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Development of Pedagogical Thinking and Awareness in Higher Education Social Contexts – Longitudinal study on teacher growing process

Nissilä Säde-Pirkko, Karjalainen Asko

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Pedagogical awareness is sometimes equalled either to knowledge of the contents and discipline or, more often, to pedagogical measures. It is much more: it refers to teachers' interpretations and transformations of subject-matter knowledge in the context of facilitating student learning, not to speak of adding the teachers' self-knowledge and self-development. In doing so it encompasses understanding of common learning conditions. Having those ideas as a starting point, this study tries to analyze the writings of university employed teacher to see how they experienced and recollected their actions during teacher education and after it. The aim was to add the knowledge of the effectiveness of university teachers' pedagogical education and consider the possibilities of continuous promotion of academic teaching competence in higher education communities.

The background of the research

As part of a wider higher education (HE) pedagogy boom in Finland, a piloting teacher training program of 60 credits giving general pedagogical competence was planned jointly and realized in 2007–2009 by the teachers of university and university of applied sciences (Kope-program). The program aimed at developing experimental knowledge of HE teachers' pedagogical conceptions and the practices promoting learning. In addition, the purpose was to promote the cooperation of different higher education implementers and the transmission of good practices. [\[1\]](#) [\[2\]](#)

At the same time with the implementation, a longitudinal follow-up study was started to explain the realization of the aims and the effectiveness of the education. The earlier research consisted of three studies of joint planning [\[3\]](#) [\[4\]](#) [\[5\]](#), five separate studies of their implementation, and a follow-up study [\[1\]](#) [\[6\]](#) [\[7\]](#) [\[2\]](#) [\[8\]](#) [\[9\]](#). The material [\[1\]](#) [\[7\]](#) was collected from essays, questionnaires, recorded group discussions and interviews. The research method was a case study.

What is awareness?

Awareness is the quality or state of being aware, knowledge and understanding that something is happening or exists (Merriam Webster dictionary). It is the state of being conscious of something. More specifically, is the ability to personally know and perceive, to feel, or to be cognizant of events.

Besides perception of a situation or fact, it can also be concern about and well-informed interest in a situation or development. Types of awareness can be defined as: 1) time awareness, 2) task awareness, 3) result awareness and 4) self-awareness.

Self-awareness is important because when we have a better understanding of ourselves, we can experience ourselves as unique and separate individuals. We are then empowered to make changes and to build on our

areas of strength as well as identify areas where we would like to make improvements. To raise awareness is also to inform and educate people about a topic or issue with the intention of influencing their attitudes, behaviors, and beliefs towards the achievement of a defined purpose or goal.

This research divides the conception of awareness into personal, task, process, and professional pedagogical awareness types, which roughly correspond to the above defined types of awareness.

The current research

To get a conception of an individual academic teacher's pedagogical awareness and evaluation of pedagogical studies, follow-up group discussions were arranged, recorded, and transcribed at the end of 2015. The research persons (N=19) had passed pedagogical education in 2008–2014. The data included 248 statements. The analyzing method was a qualitative case study, the analysis unit being a word or a group of words expressing one meaning. The respondents are called teachers in this study. The terms "pedagogical awareness", "practical knowledge" and "personal knowledge" are used as a combination of all teachers' cognitions, such as declarative and procedural knowledge, and beliefs and values that influence their teaching activities.

The research approach is phenomenography, a theory of how to describe manifestations of human experience and qualitative differences. The object of analysis consists of expressed experiences. It is argued [10] that people's different ways of understanding or experiencing the surrounding world is all there is. We may then compare different understandings with each other, but we cannot compare their understandings with the reality itself.

Interview themes were chosen according to the seven principles of any academic teacher. They are:

1. Commitment to the interdisciplinary scientific work, teaching and learning that are required from his/ her own discipline and scientific community
2. Commitment to research-based and reflective practices
3. Positive attitude to challenges and changes with good communicative and problem-solving skill
4. Active participation in national and international networks and their promotion
5. Ability to understand and apply modern learning-centered teaching and evaluation methods
6. Positive attitude to work and work community, and ability to take responsibility as a leader and mentor in his/her organization
7. Ability and willingness to support favorable cooperation with the partners inside and outside the academic world with expert level skills in communication

The interview moved freely between the themes, partly intersecting them. The themes were intended to seem easy but to inspire the respondents to discuss of their experiences. The authors participated in the interview only by regulating the discussion so that as many themes as possible could be dealt with.

