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## The Learning to Learn Competence - Guarantor of Personal Development

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### Abstract

The nowadays society is in a continuous change with major impact on education, and in the overall development of an individual. In fact, the school cannot provide all the information and related knowledge for the whole life, and, in the context of the actual lifelong learning, an individual has to be trained with those competences and capacities that allow to continue the learning process also after the ending of the studies. As defined at the European level, the key competences for lifelong learning represent those which all individuals need for personal fulfillment and development, active citizenship, social inclusion and employment. One of those competences is “learning to learn”, defined as the ability to pursue and persist in learning, to organize one’s own learning, including through effective management of time and information, both individually and in groups (*The Key Competences for Lifelong Learning - A European Framework*, 2006). It is clear that in this context, the Romanian system of education has to define a curriculum oriented on competences that must identify, develop and valorize the students’ skills and abilities. The paper illustrates the results of an investigation of 250 Romanian secondary school students, counted as indirect beneficiaries of the teacher training programme “*PROFILES - Education through Sciences*”, organized in the frame of the Seventh Framework Programme “*PROFILES - Professional Reflection Oriented Focus on Inquiry-based Learning and Education through Science*”. The results showed that students try to maximize their efforts concerning to know and understand their learning strategies, but also their strengths and weaknesses related to their skills and abilities, seen in correlation to Science subjects.

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## 1. Introduction

The profound reformation of the educational system, the necessary transition from a transmission of information to one based on training and competences, the assurance of a qualitative educational process, focused on student, mustn't remain only populist slogans. It is necessary that every school involved personnel, from minister to the teacher behind the desk, to assume them as priority objectives of whose accomplishment depend the efficiency of the entire educational system. The major changes produced in the societal ensemble require today, more than ever, paradigm changes in the educational space. The contemporary society pretends that the school's graduates should have, at the end of their studies, certain key competences, susceptible for an objective evaluation. In this context, the Romanian school must be engaged in a demarche oriented towards producing the necessary competences for the social development, in general, and especially the personal development, viewing the maximal identification and valorization of the pupils' individual abilities. The mission of the contemporary school is to form competences susceptible of being used in different contexts, instructional or, generally, of life. Out of the competences stipulated in *The European reference framework of the key competences of learning throughout lifetime*, we apprehend as relevant for the analyzed theme, the competency of learning how to learn.

## 2. The competency of learning how to learn - structural framework

*Learning how to learn* is one of the key competences in the society of knowledge, a competency which ensures those who possess it and constantly valorize it grown chances of adaptation and insertion in the socio-professional environment. In a time when knowledge is in a real expansion process, information lose currency in shorter periods of time, technology evolves faster, and the society's needs transformation every day, the people's capacity to adapt can be sustained only by their availability to learn continuously and by the "science" of learning efficiently. In the same UE document we mentioned above, the following definition is proposed for this competency: "*Learning how to learn* is the ability to abide in learning, to organize one's own learning, including through the efficient management of time and information, both individual and in group. This competency includes the acknowledgement of the process and personal needs for learning, the identification of opportunities and the ability to surpass the obstacles in order to learn successfully. This competency means gathering, processing and assimilating new knowledge and abilities, and at the same time, searching and using counseling and orientation. Learning how to learn means that those who start to learn must begin from previous knowledge and life experience, so that they can use and properly apply knowledge and abilities in a variety of contexts: at home, at work, in education and formation. Motivation and trust are crucial for this competency." After 2006, when a group of experts projected an evaluation framework of the previously defined competency, based on the supposition that "learning how to learn" includes two dimensions - cognitive and affective (*Expert Group set by the European Network of Policy Makers for the Evaluation of Education Systems*), in 2008, CREL revised this framework (*The new learning to learn framework*), adding a new dimension - *metacognition*. Thus, the components from the new framework are (*Guide of activities for learning to learn in schools*, ISE, 2009):

- *The affective dimension:*
  - Motivation for learning, learning strategies and orientation towards change,
  - Concept of self and self-esteem,
  - Learning environment.
- *Cognitive dimension:*
  - Identification of a sentence,
  - The using of rules,
  - Testing rules and sentences,
  - Using mental instruments.
- *Metacognition:*
  - Solving problems,
  - Monitoring tasks,

