

Documentary study on the psychopedagogical knowledge of students

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Abstract: This study is part of a larger experimental approach called Optimizing methodological skills training during teaching practice activities, an approach that aims to identify and test ways of developing teaching skills for the profession to university students with educational profile of the "Aurel Vlaicu" University of Arad (Department of Teacher Preparation Personnel). In this constatativ study on identifying the level of psychopedagogy knowledge on students, collecting data was possible by the instrumentality of an evaluation test, build by as.

Keywords: teacher, psychopedagogy knowledge, teaching practice, evaluation test.

Introduction

In preparing and training students for teaching profession we could talk about two stages. As a first step we recognize the initial training, conducted during study in college and aimed towards specialized scientific knowledge (according to the field in which the student specializes: mathematics, science, physics, chemistry, engineering, economics, theology, psychology, history, modern languages, etc.), and psycho-pedagogy knowledge and teaching skills training. In a second step we talk about continuous training of teachers, further training in order to make contact with ideas and new practices in education generally and in didactics in particular.

Preparing for teaching career occurs in parallel (the concurrent model), along with the scientific - specialized study during years in

university. Simultaneously, there is the possibility for choosing a training course based on the consecutive model for preparing as a teacher in secondary education, and higher postsecondary.

Pedagogical practice's purpose is "harnessing the theoretical knowledge and laying the foundation for their practical training through the provision of specific professional skills for a teacher who wants to practice a modern education" (Bocos, 2007).

Pedagogical practice's goals are: teaching students the ability to work with information from specialized disciplines and from the field of education sciences; training students in the use of framework plans, programs and schools textbooks; enabling students to develop skills to use specialized materials; initiating students to the technique of laboratory or cabinet classes; the acquisition of skills by students for the teaching profession. Acquiring psycho-pedagogical skills, mastering technology and teaching methodology, so that the professor teaching behavior is one factor in higher performance for students is also part of the initial pedagogical training. Of course, teaching practice for students can not be reduced to developing, supporting and reviewing lessons. It must be an opportunity and a framework to implement all the theoretical knowledge acquired in the psycho-pedagogical disciplines.

Teaching practice purposes, according to OMEN 4356/1996 are:

- training students ability to work with information from the specialized disciplines of science and education;
- orienting students in the use of the master plans, programs and textbooks;
- developing students skills in using specialty materials, initiating students in technical laboratory work or study;
- acquiring professional skills relating to the teaching profession.

Methodology

The evaluation test was built to identify the level of knowledge acquired by students in psycho-pedagogical mandatory disciplines (educational psychology, introduction to pedagogy, curriculum theory and methodology, theory and methodology of training, theory and methodology of evaluation, specialty didactics), knowledge there are absolutely necessary in achieving effective results in teaching practice.

The evaluation test includes a number of 30 items, which can be divided into five categories, as follows:

- Category I - regarding the theme of **designing teaching activities**;
- Category II - analyses issues relating to **educational goals**;
- Category III - studies forms of organization of teaching activity with emphasis on **lesson as a primary organizing form** of educational activities;
- Category IV - includes items aimed at **teaching strategy** issues,
- Category V includes **didactics evaluation**.

The sample of subjects was composed of 280 students from the third year of study in "Aurel Vlaicu" University of Arad, students who participate in training courses organized by the Department for Teacher Education. Subjects were aged between 20 and 44 years with an average age $m = 23.45$ years and standard deviation $sd = 5.81$. Of these, 98 are male (representing 38% of the overall tested population), 170 women (representing 60.7% of the overall tested population), and 12 people have not mentioned the answer to this question (representing 4.3% of the total number of subjects) (Bocos, 2003). Participation in psycho-pedagogy course module was mandatory for 71.8% (201 subjects) of the students and optional for 25% of them (71 subjects). A total of 9 subjects not mentioned the compulsory or optional nature of the participation in courses. They represent 3.2% of the overall population included in the study.