Research questions

1. What key experiences of learning and teaching were identified by the teachers during and after their pedagogical education?
2. What kind of deep learning did they acquire during and after their pedagogical education?
3. What sociocultural features have they met and dealt with?

Towards teachers' awareness profile

Pedagogical thinking and awareness are said to be decision-making that is based on the personal belief systems. Pedagogical awareness is not, however, mechanical, routine decision-making, although it may be reactions to given stimuli. Teachers' reactions are always preceded by reflected earlier experiences. [11] Jyrhämä [12] adds that it is a process of becoming conscious of the arguments and alternatives ending up in restructuring knowledge. Uusikylä & Kansanen [13] and Talvio [14] see it as a complex process in which the teacher applies his/her knowledge intuitively in complex, continuously changing situations. Pedagogical awareness and thinking become visible in action as practical knowledge (cf. [15] [11]) including an ability to conceptualize and model action and to evaluate the backgrounds and conceptions in evolving teaching situations. Practical knowledge is assumed to be personal, unique, often tacit, organized, and intertwined with teaching actions. It means teachers' practical awareness in pedagogical contexts and can serve several functions for teachers' learning and understanding the complex nature of teaching and learning environments [6].

Consequently, teachers' practical knowledge does not refer to the traditional meaning of the "practical", neither to the application of theory [16]. It is qualitatively different from academic subject matter or formal theoretical knowledge. It refers to the form of knowledge that cannot necessarily be captured in words [16]. It refers to the phenomenon of embodiment in human action; the body knows how to do things, and it enables our embodied activities [16]. Knowledge that resides in our practices is not directly accessible, observable, measurable or definable. Neither is it possible to make a clear distinction between knowledge and skills.

Since practical knowledge is highly context-dependent situational knowledge, a pedagogically tactful teacher is a master of situations, alert and receptive to situational clues which inform her, for instance, about students' emotional or cognitive needs or of the atmosphere in the group. This highly adaptive nature of teacher knowledge further complicates the dissemination of teacher knowledge in any fixed, formal, or static mode: i.e. in the forms of receipts, rules, or methods. [17]

Due to its practical nature, and lack of linguistic form, teacher knowledge has been weakly recognized and weakly valued. Recently, its esteem has, however, grown alongside with the new understanding of the nature of this knowledge. It has been emphasized that what teachers express in their action unfolds much more depth, nuances, and wisdom than their talk. Their knowledge is essentially knowledge-in-action and can best be learned in and through action. [18] [19]

Relating conceptual and situational knowledge will also aid in crossing individual and situational experiences and transferring the knowledge acquired in the teaching situation to other situations, resituating knowledge [20]. The importance of theoretical knowledge is in the fact that it provides explanations and aids teachers to see everyday situations from a wider perspective. It offers interpretative tools. [19] [21]

In the table 1 the basic characteristics of different cultural backgrounds of teacher knowledge are summarized.

TABLE 1. The characteristics of different types of teacher knowledge [19]

Cultural knowledge	Practical knowledge	Theoretical knowledge
implicit, hidden	implicit, hidden, tacit	explicit
unspoken	unspoken, partly linguistically inexpressible	linguistically expressible
informal	informal	formal
collective, socially achieved	individual, experiential	general, abstract
interpersonal	personal	impersonal
partly cross-contextual, partly contextual	contextual, situational	de-contextual
embedded in practices, knowledge and skills inseparable	embedded in practices, knowledge, and skills inseparable	separate from practice, knowledge and skills separate
unsystematic, value-bound	unaccumulated, episodic, tendency towards entity, personal theory	cumulated, systematic, hierarchical

The teacher learning and development are here understood as contextual, inseparable part of the activity, context, and culture. Development of knowledge is related to one's action in context (cf. [22] [23]). Different contexts pose different constraints as well as possibilities for teacher and student action. Different learning organizations invite different kinds of teacher roles and action, e.g. autonomous learning of students offer new opportunities of professional learning to the teacher. [24] The structure of teachers' conceptions is not uniform and simple, they appear to be interconnected with each other and with the cultures.

