Problems of Reaching Competence During Studies at a Higher School
Problemas para alcanzar la competencia en los estudios en la escuela superior

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Abstract

Problems of reaching competence (professional and social) is a topical problem because higher schools have to consider what competencies are important from the point of view of employers and take into account labor market demands. Reflection abilities are more and more stressed in the frame of professional and social competence. It means that competence is quite complicated consisting of various components in which a lot of features are included. The features have to be considered making the study programmes. Development of competence doesn't take place only in formal study process. Learning process carried out not only at a higher school is also important. According to the Lifelong Memorandum there are three categories of learning: formal, non-formal and informal. A person can acquire knowledge and skills both consciously and unconsciously. Researches are mainly devoted to formal and non-formal learning. Informal learning i.e. unconscious process of education, its results, evaluation and assessment has not been the object of the research sufficiently.

Key words: *competence, reflection, lifelong learning.*

Resumen

Los problemas para alcanzar la competencia (profesional y social) en la escuela superior se considera son importantes desde el punto de vista de empleadores y en el mercado laboral. Las capacidades de reflexión son más y más acentuadas en el marco de competencia profesional y social. Esto significa que la competencia es un concepto complicado que incluye diversos componentes, los cuales tienen que ser considerados en el diseño de los programas de estudio. El desarrollo de las competencias no tiene lugar sólo en el proceso formal de estudio, sino también en el proceso de aprendizaje efectuado fuera de una escuela superior. Según el *Memorando de la vida* hay tres categorías en el aprendizaje: formal, no formal e informal. Una persona puede adquirir conocimiento y habilidades conscientemente e inconscientemente. Las investigaciones se dedican principalmente al aprendizaje formal y no formal, pero en el aprendizaje informal, es decir inconsciente, sus resultados y evaluación no han sido investigados suficientemente.

Palabras clave: *competencia, reflexiones, aprendizaje de la vida.*

INTRODUCTION

Problems of reaching competence during studies may differ in various countries but there are some features which are common and worth discussion.

From the aspect of the study program problems are the following: lack of criteria in the choice of subject content and volume; study subjects (modules) overloaded with excessive amount of information; not always clear understanding of competence a becoming specialist has to reach.

Students often have such problems as: heavy loads promotes only superficial (surface) approach to studies; coverage do not ensure learning (students do not develop neither a range of knowledge and skills appropriate to the demands of programmes nor approaches that lead to understanding or application of what is learnt); too big gap between and knowledge and skills level at school and demands after entering a higher school-this is the reason of lagging behind and quitting the higher school after the first semester or the first year or even later; adaptation difficulties at the higher school; learning disturbances in hostels; health problems.

Teachers' problems are the following: contact hours per year are too many and sometimes lead also to superficial approach to academic work; lack of time for scientific work; demand from administration to write reports and other kinds of beaurocratic papers; high stress situations often at work; health problems, etc.

The above-mentioned problems are mentioned and/or described by RAMSDEN (2003), COTTRELL (2001) and some problems are from the experience and observations of the author of the article. A few problems are discussed in the items of the article.

The first set of problems refers to competence components from the point of view of various commissions of education, employers and researchers.

Reflection is the next item discussed. Reflection abilities are an essential feature of a competent specialist and therefore higher schoolteachers should consider methods and tasks of teaching in a reflective way. It means that students have to develop the ability to think critically, analyse, evaluate and generalise.

The last set of problems comprises lifelong learning aspects emphasizing the importance of non-formal and informal learning during studies.

REQUIREMENTS FOR COMPETENCE

One of quite typical problems is that there are differences between competence reached during studies and that required by employers. The differences are depicted graphically (figure 1).

