguous tasks.

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<sup>125</sup> Bedrnová, Eva, Jarošová, Eva and Nový, Ivan, 2012. Manažerská psychologie a sociologie, edited by Management Press, p. 296

The formation of working teams and teamwork performs a number of substantive, content based and also social-psychological functions. For this reason, careful recruitment of people is very important. It is not just about professional erudition or existing professional and life experience, but also the individual qualities of a potential member.

There are many professionals whose competencies and job performance are extraordinary, but their social competence, communication skills and willingness to cooperate are very poor. Moreover, these individuals seek this type of cooperation very rarely. Workers that are even more problematic than the aforementioned are generally people, who like to call attention to themselves, gain recognition or show off even if doing so may cause big and protracted conflicts.

In a working team, there should be present, if possible, representatives from the widest spectrum of professionals.

While building teams it is appropriate, to take into account the mutual sympathy or antipathy of the potential members, and with whom they would like to cooperate. Likewise, the appointing of a team leader should be based on, in addition to his professional qualifications and other criteria, the extent of informal authority, popularity and trust which he inspires in his coworkers. A properly established team is key to success of its activities.

The course and above all the results of teamwork are influenced by a range of objective and subjective matters. A very important objective determinant of successful teamwork is the nature of the problem or its setting. Teamwork can be very effective in the case of complicated and unclear tasks that require different points of view and evaluation judgements. Tasks with only one solution and one way of finding it, are not suitable for a teamwork. Different team members define, follow, evaluate and solve the same problem through subjective filters of their personality, which is represented by their proper paradigm. This subjective filter – specific or interpretive key – is based upon current working and life experiences as well individual differences among people that arise during the course of their lives.

Teamwork is a continuous learning process requiring a distinctive culture discourse and much tolerance. However, these subjective conditions often mean a barrier to an effective teamwork.

Research methodology:

We addressed 300 medical doctors and 300 university instructors from the Czech Republic, with 2 to 5 years of postgradual working experience. These young workers came from different fields of medicine and different types of universities. In the case of university instructors we addressed both private and public universities. In the case of medical

doctors, we addressed only public hospitals, because postgraduate medical doctors must go through a compulsory residency in the public hospitals.

We distributed questionnaires and conducted interviews, to get detailed information, with 40 postgraduates. The rest was addressed via e-mail; however the response rate was quite low, and therefore we decided to contact those, who did not answer our e-mails by phone, we explained the importance of our research with the promise that, 50 CZK would be donated to a charity in exchange for each completed questionnaire. As a result, we then obtained slightly above 200 relevant responses - 102 from young medical doctors and 112 from young university instructors.

We posed questions investigating the influence of each learning method on the knowledge acquisition of an individual worker applying our learning methods (described in detail below).

These questions were aimed at: teamwork, networking, conferences and seminars, working alongside a more experienced colleague, mentoring, role models, life outside of work and interesting aspects of the work itself.

In 2012, we identified 6 learning methods that contribute to professional knowledge acquisition and are virtually identical with the learning episodes identified by Eraut (1994).<sup>126</sup>

1. Taking part in organised educational courses – e.g. taking part in seminars or conferences
2. Networking – being in contact with other professionals
3. Teamwork – working in a team
4. Working alongside a more experienced colleague
5. Working with students/patients, learning from students/patients
6. Mentoring – being mentored formally or informally

We further identified the following 6 supportive methods that boost knowledge acquisition:

1. Consultations with colleagues in the workplace – as an important part of networking
2. Consultation with professionals outside of their work – consultations with professionals from different fields
3. Interesting aspects of the work itself - as motivation for professional learning
4. Thinking about work and learning from mistakes
5. Life outside of work – time spent with family and friends, pursuing hobbies
6. Role models – using a professional as a role model learners look up to and trying to imitate his work

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<sup>126</sup> Eraut, Michael. 1994. *Developing Professional Knowledge and Competence*, The Falmer Press.



### **Research findings:**

In the case of young medical doctors, most of their professional learning took place through the following methods:

1. Teamwork
2. Working alongside a more experienced colleague
3. Networking
4. Working and learning from patients

Their professional learning was supported and encouraged by the following methods:

1. Positive role models
2. Consultations with their colleagues
3. Interesting aspects of their work
4. Thinking about work and learning from mistakes

The majority of their learning happened at the workplace. Life outside of work and mentoring both proved to be irrelevant in regards to their professional learning.