The studies show that teachers who adopt a deeper approach to learning are more likely to have more meaningful learning outcomes than those who do not [25] [26] [27]. To address the differences between and relationships among knowledge, beliefs, and belief clusters, mental models should be made conscious. They represent different categories of ideas held by teachers behind their descriptions of how educational items are experienced. Thus, mental models act as a framework through which a teacher observes, interprets, and interacts in the teaching environment [28]. Figure 1 illustrates the hierarchy of awareness development. The arrows show that the order of the movement between the levels is constant.



FIGURE 1. The dynamic profile of awareness domains

In each of the following chapters, the principles of awareness phenomena and their hallmarks are first explained and then exemplified by the observations of pedagogical manifestations in practice.

Personal Awareness

Teachers' personal awareness in this study has been dealt from the viewpoints of mental models (i.e. epistemic, human and learning conceptions), and from the perspectives of teacher personality (affections, motives, goals, temperament and intelligence), explicated values and attitudes, and interpersonal domains. The first areas are intrinsic, and the last area builds bridges between inner and outer phenomena.

Teachers went through their self-discovery during the study years and afterwards as competent teachers. The search emphasized the role of social context in cognition. Although the research persons are experts in their disciplines, they appear to be life-long learners. Their development continues, according to social theorists, in social interaction. Knowledge is not an individual possession but socially shared and emerges from participation in shared activities.

It became evident that the teachers' beliefs affect their conceptions of student learning and perceptions of the desirable outcomes. Their epistemological beliefs interact with pedagogical actions and implications and affect the shaping of students' personal epistemology. In the intrapersonal domain the self-concept and identity seem to describe the qualities with which the teachers act in teaching situations. Self-esteem and self-efficacy appear in action or as the result of action. Reflection and self-direction appear as self-evaluation and in the tasks of self-development.



Now I have got some theoretical argument to the fact why something is worth doing in a certain way and why that kind of things should be given attention to in teaching. Somehow increasing understanding gives support and self-reliance to the work when you understand the connections between the things. (2009)

Understanding that behind teaching practices there is always some principle that is studied in theory and realized in practice has widened pedagogical thinking. Teaching is not "trick-logy" any longer, but it is meant to influence on the structures, contents and ways of thinking of the student. (2017)

Another aspect is connected to the levels of identity and mission. A beginning teacher may be so focused on surviving in the lecture room that s/he takes the role of a critic (identity level). Another kind of teacher is conscious of the interests and needs of the students, and his/her actions are rooted in a pedagogical ideal (mission level). Where the first teacher may invite a power struggle, the second often succeeds in creating an atmosphere of togetherness, so that the students also consider it important to work together in a pleasant and productive atmosphere.



Humanistic conception of people is connected to close and emphatic, ethical attitude towards the learner. The relationship with the learner supports learning and growing as a human being. In the growing process the learner's own values and autonomy are appreciated. (2008)

Could I say that in realizing oneself there is something ... in working on the ideas of teaching ... and of course there are the people whom you meet and the successes, which can be very small things ... People sometimes think of learning items as if they were causalities, scientific truths ... and still there is no right way of teaching that would suit everybody and all situations and themes, but then it is the diversity in teaching like in all communications between people, it is the attractive side in it that you won't ever find a completely right solution to anything... there are always better and worse or right direction going and wrong direction going ... that is why diversity is so enthralling and energizing. (2017)

Contextual pedagogy, transformative pedagogy as well, call for different professional teacher identities. It moves from a transmitter of knowledge to a promoter of learning concerning his/her students and him/herself. It involves a transformation from a teacher with "all" the answers to a participating learner, from a neutral transmitter of knowledge to an emotionally and ethically involved participant. Admittedly, such changes in teachers' professional identity and lecturing activities are hard to attain. The traditional environment easily preserves and activates the conventional conception of teaching, whereas other kinds of settings activate the transformative thinking more easily.