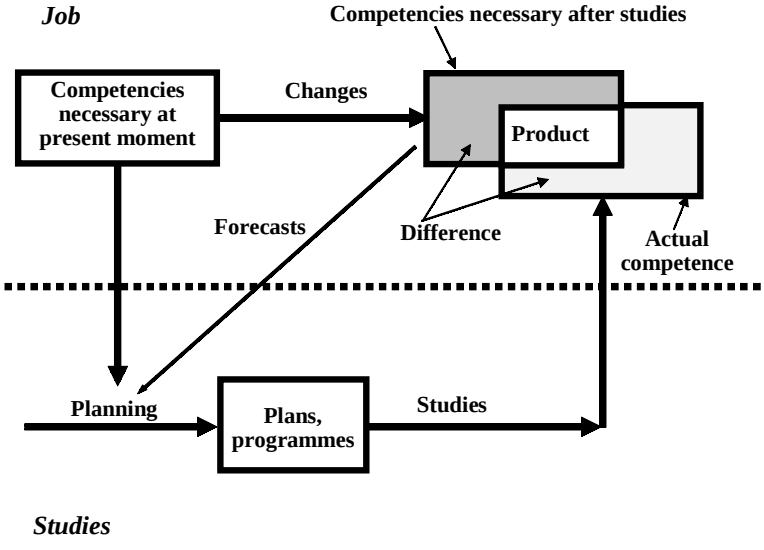

Figure 1. **Competencies based aspect in planning**

The essence of the figure reveals the problem of the exactness of competence forecasting in changing economic conditions of nowadays. Different job-related tasks require different competencies, and leaders of curricula should take into account knowledge, skills and abilities relevant for the employers.

We can distinguish two types of competencies in the respect of planning. They are competencies needed at present and after studies. Usually in the planning process we consider competencies needed at present and we have problems with competencies forecasts needed after studies and there is a gap often. The causes of differences are lack of exact forecasts of competencies, discrepant planning, traditions in making curricula, etc. The longer is the time between planning and obtaining of competencies the larger is deviation. It is very important to plan studies so that competence obtained during studies concurs with the competence needed after studies from the point of view of employers and the future foresights from global aspect.

> "Higher education is facing a period of unprecedented change. The development of global, knowledge-driven economies will demand that higher education works together with business and provides the education that the workforce of the future will need.
>
> Foresight has brought people together —academics and business people— who would not otherwise have had occasion to exchange views. The result has been a stimulating cross-fertilisation, important in promoting multi-and interdisciplinary work" (*The Foresight Effect*, 2000).

HUTCHINSON stresses that young people needs and views should be respected and valued in the study process.

> "A vital challenge for educators is whether we not only acknowledge major difficulties but begin to 'walk our talk' in ways that combine freedom with responsibility and resist impoverished, violent social futures for our students and successive generations".

The standards of professions in Latvia determine the basic requirements for qualifications as well as the appropriate specific demands, e.g. absolute pitch, which is necessary for carrying out the main duties. The standards should not be rigid and they need to be revised after some period of time. They must not lag behind from dynamic development of demands for each profession and retard progress. It is now generally acknowledged that true competence is not a simplified performance of one's skills. *PURCELL (*2001) writes that the performance also includes the application of knowledge, critical analysis and the ability to adapt and innovate. It is worth mentioning Purcell's acknowledgement that knowledge is an important factor in the process of demonstration one's competence because: a person must do a concrete task in a given situation but he or she also should use knowledge and skills in new situations and contexts creatively; competence also involves being able to deal with contingencies.

*HANNO, PATTON and MARLOW (*2000) in their research on developing management competencies for effective small firm-stakeholder interactions mention that to achieve business success it is necessary to acquire the ability to learn how to adapt to changing environments. The authors stress that the nature of these transactional relationships and the processes of exchange will be influenced by individual, organisational and environmental factors. These factors, such as for example personal needs and drivers or organisational policies and cultures are likely to have significant impact on the nature and the degree of learning which occurs within the transaction. It means that comprehension of influence of environment; needs and relations are necessary preconditions to develop one's career successfully.

The same idea is stressed in researches on social learning of farmers to guarantee sustainability of their farms. One of factors how to do it is flexible adaptation to changing conditions (LEEUWIS, PYBURN, 2002).

Competence based approach; valuation and standards are scrupulously developed in Great Britain. The differences between skills required for academic studies and those desired by employers should be matched. COTTRELL (2001) marks that in TMP Worldwide research in 1998 identified skills desired by employers. The three most desired skills were oral communication, team working, listening. The second cluster of skills employers required included: written communication, problem solving, relationship development, the ability to adapt communication style, time management, the ability to share knowledge with others. These are all skills, which are of benefit from an academic perspective as well as that of employment.

Similarly Skills Development in Higher Education (CVCP, 1998 from COTTRELL, 2001) brings home the relation between skills required for both academic and employment purposes. The first were traditional intellectual skills: critical evaluation of evidence, problem solving, the ability to argue logically, to challenge assumptions. The second category refers to key skills: communication, application of number, working with others, use of technology, improving one's own performance, equally valid in employment and academic contexts. The third category covers personal attributes: self-reliance, adaptability, creativity, and *nous.* The fourth category is knowledge about how institutions work.

