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AGENȚIA ROMÂNIA
DE ASIGURARE A
CALITĂȚII ÎN
ÎNVĂȚĂMÎNTUL SUPERIOR

LEARNING TO LEARN - A KEY COMPETENCE WITHIN BOLOGNA EDUCATIONAL SYSTEM

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THEORETICAL FRAME

Within the Romanian university educational environment there are numberless interrogations related to the finalities it should form– from the cognitive finalities to the attitudinal ones. For the university educational space the cognitive finalities consider not only the acquisition of an specialized information, transposition, application and evaluation capacities, but also research skills, reflection skills upon one's own learning and searching possibilities.

There are students who experience the academic success (or not!) thanks to their learning to learn skills.

For P. Knight the general finalities are: the field and subject understanding, the development of the practical skills and the metacognitive skills.



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Tuning Educational Structures

- **instrumental competences** (cognitive, methodological, technological, linguistic skills),
- **interpersonal competences** (emotional competence, cooperation skills, respect the ethic and social rules) and
- **the systemic competencies** (capacity to understand and to foresee the information functioning within a complex system, capacity to understand the changes and to plan the changes).

The European Framework for Key Competences

There are eight key competencies: **communication** in mother tongue; communication in foreign languages; **mathematical competence** and **basic competences in science and technology**; **digital competence**; **learning to learn**; **social and civic competences**; **sense of initiative and entrepreneurship**; **cultural awareness and expression**

(Recommendations of the European Parliaments and the Council of 18 December 2006 on key competences for lifelong learning, in Official Journal of the European Union)



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THE CONCEPTS...

The metacognition is defined as a strategic application of the declarative, procedural and conditional knowledge in order to fulfill the established tasks.

The metacognitive strategies comprise:

- the planning,
- the monitoring and
- the evaluation.

METHODOLOGY

The participants in this study were 92 students at sciences of education, who were attending an optional course about learning how to learn, in the end of the first academic year.

The mean of number of years of experience as teacher is 6.54 and the median is 1 year. Most of the students (47,8%) don't have any experience in these field.

The mean of the academic performance is 8,29 and the median is 8,40.

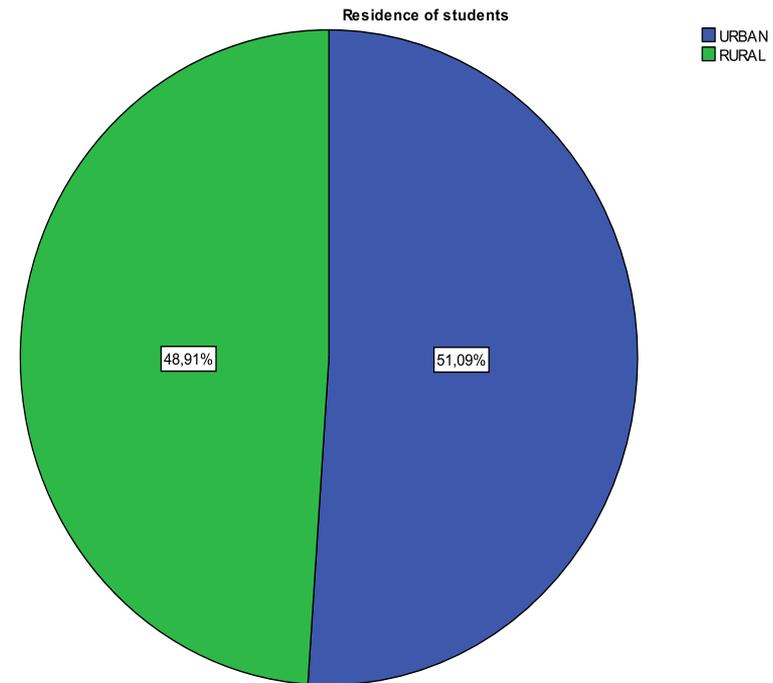


Figure 1. Distribution in terms of residence



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INSTRUMENTS AND VARIABLES

In order to identify the students` perceptions upon their own academic performance we have asked the students to evaluate themselves before the exam (before the exam they should put themselves a mark considering their learning effort) and to evaluate themselves after they did the exam. These marks were compared with the evaluator`s marks.