In the case of young university instructors, most of their professional learning took place through the following methods:

1. Networking
2. Organized educational courses, e.g. seminars, conferences
3. Working and learning by teaching their students
4. Teamwork

Their professional learning was supported and encouraged by the following methods:

1. Consultations with professionals outside of their field
2. Positive role models
3. Thinking about the work and learning from mistakes
4. Interesting aspects of their work

As in the case of medical doctors, life outside of work and mentoring both proved to be irrelevant to their professional learning.

### **Conclusion**

We examined the aforementioned learning methods and the supportive methods, which are the same as those that we examined in the case of medical doctors and university teachers with more than 20 years of experience.

We came to the following conclusions:

In the case of **medical doctors, teamwork** had the most significant influence on their professional learning. The interviewed learners emphasized the following reasons that enabled and simplified their learning:

- Well-established team – they confirmed it as an essential headstone for a team to function.

- Blame-free atmosphere – a place where there they did not have to be afraid of making a mistake and being blamed for it.
- Effective learning of new things – their learning was effective while cooperating with their colleagues in the team, seeing others work, and having a chance to consult about their work with their peers.
- Confidence when facing new challenges – facing a new challenge was not as difficult for an individual because they encouraged each other in a team.
- Constructive criticism – criticism with no intention to hurt a person and, on the other’s side, an ability to accept constructive criticism.
- Different members bring different knowledge and experience – every member had a diverse range of knowledge and work experience. The team members always had a chance to pick up something new.
- Difficult tasks seemed more manageable - in the group than doing them alone.
- Boosts morale and confidence – people became more ethical and responsible while working together and having direct feedback contributed to feelings of confidence in their work.
- Improved communication skills and empathy skills – that are very important especially in this profession.
- Responsibility does not lie on one person – it did not seem to be such a big obstacle as it would be for an individual; having collective responsibility did not produce so much stress and fear for an individual that it would impede his work.
- Being exposed to work in front of others – enabled and accelerated their learning, because they could not hide themselves from the work.
- Openness – to say openly “I don’t know” without being stressed and afraid of any judgement.

Their learning was facilitated by the following supportive methods:

- Positive and negative role models – looking up to a mature colleague and trying to imitate him and, surprisingly, observing a negative role model and knowing they did not want to be like him.
- Consultations with their colleagues – having the opportunity to discuss their work problems with their colleagues in an informal way proved to be the most effective supportive method.
- Interesting aspects of their work – e.g. opportunities to assist in a surgery, learners described the satisfaction after assisting in the surgery and seeing the positive effects of it on the patient’s health.
- Thinking about their work and learning from mistakes – replaying and contemplating about the most recent day at work brings new experiences and also being aware of mistakes and learning by not repeating them.

The learners affirmed that it took them up to two years to learn how to work in a team. They suggest that this problem arose from the lack and in case of the majority of the Czech schools, even absence of teamwork. They insist that they had not been taught or motivated to work in teams.

If we (the researchers) look back, we have to admit that we missed this type of training as well. When re-evaluating the years that we spent in schools, we came to the conclusion that teamwork was not supported in our schools. Individualism, evaluation of the performance of an individual, comparing the performances of individuals and thereby creating a very competitive and stressful atmosphere in the class, were predominant.

We ourselves decide to guide our teaching using teamwork and have had good results and great experiences with it.

Despite the fact that the learners we interviewed, confirmed almost zero experience with teamwork, this proved to be the most effective learning method for them. If the students were encouraged in schools to participate in teamwork then it would accelerate their future professional learning.

To our surprise, mentoring proved to have no effect in the case of young medical doctors, although in the case of mature medical doctors. This leads us to the conclusion, that today's postgraduates learn in a different way than their older colleagues did when they were their age.

The mentoring that was described by their mature colleagues was based on a formal relationship between mentor and mentee. The mentor was a mature professional, usually their direct supervisor, whom they looked up to and were afraid of.

There is an informal environment in the team that eases the tension and fear from making a mistake. It does not mean that today's postgraduate lose their respect for their more experienced colleagues, but the informal relationship makes the learning easier for them.