- Metacognitive accuracy,
- Metacognitive trust

The defining and description of key competences represent an actual concern not only for the UE organisms, but also for other institutions, national or international organizations. The project *Partnership for 21<sup>st</sup> century skills*, which started in 2002, implicating the Education Department of USA, but also other entities/organizations interested in the educational field, aimed the defining of key competences for the 21<sup>st</sup> century, beginning from the premise that *each child needs certain knowledge and specific competences in order to become a citizen, an efficient worker or leader, in order to effectively integrate in the society in which he/she lives*. The observation which served as a landmark in the projection of those competences - observation which is valuable also for the Romanian space - is that there is a profound disparity between the knowledge and the competences which are offered to the pupils in school, and the knowledge and the competences which they need in the communities of the 21<sup>st</sup> century and at their future working place. In order to help the education's practitioners to integrate the competences in basic academic disciplines, it was elaborated *The learning framework in the 21<sup>st</sup> century (P21 Framework Definition Document)*, which offers an unitary vision upon the learning process. This framework describes generally the abilities, knowledge, competences and expertise which pupils must have in order to succeed in work and life. There are identified three types of competences: *learning and innovation skills, information, media and technology skills* and *life and career skills*. In order to fathom the understanding of the *learning how to learn competency*, of which we are especially interested in, we will detail the aspects subsumed to it, as they are presented in *The learning framework in the 21<sup>st</sup> century*. Thus, the *learning and innovation skills* include 3 categories of abilities:

## *2.1 Creativity and innovation*

### *2.1.1 Creative thinking*

- Utilization of a large array of creativity stimulating techniques (like brainstorming);
- Creating new and useful ideas;
- Elaborating, refining, analyzing and evaluating one's own ideas, in order to improve and maximize the creative efforts.

### *2.1.2 The creative work in collaboration/group*

- Elaboration, applying, and communicating new ideas in an efficient way;
- Opening and receptivity to new and diverse perspectives; valorization of the group's ideas and of feedback;
- Originality and inventiveness in work understanding of the real limits of others in the context of adopting new ideas;
- Perceiving failure/abortion as an opportunity to learn; understanding the fact that the process of creativity and innovation implies reporting on a long period of time, being a process characterized by small successes and frequent mistakes.

#### *Implementation of new/innovations*

- Valorization of the creative ideas in order to bring a concrete and useful contribution in the field in which innovation is produced.

## *2.2 Critical thinking and problems solving*

### *2.2.1 Efficient thinking*

- Utilization of the different types of reasoning (inductive, deductive etc), adequate to the situation;

### **2.2.2 Utilization of the thinking systems**

- Analyze of the way in which parts of an ensemble interact in complex systems in order to produce certain results.

### **2.2.3 Emission of judgments and making decisions**

- The efficient analysis and the evaluation of profess, facts, arguments, demands and beliefs/convictions;
- analyze and evaluation of the alternative and relevant points of view;
- synthesis and accomplishment of connection between information and arguments;
- information interpretation and formulation of conclusions based on the best of analysis;
- critical reflection upon the learning experiences and processes.

### **2.2.4 Problems solving**

- solving different types of non-familiar problems in both ways, conventional and innovative;
- identification and asking relevant questions which to clarify various points of view and to lead to better solutions.

## **2. 3. Communication and collaboration**

### **2.3.1 Efficient communication**

- Efficient articulation of thoughts and ideas using communication abilities, in a variety of forms and contexts;
- Efficient listening in order to decipher the significance of knowledge, values, attitudes and intentions;
- Utilization of communication for a series of purposes (for instance, to inform, instruct, motivate and determine);
- Utilization of multimedia and of modern technologies and the capacity to analyze a priori their efficaciousness and to evaluate their impact;
- Efficient communication in diverse environments/contexts (including multilingual).

### **2.3.2 Collaboration with others**

- The capacity to work efficiently with diverse groups;
- Exercising the flexibility and the desire to help and to make compromises in order to achieve a common purpose;
- Assuming responsibility for the collaborative activity an estimation/evaluation of the individual contribution for each member of the team.

Referring to the *European reference framework of the key competences of learning throughout lifetime*, the basic competency, from those we mentioned in this document, which conditions the formation of all the other skills, is *learning how to learn*.