... in university teaching, too, it is a good thing if a student asks something that I cannot answer, that we sometimes ponder together and if we don't find answers I tell that I will study this detail in my chamber and you should do the same in your study flats and let's go on in the next time. Always, somehow the problem is solved ... that I dare go to disturb the folks on the back bench and ask how the work proceeds here. (2017)

The basic conception of learning in this study suggests both that learning always consists of two integrated processes of interaction and internalization, respectively; and that learning simultaneously comprises (1) cognitive, (2) emotional and psychodynamic, and (3) social and societal dimensions. In other words that learning, and every single learning process are stretched out between three main angles or approaches (e.g. [29]). The students reflect on various mental models:



I think that learning never takes place according to one learning conception, but it consists of constructivism (cognitive) as well as humanistic and behavioristic learning. (2008)

Humanistic learning conception is very natural to me, to interact with the students on equal terms. (2017)

Teacher/researcher beliefs of themselves affect the kind of knowledge that the teachers assimilate and integrate into their conceptual framework. The problematic situations in their work act as a locus for reflection and change. It is both reflective and collaborative and not sentimental. [16] [30] The change from strictly disciplinary contents of presentation to teaching them for learning takes some time.



From the point of discipline, the most apparent feeling stays: the reliance on my own ability, the feeling that I can manage the contents without difficulties. At the same time, the respect to a teacher's work increased. (2008)

Education helped above all to develop teacher's professional identity. Before it I was strongly stuck in substance, but along the education and growing work experience I have clearly developed to a teacher. (2017)

Concerning interpersonal activities, Wenger [31] embraces various dimensions in the social context of learning (figure 2). Four main dimensions of learning are practice, community, meaning and identity. The first two clearly relate to the social context, while the latter two reach towards the individual dimensions, although seen from a social perspective.

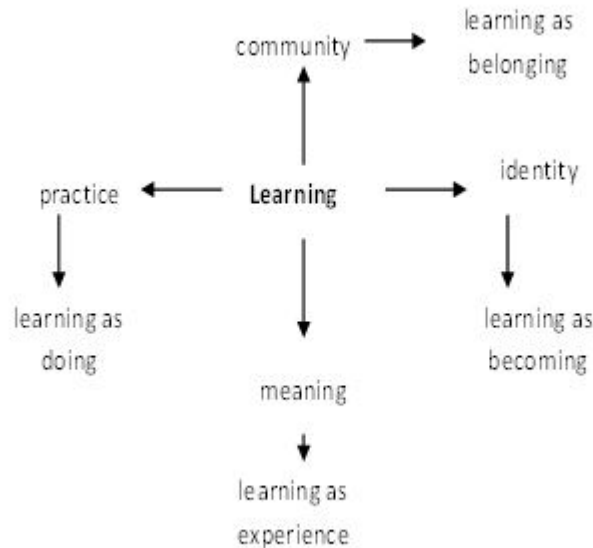


FIGURE 2. Learning as social action [1]

The dimensions are explained as participation in the social process of learning to experience it and the world as meaningful. Identity, again, is a way of talking about how learning changes who we are and creates personal histories of becoming in our social contexts.



As a teacher I have had many good moments with students. Especially in mentoring these I have felt successful because of my strengthened skills in supervising. I have been courageous enough to be just the kind of mentor as I am and not like the one that I have imagined I should be. (2017)

Research is teamwork, continuing collaboration with colleagues. In teaching there is the same pattern. Because many courses are taught by many teachers who generally strive and can work together ... at its best collaboration is continuing support, discussion companionship. (2017)

Task Awareness

Task awareness appeared in this study in three categories: (1) subject matter/ discipline, (2) material preparation, and (3) strategies and developmental tasks. Having enough subject matter skills is not a major concern among the university teachers, because most of them have a wide expertise in the world of research as skilled professionals. When expert knowledge must be changed into the themes of teaching, it gives much more reason to think, both individually and collectively [32].

A teacher who has got reputation for his/her research results, in which personal expertise is appreciated more than the skill of teaching, must inevitably reflect on his/her contribution to teaching. The greatest challenge concerning the field of science domain is to choose the right amount of right level knowledge to be taught. Preparing teaching material seems to be, in general, important. One reason for this might be that there does not exist written material for university studies to open the newest research results. Another reason may be that teachers, having the most up-to-date specialty, want to include it in their teaching.



... finding a balance between generalists and experts. Since nobody can ever master anything completely, learning must be directed to understanding the phenomenon on one hand and knowing deeply a smaller part of it on the other. What the balance between general and expert knowledge depends on the situation, The most essential in this is that learning should aim at both understanding the whole and the processes of a chosen part, not remembering only the facts by heart. (2008)

In my work I have had a chance to be responsible for the education in our unit at strategic level and develop it. In these tasks I have experienced many good moments, tremendous moments of success. (2017)

The teachers are confident with their ability to apply constructivist principles in their teaching. Their own discovery process appears either in problem solving or in scientific research. Oddly enough, there appear only a few statements concerning student motivation. It may perhaps be seen self-evident at university level. Still, it is the prerequisite for student learning.