People who develop their career successfully face new and new demands from the nowadays' society. In the documents of the Council of Europe, UNESCO and researches of various scientists (Commission of the European Communities, 1995; International Commission on Education, 1996; HUTMACHER, 1997) is stressed that people should be skilful according to the following characteristics:

- flexibility in facing uncertainty and complexity, to adapt to rapid changes e.g. take on responsibilities, persuade, solve conflicts in non-violent manner;
- ability to find information from different sources and use information;
- respect to people of other cultures and religions;
- readiness to life-long education;
- skilfulness in written and oral communication;
- ability to express active attitude to processes in society and understand relations between past and present;
- co-operation skill including ability to work in a team and manage disagreements and conflicts;
- ability to listen and consider other views; understand and speak more than one language.

The Quality Assurance Agency in Great Britain offers benchmarks for skills in different academic disciplines (COTTRELL, 2001). The skills require the students' ability to plan their time and tasks, interact with others, take a responsibility, communicate, use IT and manage information. There are six clusters of skills.

> "Improving own learning and performance (Self): taking responsibility for one's own learning and performance; reflecting on practice; learning to learn; applying learning to new contexts, applying learning theory; reflective professional practice; self-management and self-reliance.
>
> Working with others (others): interactive group skills, project work, listening skills; working with the public or different client groups; constructive criticism; teamwork; working with colleagues and managing work placements; negotiation, consultation, interviewing, observing; committee skills; the ethics of interaction and intervention; managing emotion; assertiveness; being aware of the effect of one's own behaviour upon a group.
>
> Problem solving and task management (Task): time and space management; working to deadlines; organisational skills; investigative skills; research; recognising

problem structures; applying knowledge and skills to new areas; trying out models; applying theory to real contexts.

Communication: writing in a range of styles for different audiences and purposes; oral presentation skills; listening skills; team presentation; using IT to aid presentation; communicating to a range of audiences using different media.

Using IT: basic applications (word-processing, spread-sheets, databases, graphics, email); using the internet; using course software, using statistic packages, using specialist IT for specific purposes.

Information management/investigative skills: being able to collect, manage, select and interpret data of various kinds including statistics and qualitative data; understanding the conventions of research; evaluating the quality of data, presenting data to others; the application of number; using IT to enhance research skills and store information".

International Commission on Education. (1996) in the Report to UNESCO for the 21st Century views that education must involve four fundamental pillars (kinds of learning): learning to know - how to acquire means of getting knowledge; to know-to do-how, where, when to use knowledge and skills and how to use education for the future; to live together-to understand others, cooperate and work for positive goals; to be-education should facilitate harmonious development (intellectual, will-power, emotional, physical, social) of a person and understanding of-self.

The emphasis within current pedagogical process at a higher school is on increasing students' active participation within the learning process in order to foster independence and autonomy. LITTLE (1991) suggests that students far from being naturally independent need to be trained in a capacity for detachment, critical reflection, decision making, independent action. FAZEY (1996) suggests that student autonomy can be discussed with reference to skill development. Guiding students towards autonomy can help them to identify their skill requirement, and she identifies four sets of skills needed in this regard: academic skills, personal management skills, self-awareness, and metacognitive skills.

Students and teachers should consider the topicality of one's potential from the aspect of competence. Students often are not conscious of it and do not know what and how to demonstrate it. I think that we need to understand that the terms *competence* and *consciousness* can form four combinations: unconscious incompetence, conscious incompetence, conscious competence and unconscious competence. We usually demonstrate competence we are aware of having it. We have to take into account that at the same time we have also the so-called unconscious competence. We have it but we don't demonstrate it. It could be a good programme that helped to reveal all the four kinds of competence.

CONCEPT OF COMPETENCE

Competence is a very complicated conception because it is used for a description of a person's intellectual potential, abilities and other qualities. The word *competent* originated from the Latin language word *competo* meaning *useful, appropriate*.

We use it a lot because it is very capacious and we use it for expression of assessment.

Competence can be defined as the ability to use knowledge and skills in action, which should be assessed through performance according to the appropriate criteria as standards of profession involving occupational requirements.

The other definition of competence can be the following: competence is a totality of knowledge, skills and reflection abilities which is possible to prove documentary and in action in which a person agree to participate actively and with a sense of responsibility.

JENSEN and SCHNACK (1994) describe the so-called action competence stressing such components as: knowledge, skills, will power, courage, experience, truth to one's abilities. Of course, those components also refer to the conception of competence in general.