Once formed, this skill becomes a guarantee of the personal development, of the optimal professional insertion and of the social inclusion. „*Learning how to learn* includes the availability to organize and control one's own learning, both individually and in group. This includes the ability to efficiently organize time, to solve problems, to acquire, process, evaluate and assimilate new knowledge and to apply the new knowledge and skills in a variety of contexts - at home, at work, in education and training. In more general terms, “*learning how to learn*” contributes strongly at the professional pattern management” (*The European reference framework of the key competences of learning throughout lifetime*). The management and efficiency of school learning are conditioned by the competency of learning to learn. „*Learning to learn*” is a fundamental acquisition which obliges us to a couple of interrogations:

*Do our pupils/students know to learn efficiently?*

*Are they aware of their own learning?*

*Do they adjust this learning?*

*Are we responsible of the way in which they learn?*

*Can we help our pupils/students to learn how to learn? How?*

Those questions open only a couple directions of analysis/self-analysis, observation / self-observation, reflection, evaluation/auto-evaluation for teachers. Applying these actions, we will be able to outline objective responses to the interrogations which are not only rhetorical, but are meant to orientate the teachers' attention and generally the educational system, towards the pupils' real needs. Thus, the quality of learning of the entire educational process will increase visibly.

### 3. Methodology

Assuming that the competence of *learning to learn* is a guarantor of students' personal development, a research study was undertaken in that direction. For this purpose, in the frame of the *PROFILES* project - *Professional Reflection Oriented Focus on Inquiry-based Learning and Education through Science* (<http://www.profiles-project.eu/>, <http://profiles.ssai.valahia.ro>), a questionnaire was applied on a sample of 250 Romanian students from upper secondary education in several high-schools from Dâmbovița, Teleorman and Buzău Counties. The questionnaires were applied under conditions of complete confidentiality, most of the students expressing a real interest related to the discussed issues. The questionnaires were structured in the manner of assessment scales containing seven steps. It should be noted that all the surveyed students were reported at the same scale and addressed issues, in two distinct temporal situations: an initial situation - before the implementation of the teaching strategies promoted by the *PROFILES* project -, and the other as post-implementation. Also, for each item, the students stipulated the ideal teaching situation for the Science lessons. The students' feedback was collected before and after the implementation of the *PROFILES* modules designed in the frame of the project. The students' assessment questionnaires considered the *Motivational Learning Environment - MoLE* - as technique. (Bolte, 2006). The processing of the results was mostly statistical, in correlation with qualitative analysis, based on the data gathered from discussions with students and involved teachers.

### 4. Results and Discussions

As result of the implemented questionnaires, Figure 1 illustrates the students' opinions concerning the level of importance of the topics studied during Science lessons related to the everyday life (Figure 1a), but also to the importance for the society (Figure 1b). Both graphics contain the students' answers from an ideal situation point of view, beside their responses completed before and after the *PROFILES* modules implementations, during their Science lessons.

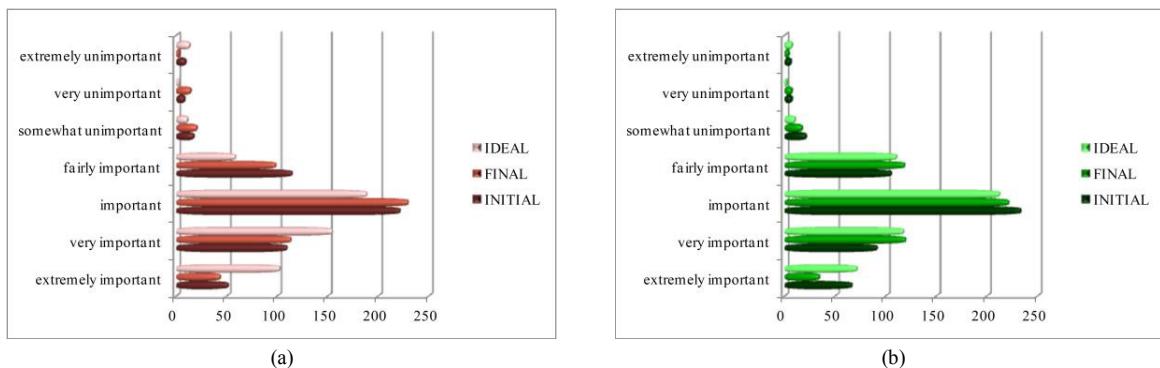
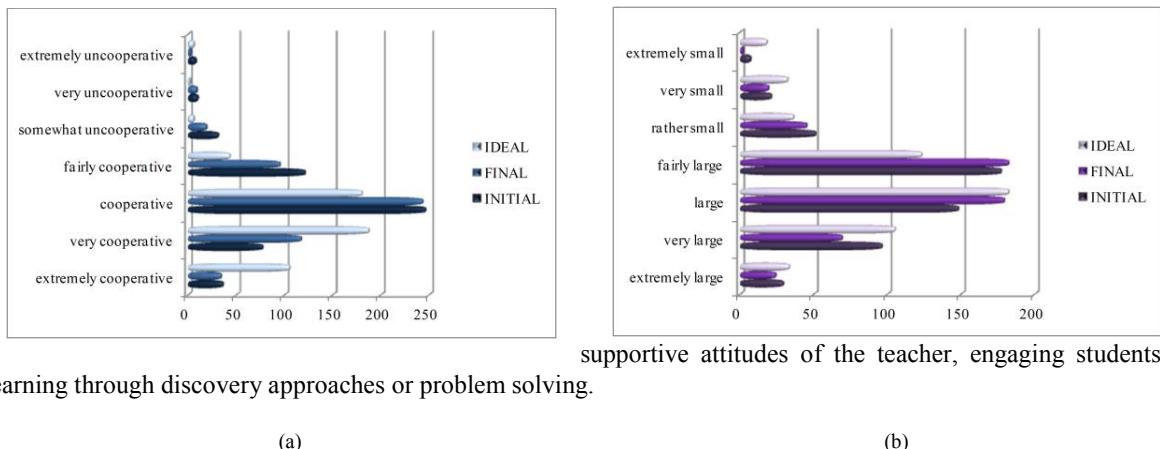