For the same reason a second set of compared marks were between the students` self-evaluation and the teacher`s evaluation (using the teachers` marks and the students` marks, after they finished to answer to the exam questions)



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In order to find out the level of metacognitive competencies of the freshmen we applied a questionnaire which describes the level of the metacognitive competence. The questionnaire was built and validated by professor M. Stanciu within the project „The development of metacognitive competence at the students from the first academic year”. For the present study we were interested in that items which point out those capacities enclosed to the metacognitive competence. The concept of metacognitive competence was analyzed through eight indicators: the taking notes capacity, the capacity of elaboration and presentation of an individual project, the capacity of elaboration and presentation of a group project, the capacity of elaboration and presentation of a scientific work, the capacity to follow a learning plan, the capacity to evaluate a learning plan, the capacity of management information.



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The achievement motivation was assessed through Achievement Motivation Inventory of Heinz Schuler, George Thornton III & Andreas Frintrup (Romanian version, L. Miclăuș and Dragoș Iliescu).

The inventory consists from 170 items, displayed by 17 dimensions: Persistence, Dominance, Engagement, Confidence in Success, Flexibility, Flow, Fearlessness, Internality, Compensatory Effort, Pride in Productivity, Eagerness to Learn, Preference for Difficult Tasks, Independence, Self-Control, Status Orientation, Competitiveness, Goal Setting. Each item is assessed on a scale from „1” – „completely disagree” to 7 – „completely agree”. For the purpose of our study we are especially interested in Eagerness to Learn which signifies a personal openness toward the effort for the acquisition of the new knowledge.



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The dependent variables are

- the metacognitive competences,
- the values of achievement motivation (the values of its dimensions) and
- the marks obtained through evaluation and self-evaluation.

The independent variables related to the group of students are:

- the experience level in the educational system,
- the academic performance and
- the living environment.



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Hypothesis 1: the developmental level of the metacognitive competence has significant differences in terms of academic performance.

Hypothesis 2: There are significant correlations between the students` learning competences, the self-evaluation and the eagerness to learn

Hypothesis 3: There are significant differences between the self-evaluation of the students and the teachers` evaluation in terms of academic performance

Hypothesis 4: There are significant differences between the students with different academic performance and the eagerness to learn