Encountering students brings good moments. It is rewarding to work with the young, when you see that they invest in learning and experience moments of insights. (2017)

Different accents reflect diverse interest groups, the ways people interpret the world in which they live. Reflected experiences lead to understanding, non-reflected lead to reactions only. (Figure 3.)

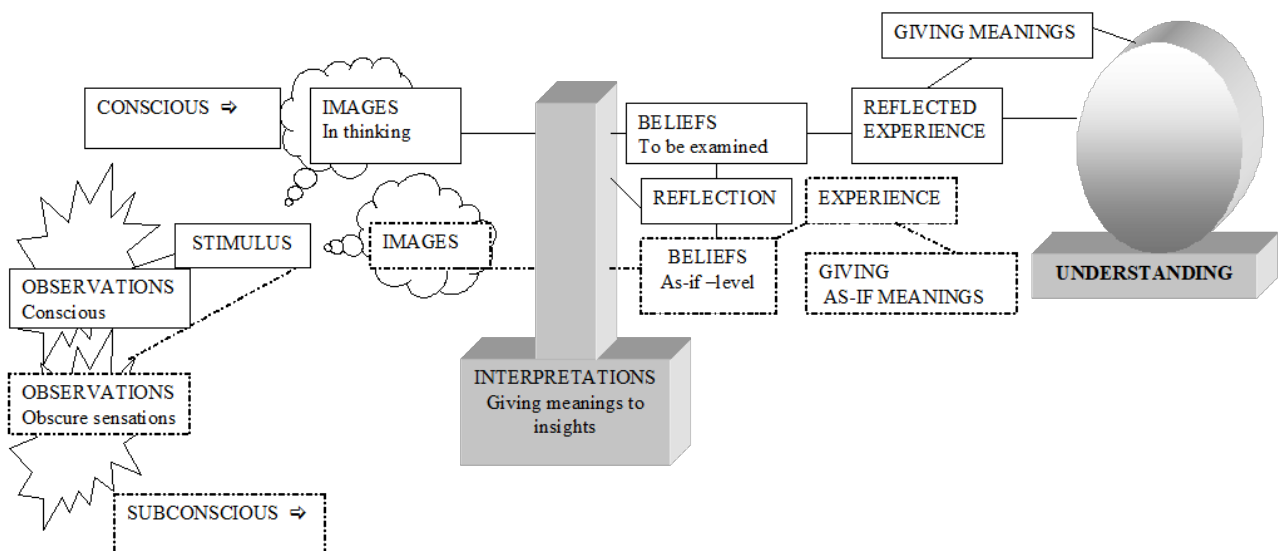


FIGURE 3. From observation to conscious experiences and understanding ^[21]

Teachers are unanimous of the wider framework of universities and the necessary development, but the diversity of the pedagogical microcosmos stays confusing. It is noteworthy that there does not seem to be a unanimous opinion of what to concentrate on when reflecting on teaching activities. They reflect either on contents, methods or teaching or themselves as teachers. In general, they are hoped to pay attention to values, administration, and collaboration, not to forget collegial relationships.



Since teachers are regarded reflective practitioners and professionals, they should be given enough autonomy over their work. (2008)

One's own learning is important, to be allowed to test new things and their own ideas. It needs autonomy. (2017)

Motivating students is not sufficient without making information available, without lectures, verbal definitions, narratives, examples of cases, models and the different application and problem-solving tasks, which will be dealt with in the following.

Process Awareness

Process awareness from a teacher's point of view emphasizes connecting the above described factors of task and personal awareness into a functional whole. This research tries to prevent the possibility of reducing the complexity of the process into effective pedagogical actions only. The process is like creating a red thread, the plot and arch of a drama, and running it through the occasion, not forgetting to pay attention to any of the important factors needed for successful action.



...an old-fashioned idea of learning, i.e. that a teacher will give the knowledge ready – it takes energy from teachers. (2017)

...teaching is not reading lecture material aloud in front of the audience ... it is involving people in the theme in the teacher's personal way. In these tasks the application in the practice is not only theoretical, but you must always bring your own reflection and idea to them, then apply the theory to the practice. I think that it has been successful. (2009)

Teaching and learning processes are critical and there is tension between collaboration and individual performance. Collaboration in planning provides opportunities to shared expertise. To be successful, it presupposes capable partners who know the students' needs, understand learning goals and master the logic of the substance area or discipline and the application aspects.