Data analysis

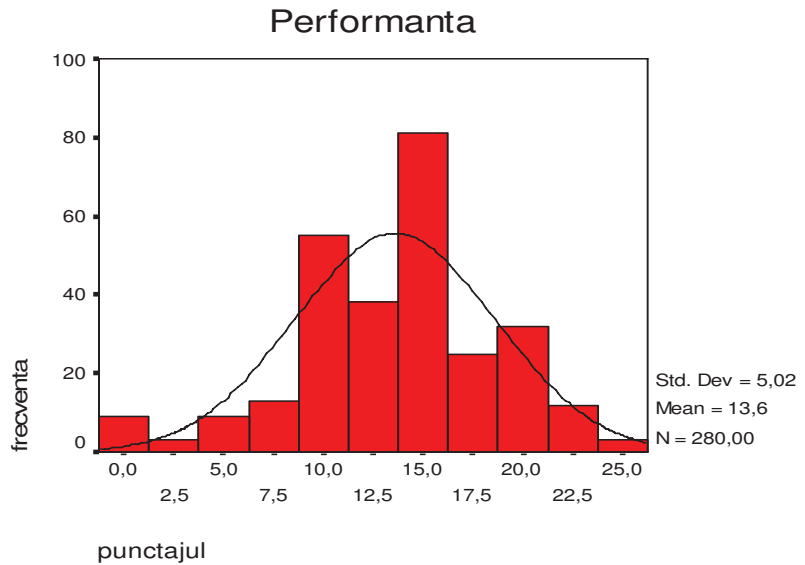
To assess the level of knowledge in psycho-pedagogy, a sample assessment knowledge test has been applied, which consisted of 30 items with closed or open questions. Answers to these items were listed in the database and were noted with „0” for the wrong replies and with „1” the correct responses. Finally, a score has been calculated by adding all correct responses. This score shows the level of knowledge in the field of psycho-pedagogy (Sava, 2004).

Analyzing the data, we obtained the descriptive results summarized in the table below. Thus, the score goes from 0 to 26, with an average $m = 13.58$ and a standard deviation $sd = 5.01$. Inspecting distribution results we find that it is approaching a Gaussian distribution. This means that most participants achieved a performance close to the average performance and a very low or very high performance was obtained by a relatively small number of participants (table no.1 and figure 1).

Table 1

Descriptive results on the knowledge assessment

N	280
Average	13,58
Median	14,00
Standard deviation	5,01
Minimum	,00
Maximum	26,00

**Figure 1** The results distribution for the knowledge assessment

For an in-depth investigation on the level of knowledge that students have gained we analyzed the results obtained from the docimological phase, on categories tracked in the sample construction:

- designing teaching,
- educational goals (operational objectives),
- forms of organization of educational activities (with emphasis on lesson and the types of lessons),
- teaching strategies and
- assessment.

In this respect we totaled the number of correct responses for each dimension. Next we present the frequency and the number of correct responses for each dimension.

Thus, for designing teaching activities we have a small number of participants who do not give any correct answer or give the maximum number of correct answers. Most participants, as seen from the percentage representation (table no. 2), gave three or four correct answers.

Thus, we see that, regarding the definition of the term of design teaching; questions that teaching design answers; components; structure of school curricula; competence for developing official school curriculum; the curriculum needed for the elaborating the lesson project; stages of project lesson preparation, students' knowledge are at an average level, 53% of subjects giving 4, 5 or 6 correct answers.

Table 2

The frequency and the number of correct answers percentage for didactic planning

Number of correct answers	Frequency	Percent
0	9	3,2
1	18	6,4
2	41	14,6
3	64	22,9
4	96	34,3
5	36	12,9
6	16	5,7
Total	280	100,0

Regarding the knowledge of the educational purposes and operationalization of the educational objectives (items 8, 9, 10, and 11), most participants (37.1%) gave a single correct answer from four possible.

This is illustrated in Figure 2. This means that:

- the enumeration of the three steps developed by RF Mager in the operationalization of a goal;
- identify a operating objective properly formulated,
- establishing the link between an reference objective and a operational objective,
- are aspects that students do not master in an efficient measure.

This can be explained by the fact that they still had not had direct contact with the class, with the development of an instructive - educational approach, and just exercises in courses and seminars have not been able to raise the awareness of the students regarding the importance of these theoretical concepts in practical work, didactics that will take place in the future.