RESULTS

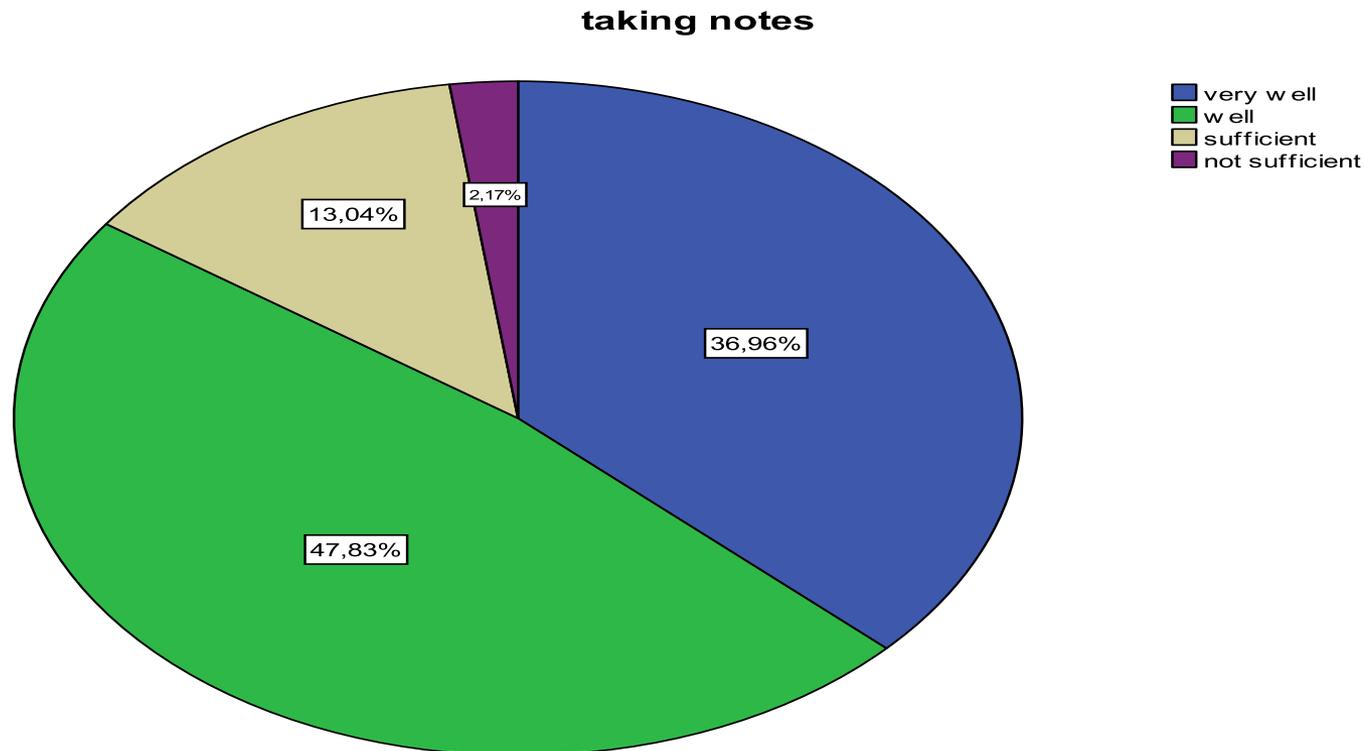


Figure 2. The students` perception upon their capacity of taking notes

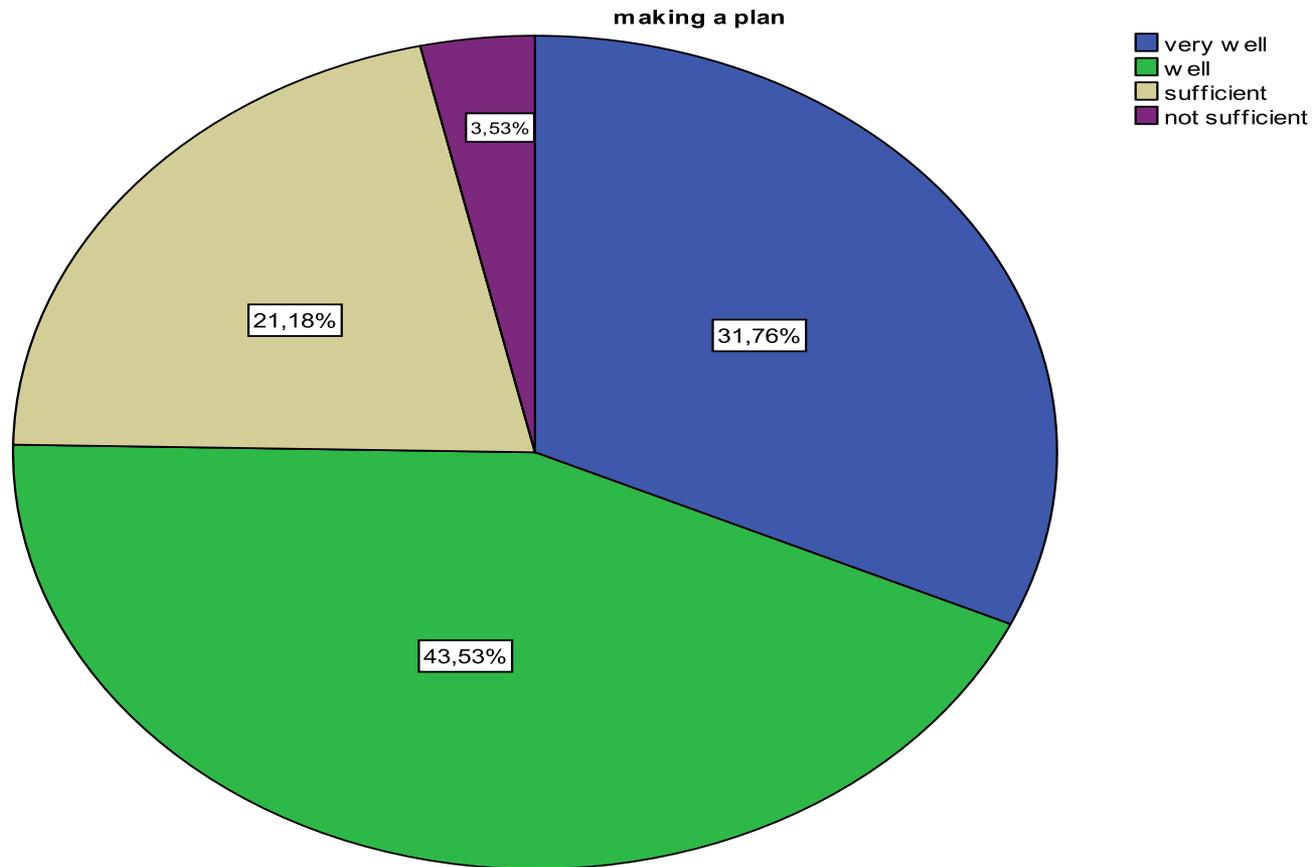


Figure 3. The capacity of elaboration a learning plan

Hypothesis 1: the developmental level of the metacognitive competence has significant differences in terms of academic performance

We could find out that the students with poor academic performance have poor capacities of taking notes. These two factors could be related because the students able to take notes they have already the capacity for information synthesis, for information processing, and the learning success could be derived from this fact.

The students who have the capacity of information processing and information organization get high level of academic performance.

Table 1. Perceptions about metacognition skills and academic performance

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference		
elaboration a learning plan	Equal variances assumed	,884	,350	-2,935	90	,004	-,475	,162		
	Equal variances not assumed			-2,922	84,956	,004	-,475	,162		
abilities to structure the learning materials	Equal variances assumed	,833	,364	-3,010	90	,003	-,375	,125		
	Equal variances not assumed			-2,990	80,641	,004	-,375	,126		
perceptions upon academic performance	Equal variances assumed	2,571	,112	-5,247	90	,000	-,837	,160		
	Equal variances not assumed			-5,228	86,372	,000	-,837	,160		

Hypothesis 2: There are significant correlations between the students' learning competences, the self-evaluation and the eagerness to learn

We could notice that there are both positive and negative correlations between the data. Considering the results, we could infer that the students who see themselves as having capacities for structure the learning material have also a positive perception upon their own learning results. We consider as interesting the correlations between the eagerness to learn and the perception upon academic performance: the students with high level of eagerness to learn have significant low perceptions upon their academic performance. This could mean that they are discontent with their learning results and they want to grow their knowledge within the study field.