Fig. 1. Students' feedback to the questions: (a) "The level of importance to my everyday life of the topics I study in my Science lessons"; (b) "The level of importance to society in general of the topics I study in my Science lessons" in the ideal situation from the student's point of view, before and after the *PROFILES* Modules implementation.

Analyzing students' answers on the usefulness of topics in Science lessons to their everyday life, we see that most of them are focused on the third step of the scale (*important*) on the downside (Figure 1a). Also, it is noted that in all three cases (ideal, initial and final) of investigation, students' responses are concentrated in the same area. This

leads us to consider that students are aware of the importance of the themes addressed in Science lessons related to life skills training, in general, and hence, the competence of learning to learn. Figure 1b presents the students' answers concerning the level of importance to society in general related to the topics studied in the Science lessons. The feedback illustrated in this figure is in tightly correlation with the students' answers to the previous item and this emphasizes the relevance of the topics and themes addressed in the context of Science lessons for society in general. Here, the students' responses in all three cases of the investigation were focused clearly on the level of "important". This means that students understand in a high measure that in the context of the contemporary society, the knowledge, the extent to which an individual possesses scientific knowledge acquires special significance in terms of his/her personal and social development. The students' feedback concerning the level of co-operation that their colleagues manifested during the Science lessons is illustrated in Figure 2a. Analyzing the obtained data, it can be noted that for the majority of the respondents, the level of students' cooperation in Science lessons is *good*, to *very good*, and for the "final" situation of analysis (that contains the students' answers after the PROFILES modules implementation) it can be noticed again the benefits of teaching strategies implemented by the teachers who participated in the PROFILES project, which led to a significant increase of the level of cooperation between students.

Figure 2b shows the students' feedback related to the level of the effort perceived for understanding the subject matters in Science lessons. A short look on the data presented in the figure emphasizes that regarding the effort to understand the issues presented during the Science lessons, the majority of students considered that in all cases of investigation, this is *significant*. Thus, we think that it is imposed a reconsideration of instructional practices so that they facilitate learning. In this context we have to mention the necessity of transposing scientific information, available knowledge of students, alternating theoretical and applicative activities (experimental), promoting



supportive attitudes of the teacher, engaging students in learning through discovery approaches or problem solving.

(a)

(b)

Fig. 2. Students' feedback to the questions: (a) "The level of co-operation that the students in your class display in Science lessons"; (b) "The level of effort that I make to understand the subject matter in Science lessons" in the ideal situation from the student's point of view, before and after the PROFILES Modules implementation.

## 5. Conclusion

*Learning how to learn* represents a key competence in the actual society that ensures big chances of adaptation and insertion in the socio-professional environment, both for young generation and adults. The practice emphasized that students appreciate the importance of Science lessons for solving the real life problems and they greatly understand the related knowledge and its features for their personal and social development. However, in order to maximize the *learning how to learn* key competence, it is recommended to give to students much more possibilities to be more active, to put more questions and to communicate and collaborate between them during the Science lessons. From the teacher's point of view, some changes in the teaching practices are welcome in this respect.

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