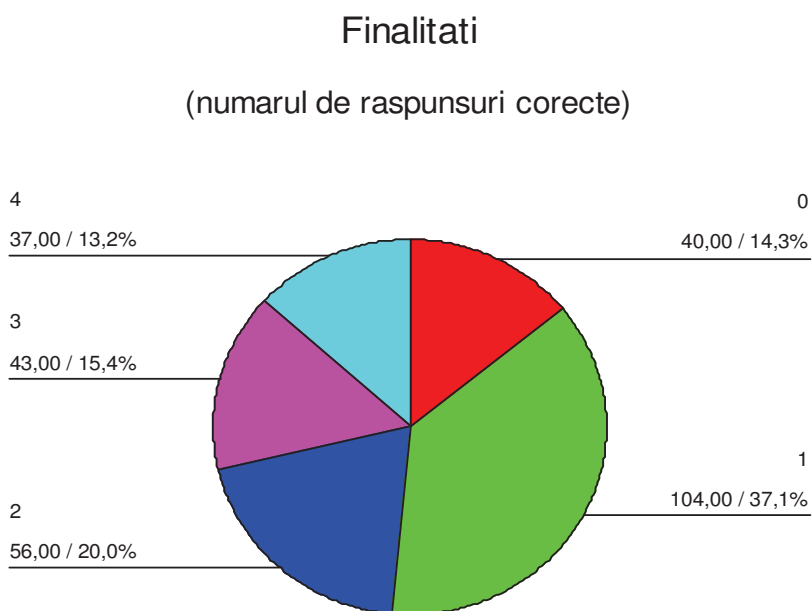


Figure 2 Number of correct answers - the educational goals dimension

A similar pattern is found when knowledge of types of lessons is analyzed (figure 3), where 40.7% of the participants gave a single correct answer. An almost equal percentage of participants gave 0 or 2 correct answers.

The lowest percentage is found for the maximum number of correct answers: 8.2%. This category of the evaluation test seeks:

- listing the main categories of lessons,
- identifying logical order of steps for methodical conducting a lesson;
- assertion of "replicas" / statements / procedures for entry into the intellectual effort of the lesson.

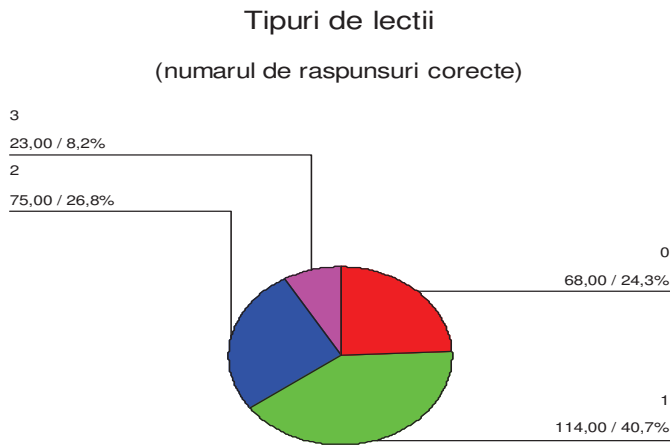


Figure 3 Number of correct answers - the types of lessons dimension

In the case of teaching strategies we have a greater number of items assessing this dimension (figure 4). The results show that most participants gave 4-7 correct answers, with a maximum frequency for 6 correct answers. Items in this category follow:

- defining the term "didactic methodology",
- identifying the characteristics of some teaching methods: heuristic conversation, explanation, learning through cooperation, reasoning for the need of using active-participatory, interactive methods;
- enumeration for organization types of students work.

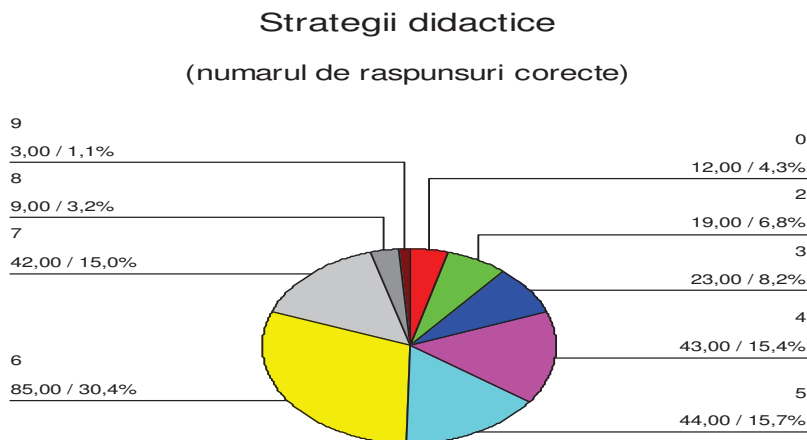


Figure 4 Number of correct answers - teaching strategies dimension

The same conclusion is noted for evaluation (figure 5), where few subjects give the all the correct answers (6), but a rather high number do not give any answer correctly (53).

This category aims:

- to define strategy for evaluating the results of school training;
- to define the formative evaluation and identification of its goals; to identify forms of assessment and their specific instruments;
- to formulate objective type items;
- to identify an semi/objective item type.