Hypothesis 3: There are significant differences between the self-evaluation of the students and the teachers' evaluation in terms of academic performance

In order to verify this hypothesis we have applied the T Test for independent samples (in terms of the median value of the grades after the first academic year – 8,40).

We have notice that the students with low academic performance have also low results both at the teachers' evaluation and at the self-evaluation. The differences between the means is 1,30, for $p < 0, 005$, and this demonstrates that these differences are significant.

Hypothesis 4: There are significant differences between the students with different academic performance and the eagerness to learn

This hypothesis was confirmed. Through statistical analyses we obtained that the students with low academic performances have also low level of eagerness to learn.

	Mean	N	Mean	Std. Deviation	Std. Error Mean
Eagerness to Learn	>= 8,40	47	49,8723	5,16517	,75342
	< 8,40	45	46,4667	4,02605	,60017



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CONCLUSION AND DISCUSSION

This investigation shows us what is the perception of the students from the first year from the Faculty of Science of Education regarding their metacognitive capacities, in terms of their attitude towards the self-evaluation and their academic performance.

We propose for the university educational policies to take into consideration the development of the university pedagogy courses, the development of the learning techniques courses for the students and also counseling programs for assisting the students with learning difficulties. The schools and teachers are challenged by at least two things: on the one hand teaching the core of subjects within the field of study, and, on the other hand, helping students to learn the ideas and practices related to the learning process itself. This complex skill will enable the students to become autonomous learners (learning autonomy is recommended by other studies on the teachers' learning how to learn issue)



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