Several overlapping aspects have originated in the result of theoretical researches:

- knowledge, skills and reflection are mutually connected;
- will-power and responsible activity refer to the questions when, how, why, where to mobilize skills and experience for demonstration of one's competence;
- collecting of versatile evidence for a portfolio is a very important mean for proving one's competence.

Competence components also originate from the demands of employers, documents accepted on international level and scientific researches. There is a quite accepted opinion that the competence involves two large parts: professional and social. This assertion is also under debate because the both parts overlap. The both parts consist of a lot of components, e.g. knowledge, skills, reflection, experience, etc.

KELLER, NOVAK, (1993) divide competence into: professional, social and methodological. Professional competence involves professional consciousness (reflection) and skills. It is worth mentioning that the quality of professional performance depends on autonomy of a specialist and his/her ability to avoid outer pressure in the interests of some groups. The question of professional ethics is important but in many cases incompetent decisions are accepted purposefully ignoring the right professional view.

Social competence (HALFPAP, 1992; KELLER, NOVAK, 1993) is described by such characteristics as cooperation, communication, competition, self-competence, etc.

Self-competence e.g. can be demonstrated by the purposeful and logical action in a concrete situation.

Cooperation competence can be proved by skilful interaction in a group. Cooperation is an important feature of competence and it also describes a democratic society in general.

Methodological competence mainly concerns the question *how* comprising both thinking and performance skills. It means that thinking competence involves logical, systemic thinking or creative, genuine, flexible thinking.

Performance competence involves ability to endure loads, to concentrate and readiness to work hard.

Social competence is necessary in all the fields of work and it often is defined as a part of civic maturity which is characterized by ability to judge, decide and to manage concrete social and business-like situations according to concrete conditions (KELLER, Novak, 2000).

The characteristics of social competence are:

- self-competence: expresses in ability to act constructively and evaluate himself or herself appropriately;
- cooperation: expresses in ability to act constructively in a group and assess others appropriately.

Almost each skilful specialist nowadays has developed communicative skills. They determine not only a person's individual skills but also promote successful achieving of good results in a career as well. Therefore vital is a conclusion by GAMBLE and GAMBLE that:

> "In today's world, job-specific talent, technical expertise, and graduation from prestigious schools do not carry with them any guarantees for goal attainment or upward mobility. Instead, the one common factor shared by people who are able to ascend both the professional and personal ladders of success is superior communication." (GAMBLE & GAMBLE 1991, p. 4)

The above mentioned kinds of competence are depicted in figure 2.

One of the acknowledgements in the science of ethics is that every person has to think about his/her input for the future. From this aspect it means that not only knowledge and skills how to use but also how to keep and create things for positive goals are the features of one' competence. So every specialist needs reflection ability on his/her activity influence on the results in the future.

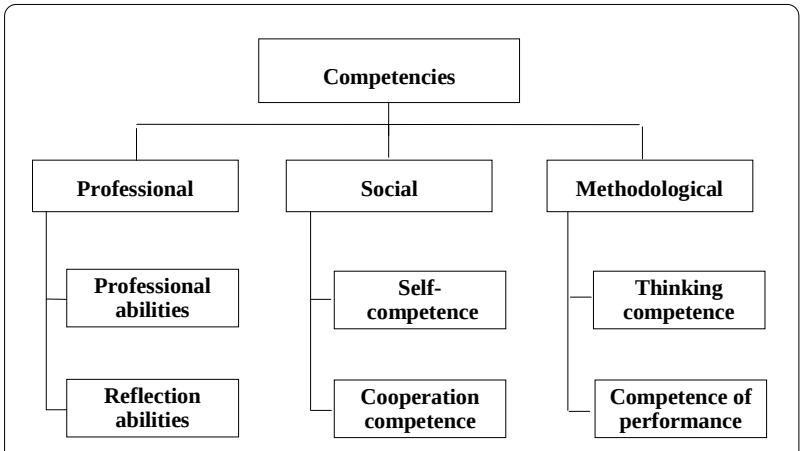

Figure 2. **Division of competencies**

REFLECTION

McCombs and Marzano (1990) argued that students need training to recognise the link between themselves, i.e. to understand the "I" component in order to realise a sense of personal control over learning activities. It is also highly important for the development of reflection abilities.