Team teaching and joint courses are nowadays a regular part of our activities both in our higher education and various other educational units. (2017)

Of planning the teachers only referred to the processes of choosing suitable material for meaningful learning. The university teachers also reflected on the students' own responsibility for their studies.



From the discussions with the students... I learnt that most of the students experienced that they had learnt the things well in my lessons. There were, however, students who would have wished teacher directed repetition of the essential things once again after group works and cooperative learning tasks. ... For a part they think it is important that the teacher should dig the things out for them and serve them ready chewed. (2008)

Most teachers seem to appreciate disciplinary accuracy, social relevance, and critical spirit. Before trying to adjust their lessons to the target group, they must become aware of the students' ability to master and use the knowledge that is topical in the lesson, their goal being to understand the level of student knowledge that enables its application in novel situations.



The motivation and orientation of the students remained a problem to me. How on earth can I know which of the silent students had gained more interest in the theme due to the introductory presentations? The differentiation of learning appeared to be problematic to define, too. (2008)

Good interaction and collaboration with students always bring good moments. Activating the group successfully brings satisfaction. (2017)

Being representatives of theory and practice teachers are aware of the demands that are set on them. They can also see the possibilities of students' self-directed work and a certain kind of giftedness.



The importance of the scientific study and practical applications and research work are not separate worlds, but they should have a dialogue. (2008)

It seems to be easier, in general, for teachers to focus on the characteristics of what they already know and on the topics about which they can talk. More difficult it is to give attention to what they should know or need to know in practice about learner groups and pedagogy, and how to organize the new knowledge at the student level.

Descriptions of the use of various teaching methods are scanty. Their importance is well understood. Earlier, before entering pedagogical education, they thought that pedagogical education would mainly deal with teaching methods, pedagogical tricks. Methodological competence was stressed in nearly half of the statements

from the study time. In 2008 teaching competence was defined by describing various pedagogical measures in teaching, in some cases referring directly to teaching methods or to what a teacher can do. They seemed to think that it is a teacher's practical knowledge that counts in teaching. It is combined with the objective scientifically proven knowledge of the contents and with some knowledge of learners and environments.

The HE teacher education program examined in this study valued diversity and creative subjectivity. There seemed to lie a gap between the understood theories, principles and methods and their realizations in actual teaching (2008). That gap could be bridged by gaining experience and reflecting on that experience (2017).

Professional Awareness

Developing one's identity is a long process, changing it is even longer. It may not always happen smoothly. The awareness of oneself as a person and teacher, awareness of tasks and processes leads gradually to strengthening professional awareness. The following areas have been dealt with in the reports of professional awareness: personal development, disciplinary competence, communicative habits, intentionality in higher education, attitudes to change, empowerment and organizational development. Professional awareness appeared most often in the connection of personal developmental tasks.



I believe that this will also remain in my mind: the teacher is responsible for his/her work to the students, school and the maintainer of the organization as well as to society, and this presupposes reaching a certain level of autonomy in the teacher's professional development. (2008)

What is the essence of academic teaching profession? There is a great consensus that it is a professional attitude composed of complex attributes: a sense of professional responsibility, moral awareness regarding the consequences of teaching, intellectual maturity and interpretative mind, openness to criticism, a passion for learning and caring for the well-being of the students, as well as communicative skills, like in the following:



Good relationships help diverse learners, they still do the learning themselves. Communicative skills bring about pleasant and rewarding learning. (2017)

Professional awareness includes growing organizational consciousness. Critical attitudes towards administration became first louder when teachers evaluated their work context during their studies. On the other hand, their understanding towards administration increased now that they had got a more global view of it. Still they hope for good judgement and deliberation in the enrolment of both teachers and students. Teachers should be given better resources for teaching and, in general, teaching should be appreciated widely in the academic community. According to the research persons, the obstacles of higher learning are often caused by stiff bureaucracy in study affairs, the lack of communication between parties, constant hurry and the unreasonable felt limitations from administrators who do not know the real circumstances of teachers' everyday practice. The change was called for.