In the case of **university instructors, networking** had the major influence on their professional learning. The interviewed university instructors emphasized the following reasons that enabled and simplified their learning:

- Possibility to communicate with peers and colleagues – this was a significant source of their professional development.
- A will to share the knowledge and experience – they built such a work environment where there was no reluctance to share knowledge and no fear of competition.
- Reciprocity – communicating information with the knowledge of getting something in return for it in the future.
- Trust – for knowledge to be shared, it is necessary to inspire trust in colleagues so that they want the knowledge to be shared with others.

- Comparison – comparison of how they do the work and how they solve certain problems provided good feedback for them.
- Reassurance – comparing and discussing the work with their colleagues within the network provided reassurance that they were doing things right.
- New links – networking provides new links to new sources of knowledge.
- Informality- learning happened mostly during informal discussions.

Their learning was facilitated by the following supportive methods:

- Consultations with their colleagues – having the opportunities to discuss their workproblems and also personal problems with their colleagues.
- Positive role models – e.g. visiting a lecture of a mature colleague they looked up to and trying to imitate his style of work in their own classes.
- Interesting aspects of their work – e.g. being among young people, having the opportunity to teach them something new.
- Thinking about their work and learning form mistakes – re-playing different work situations, thinking about the questions that the students asked them in the classes. Being aware of the mistakes and being able to learn from mistakes.

Based on these findings we find it necessary to create a friendly environment where knowledge sharing can happen. Managers of schools should support non-formal meetings of young instructors and not to discourage informal conversations by considering them as revealing of a lack of work discipline.

Learners said that they were often criticised by their employers for these types of conversations, which mostly happen in the corridors of the school. However, this informal socializing is precisely what contributes to their professional learning, when they can exchange ideas and opinions concerning their work. Instead of criticising this behaviour, employers should support it. In regards to the lack of teamwork practice in Czech schools, there should be a greater focus on communication training.

The influence of new communication technologies is prevalent. Learners use internet, e-mail communication, intranet and social networks to share their knowledge.

It was an interesting finding that networking was of the same influence on the young university instructors as well on mature university instructors.

However, their networking habits differ in type and communication style. Today's mature university professors in comparison to today's postgraduates, had limited ways of communication, but nevertheless they considered it to be the most effective method. Their networking was based mostly on personal contacts. In contrast, today's postgraduates in the Czech Republic have possibilities to travel abroad and communicate with colleagues from around the world via internet. These opportunities were impossible for their mature colleagues, especially in the era of communism.

We see the future of professional learning in teamwork and networking. Our research showed that teamwork is especially neglected in Czech schools. Thus a postgraduate, who has been educated in the Czech school system, comes to his workplace unprepared in this area. As we mentioned above, he does not have enough experience with teamwork and loses time by learning how to be an effective team member.

We suggest that schools implement communication as a subject into their teaching programs and support teamwork amongst their students. We are currently working on these two most effective methods and would like to help enforce a broader focus on teamwork and communication skills in Czech schools, especially in higher education.

### **References:**

- Bedrnová, Eva, Jarošová, Eva and Nový, Ivan, 2012. Manažerská psychologie a sociologie, edited by Management Press.
- Bedrnová, Eva. 1996. Kompetence jako zdroj a základní projev optimálního uplatnění člověka v životě a práci, Vysoká škola ekonomická v Praze, unpublished habilitation thesis.
- Cheetham, Graham, Chivers, Geoff. 2001. How professionals learn in practice: an investigation of informal learning amongst people working in professions, Journal of European Industrial Training, Volume 25, Number 5.
- Darling - Hammond, Linda., Chung Wei, Ruth. 2010. PROFESSIONAL LEARNING IN THE LEARNING PROFESSION: A Status Report on Teacher Development in the United States and Abroad in the United States and Abroad, Citation: Wei, R. C., Darling-Hammond, L., and Adamson, F. Professional development in the United States: Trends and challenges. Dallas, TX. National Staff.
- Eraut, Michael. 1994. Developing Professional Knowledge and Competence, The Falmer Press.
- Mládková, Ludmila. 2005. Moderní přístupy k managementu, C.H.Beck, Praha .