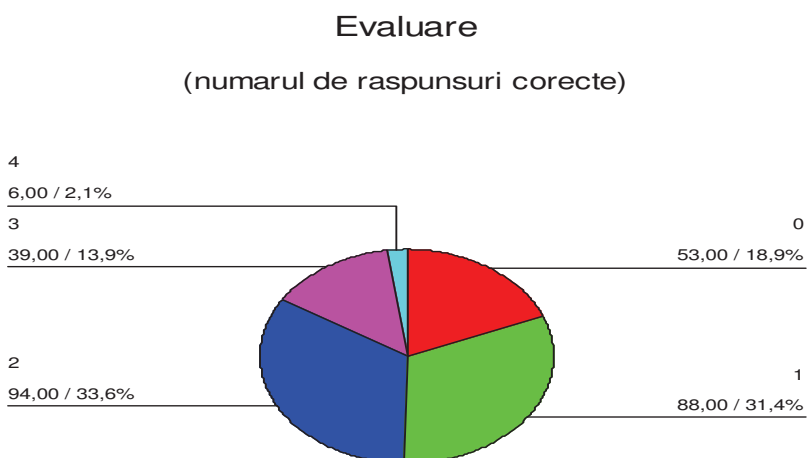


Figure 5 The number of correct answers - educational assessment dimension

To make a comparison between dimensions and see for which of these students have more knowledge we have resorted to a contrivance of the calculation. We calculated for each dimension an index consisting of arithmetic average of responses to dimensions items. So we gathered all replies for items composing didactic design dimension and divided it by the number of items which constitute it. We did the same for each dimension. Using a more complex statistic we obtained the results presented in Table no. 3. Analyzing the obtained results, we see that most knowledge is to be found for didactic strategies, for teaching methodology, followed by total score for teaching strategies and teaching design.

The lowest score was obtained for the types of lessons and assessment.

Table 3

Descriptive results for assessing the dimensions of psycho-pedagogy knowledge

	Teaching design	goals	Lesson types	Didactic strategies	evaluation
N	280	280	280	280	280
Average	,4857	,4402	,2973	,5007	,3723
Median	,5714	,2500	,2500	,5000	,2500
Standard deviation	,1975	,3136	,2245	,1882	,2549
Minimum	,00	,00	,00	,00	,00
Maximum	,86	1,00	,75	,90	1,00

Next, using ANOVA techniques for repeated measurements, we examined whether differences in students' knowledge for the investigated dimensions are significant.

Since we obtained an $F(6.274) = 3.71$ $p = .05$ we can say that we have statistically significant differences between the results obtained for evaluated knowledge, which means that certain thematic categories (design teaching, teaching strategies) students had significantly more knowledge than on others categories (educational goal, evaluation, organization types for educational activity).

Conclusions

Regarding data obtained through the application of the docimological phase we emphasize that: the performance of subjects in the docimological phase is at an average level ($m = 13.58$), the distribution is shaping as a Gaussian distribution.

As can be seen, most subjects achieved a performance close to the average performance and a very low or very high performance was obtained by a relatively small number of students, a result somewhat predictable which can be improved through an effective intervention.

Following further statistical analysis we find that the lowest score in the evaluation test was obtained on the thematic categories of:

- *organizational forms of students activities* (where $m = 0.29$ / 40.7% of subjects giving a correct response of the three possible),
- *didactic evaluation* ($m = 0.37$ where a significant number of subjects provided no correct answers, most of them - 31.4% respectively 33.6% offering one or two correct answers),

- followed by thematic category *educational purpose* ($m = 0.44$ /, where 37.1% of subjects gave a correct answer from four possible). Relative to the relationship between age and performance on the docimological test, we found that as the age is higher the performance is even higher.

We also saw a difference in performance depending on the compulsory or optional type of psycho-pedagogy course, subjects actually opting for DPPD courses obtaining higher performance on docimological test.

Until this moment, future teachers have received both theoretical and specialized psycho-pedagogy training. This preparation is more obviously inadequate in the event that is not complemented by appropriate practical training. It is recognized that the initial training and continuing training of teachers can be judged by two criteria: quality of theoretical courses and the duration in hours of practice teaching.

Training must also have an actionable perspective. Preparation and training of teachers involves personal transformation and the dynamics of training should be extended from subject to the environment, socio-emotional and motivational personality dimension. It is needed to address this part as part of special programs, not to send the graduate unprepared for life and exposed to the overwhelming environment.

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