Team teaching is opposed with resource reasons. I long for the support of work community more. I have two colleagues ... collaboration with students gives energy. Other cooperation situations have been minimized. (2017)

In the work community there is competition both inside and between the units. there is too much work temporarily, and the resources are repeatedly scarce. (2017)

The awareness profiles

In general, teachers seem to understand the defects that they meet in university teaching and the organization of the staff. They understand that the financial resources are not ample in education today. They also know how to find alternative solutions if the missing resources do not allow them to choose the optimal way of working. It means life-long learning to the community and its members. A realistic view to a university teacher's working day is the best possible developer of the attitudes and future expectations. It is evident that, although being competent teachers, they were not sure if their pedagogical competence or their need for pedagogical autonomy ^[33] would ever be appreciated in university.

The process of growing to professional awareness among the teachers in of the current study was more widely documented in 2017 than of the other types of awareness. It revealed that personal awareness seems, naturally, to come first, the practical skills follow. The levels of development are not, however, embedded in the same order as in the following table, table 2, because their function is individual. Their emerging is situation

dependent. Teachers' tacit knowledge often appears more richly amidst the complex processes of interaction than in their verbal reports. Making implicit things explicit is a way towards professional awareness. Consequently, in an occupational role the professional self draws on personality.

TABLE 2. The levels of awareness

Personal awareness
<ol style="list-style-type: none"> 1. teacher personality 2. mental models 3. explicated values and attitudes 4. interpersonal domains 5. intrapersonal domains
Task awareness
<ol style="list-style-type: none"> 6. pedagogical content knowledge, discipline 7. planning and preparing teaching material 8. strategies, personal developmental tasks 9. knowledge of learning contexts
Process awareness
<ol style="list-style-type: none"> 10. teaching and learning processes 11. integration of theory and practice 12. action repertoire, teaching methods 13. ability of planning in a broad sense 14. personal teaching philosophy; sense of situations 15. post-action evaluation of individuals and groups
Professional awareness
<ol style="list-style-type: none"> 16. understanding administration 17. understanding the need of changes 18. awareness of oneself as a lifelong learner, developing self-confidence 19. cognitive element, disciplinary competence 20. social acceptability, communication in general, responsibility 21. ability to exchange ideas in the communication habits relevant in different contexts 22. understanding academic education in a broader context in society 23. developing organizational cultures 24. feeling of empowerment 25. autonomy 26. collaboration

The longitudinal study gives reason to conclude that professional awareness is all the time in interaction with the other types of awareness, depending on situations, times, and tasks. Personal awareness is important in the beginning: who am I as a teacher, as a researcher? Am I good enough? Professional awareness can be more linked to personal awareness, e.g. in times of distress. Personal and process awareness can be in a dialogue for instance when experimenting new methods, which may be stressing to a teacher, for the fear of failure. The task awareness rises to the surface when the teacher is to change the contents of teaching.

Conclusion

Pedagogical awareness is a result of combined rational and intuitive thinking becoming concrete in the situations which demand immediate reaction and decision-making. What we found, however, is not a uniform condition or a state of rigid competence structure. Pedagogical awareness appeared to be an evolving dynamic process, an endless circuit between personal, task driven, process centered and professional energies for continuous pedagogical practice. The conceptions centered around individual professional identity, pedagogical measures, and university environment

The material of the interviews resembled story telling. It is a method that creates identities and is two-dimensional: created identities refresh or renew the real identities as well. Conscious experiences strengthen self-discovery especially when they become verbalized. Among them were successful and sometimes unsuccessful experiences as teachers. Experiences of teaching and research supervising and of the courage to realize one's personality in it gave self-efficacy. Good feedback from students replaced the hard work they had

had in preparation work. Personal experiences were mainly positive if teaching and its outcomes were in question. Professionally some even felt that, during the time since the studies, they had clearly changed their identities from a researcher to a teacher. The conclusion was that to be a good researcher, one must first be a good teacher.



The student needs came to the center of teaching. (2017)

The above quotation tells that during the education HE teachers gained more self-reliance as teachers and more often noticed the learner as an individual. A great many teachers told about the different needs of students and the need of differentiation in teaching. This was an important finding of the development in the follow-up research (2017) material.