A competent specialist thanks to self-confidence comprehends what does he/she knows and where, how, when and why to demonstrate competence. The competent specialist understands what kind of knowledge and skills need to be acquired additionally to fulfil the gaps in order to carry out concrete tasks, and it is thaks to reflection ability. It means that a person is able to think critically, use experience and evaluate. Reflective teaching with problem raising and problem solving is necessary for the development of reflection ability. Problematic situations should be described and discussed scrupulously. Therefore students see questions they cannot answer. In such problem-centred classes the students and teachers reconstruct their experience. They increase person's abilities, both individually and collectively, to see how problems can be solved. Problem based tasks are of high importance to develop reflection ability. They can't be composed at the desk but only from real life and it means that teachers should know how acknowledgements of science are implemented and what happens during the process and what is the result.

Parker (1997) described the influence of natural sciences on other branches of sciences and this influence also refers to reflective teaching in the postmodern time.

> "The cultural framework, within which the technical model of rationality is embedded implicitly, and sometimes explicitly, embraces the philosophy of positivism. Its modes of discourse are shot through with the assumption that the description and explanation of anything —including social phenomena— must employ the procedural and justificatory standards of the natural; or, more accurately, this coupled with the beliefs that the arguments, theories and practices of such discourses as philosophy, ethics, sociology and politics must take as their premises some statement(s) of natural science, the truth of statements about social phenomena —including educational practices— being dependent upon the truth of some class of statements of natural science. Knowledge, consequently, is only achievable through the objective, experimental, inductive activities of science. Facts —as revealed by the methodology of science— are the only possible content of true statements. The only guarantee that moral of sociological statements contain facts is that they have been arrived at through methods which are essentially those of natural science".

Reflective teaching helps to evaluate the results of such kind of influence critically and helps to explain are we being human or not considering only positivist view.

Nowadays reflection is defined as an ability by which a person can explain his/her action and experience and is able to do appropriate conclusions and improve performance. Such terms as *cause, analysis, evaluation, experience*s are essential to judge about one's reflection competence. These terms and reflection in general refer to studies in wider context therefore various kinds of learning should be described.

LIFELONG LEARNING IN THE CONTEXT OF STUDIES

The terms *life-long learning* is topical in higher education nowadays. *The Memorandum of Life-long Learning* comprises six key messages: new basic skills for all; more investment in human resources; innovations in teaching and learning; valuing learning; rethinking guidance and advising; bringing learning closer to home. Skills need to be developed considering the demands of education commissions and employers in the humanitarian, exact and social field.

Cottrell (2001) mentions that since the beginning of the nineties, there has been a dramatic change in the approach to skills' development in higher education. She stresses that personal development planning including improvement of one's own learning, skills development, performance, presenting of evidence, raising of awareness of all students and reflection are important. The accent is on each person's responsibility therefore focussing on such aspects as planning, evaluation, learning etc. This is a humanistic model of learning in which student centered approach promotes independent individual work and reflective action. The individual work is also determined by credits. 1 CP is equal to 40 hours of work from which, for example, in Latvia only 16 are contact hours in lecture-rooms, laboratories. 24 hours are planned for the individual work. Taking it into account students should be trained in learning to learn to guide their study process successfully. It also concurs with the idea of adult and life-long education conception in the Memorandum of Life-long Education.

Not only formal but also non-formal and informal learning are important aspects in studies at a higher school as well.

Formal, non-formal and informal learning conceptions and corresponding terms have been created in a longer period of time of the 20th century and have been defined and described in encyclopedias of education as well as in various international documents during the last decades. One of them is the Staff Work Paper by The Commission of the European Communities called A Memorandum on Lifelong Learning (2001, chap. 3) in which kinds of learning in the context of lifelong learning are described as basic categories of purposeful learning activity:

Formal learning takes place in education and training institutions, leading to recognized diplomas and qualifications.

Non-formal learning takes place alongside the mainstream systems of education and training and does not typically lead to formalized certificates. Non-formal learning may be provided in the workplace and through the activities of civil society organizations and groups (such as in youth organizations, trades unions and political parties). It can also be provided through organizations or services that have been set up to complement formal systems (such as arts, music and sports classes or private tutoring to prepare for examinations).

Informal learning is a natural accompaniment to everyday life. Unlike formal and non-formal learning, informal learning is not necessarily intentional learning, and so may well not be recognized even by individuals themselves as contributing to their knowledge and skills. Until now, formal learning has dominated policy thinking, shaping the ways in which education and training are provided and coloring people's understandings of what counts as learning. The continuum of lifelong learning brings non-formal and informal learning more fully into the picture.

Rogers (1996) describes tree kinds of education similar to those in the Memorandum.

> "Formal —courses and classes run by schools, colleges and universities and other statutory and non— statutory agencies making up the educational system;
>
> Extra-formal - courses and classes run by formal agencies outside the educational system, e.g. government departments, industrial training agencies, trade unisons and commercial concerns;
>
> Non-formal - educational activities provided by voluntary agencies and informal groups".

My colleague professor Rudzitis (2000) made the four level model of self-education which can be used for the description the person's informal education possibilities.

The first level corresponds to the period of preparation. It is for those who have just started self-education. They do not still have a clear notation of the skills and habits of rational intellectual work necessary for achievement of self-education aims. Therefore self-education activities are still unsystematic.

The second level is characterized by definite skills of intellectual work acquired but people do not have the necessary habits for implementation of self-education tasks. Those people try to elaborate plans and schedules of self-education but usually they are not successfully implemented.

In the third level persons have acquired efficient skills of intellectual work but they still sometimes lack the necessary habits of self-upbringing, which are needed for systematic self-education. They elaborate plans and schedules of self-education but they are implemented with difficulties and delay.

In the fourth level people have acquired not only the necessary self-education and self-upbringing skills and habits but also developed an inner necessity for them to master the knowledge and continuously develop their personality. Implementation of self-education plans and schedules does not require special effort from them.

The influence of informal and non-formal education on the development of the personality and competence is the same or even stronger than of formal education. Therefore valuation of this influence and evidence is of highly importance for students. For instance formal and non-formal learning and deep and at the same time wide competence is essential to promote the change of attitude towards assessment of environment. Education "is also critical for achieving environmental and ethical awareness, values and attitudes, skills and behaviour consistent with sustainable development and for effective public participation in decision-making" (*Earth Summit*' 92, p. 221).

The system of equalization of informal and non-formal education to formal education process should be developed particularly from the aspect of proving. It is necessary to establish a system of valuation of ones' competence got non-formally and informally. It means that a person should be able to present evidence in a perfect way. In *Memorandum* consulting process in Latvia had been stated that a portfolio could be a serious means of evidence and it should be assessed. Ones' competence should be demonstrated practically. But it is worth mentioning that in *Memorandum* consulting process had been stressed the fact that valuation of non-formal

and informal learning out of formal learning programs is a very complicated task.

The development of methodology of formal, non-formal and informal education assessment and evaluation methodology is different. For valuation of formal education is developed methodology and criteria. They are widely used for valuation of study or teaching/learning process and its results. Both the amount (CP) and quality are evaluated. The parameters of the amount such as the length of study time with a determined number of CP are usually used in non-formal education assessment and evaluation, and results are not presented through organisations or services that have been set up to complement formal systems (such as arts, music and sports classes or private tutoring to prepare for examinations).

The amount, quality and results of informal education are evaluated only in exceptional cases.

One of the versions of theoretical background for informal learning assessment and evaluation methodology development is the theory of the ecology of human development established by BRONFERBRENNER (1979). Considering it is necessary to evaluate the features of human, environment and their interaction referring to the process of informal learning and its result.

Valuation of informal learning can be carried out putting together self-evaluation and assessment (expert-evaluation, tests). The model of valuation can be the following: 1) determination of valuation indicators and development of methodology for self-evaluation and assessment; 2) self-evaluation according to indicators (portfolio, CV, etc.); 3) expertise of self-evaluation; 4) assessment (expert-evaluation, tests, exams and revision of its procedure considering the results of the expertise of self-evaluation; 5) integral evaluation of competence got in informal education; 6) decision on recognition and validity of competence: a) to perform concrete functions/ duties, b) to pretend to take a concrete post, c) for a part of formal education (a model or models); d) for a qualification which is got in the program of formal education.

Formal and non-formal education programmes should be taken into account in the process of decision taking.

CONCLUSIONS

Requirements for competence from education commissions and employers have to be analyzed and included in the programmes of higher schools.

Competence is a very complicated concept including two big parts-professional and social; the view that a competent specialist has to be able to adapt to rapidly changing conditions and forecast the influence of the results of his/har action in the future is becoming more and more true nowadays.

Reflection ability has to be developed in each course at a higher school and has to be evaluated like knowledge and skills.

The amount, quality and results of informal education are evaluated only in exceptional cases.

There should be worked out concrete indicators and tests or other methods for each profession and level of education to evaluate competence got in informal education.

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