One model for understanding how teachers conceived of learning is the surface-deep continuum. Surface purposes involve accurate reproduction of material, and deep purposes emphasize making meaningful connections. The research persons were interested in understanding meaningful teaching and learning and the theories behind them and focused on optimizing their effort for deep learning. It needed real understanding, ability to solve problems and even transform learning.

Among the sociocultural features they met was the problematic status of pedagogical competence in university. On one hand, they enjoyed social connections and shared efforts, on the other hand they regretted the social suspicion that they sometimes met with in the workplace. It is to be hoped that when pedagogical education continues, the suspicion will decrease.



The atmosphere has changed more change positive and there are many more colleagues round you who have got pedagogical education. (2017)

During the follow up-study it became evident, that teachers' growing pedagogical awareness showed itself, not only in personal level decision making, but in a much broader sphere of academic action and community. It meant a growing awareness of the whole. They moved from the teacher-centered to student-centered approach. Their viewing angle became wider and more global as time passed.

Discussion

Teaching is continuously shaping and changing in many ways due to the individual, contextual and systemic factors related to teachers and teaching. The research on teacher identities, pedagogical practices and ways of working remains of vital importance in taking forward our understanding of the challenges faced especially by university teachers. They enable us to increase our understandings of the evolution of the phenomena and develop theories and methodological approaches which may contribute to the development of teachers and teaching in practice, and thus to further improvement of pedagogical awareness in universities.

Teacher professional agency has also temporal dimension expressed in terms of a configuration of influences from the past, orientations for the future and engagement with the present ^[34]. On the other hand, the capability approach to human development can be assessed across five dimensions of teacher professional functioning: expertise, deliberation, recognition, responsiveness and integrity ^[35]. They refer to the beginning of this article namely to the seven principles of a university teacher. Expertise refers to the fact that teachers have specialist knowledge and skills required in the profession. Deliberation entails being able to critically reflect on one's practices and on theories and assumptions that inform the practices. It can be called pedagogical thoughtfulness ^[16]. Recognition refers to the extent to which the teachers are valued and respected for their professional work. Responsive agency means being able to appropriately meet the diverse learning needs and abilities of students. Moral agency is related to whether teachers exercise sound judgement and display ethical behavior or not. Pedagogic action requires professional judgement to do the right thing for the right reason.

How can universities be empowering learning and researching environments? Such an environment is characterized by respect, collegiality, openness, and support. Professional learning is a relational practice, a dialogical process by and through which actors engage with others within collectively organized contexts of action. Transformative professional learning experiences capitalize on the identities and recognize the aspirations and expertise of the learners.

How is awareness related to the agentic teacher? It requires knowledge and expertise as well as reflected experiences to build confidence, which is a constitutive element of being a conscious teacher. Professional learning is primarily learning for and about practice. It needs to be embedded in within university teachers' pedagogic work and thereby enabling them to investigate, evaluate and draw conclusions about their prevailing

practices. Transformative professional learning is not a detached pedagogic event. It is situated within the context of pedagogical practice.

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Metatiedot

Nimeke: Development of Pedagogical Thinking and Awareness in Higher Education Social Contexts – Longitudinal study on teacher growing process

Tekijä: Nissilä Säde-Pirkko; Karjalainen Asko

Aihe, asiasanat: teachers, teacher training, tacit knowledge, self-evaluation, professional identity, cultural environment, opettajat, opettajankoulutus, itsearviointi, hiljainen tieto, ammatti-identiteetti

Tiivistelmä: Pedagogical awareness is sometimes equalled either to knowledge of the contents and discipline or, more often, to pedagogical measures. It is much more: it refers to teachers' interpretations and transformations of subject-matter knowledge in the context of facilitating student learning, not to speak of adding the teachers' self-knowledge and self-development. In doing so it encompasses understanding of common learning conditions. Having those ideas as a starting point, this study tries to analyze the writings of university employed teachers to see how they experienced and recollected their actions during teacher

education and after that. The aim was to add the knowledge of the effectiveness of university teachers' pedagogical education and consider the possibilities of continuous promotion of academic teaching competence in higher education communities.

This report is based on the interviews of certified teachers (2017) and introduces some of their statements from 2008 and 2009 to provide material for a longitudinal study. The conceptions were examined through the domains of personal, task, process and professional awareness. The outcomes show that the teachers had even at the beginning a reasonable view of the profession. They began to understand their responsibilities to society and interest groups more consciously.

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