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Teaching roles and competences in the century of high technologies

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Abstract

The publication analyses the new requirements, predetermined by high technology on the one hand, and on the other hand, by the trainees themselves, the so-called digital generation, which are in front of the teacher, the lecturer. Traditional methods of learning are slowly shifted to those that offer active interaction between participants in the learning process. Some of these are interactive methods based on advanced technologies offering a variety of activities, such as information exchange, sharing of reasoning and impressions. Their effectiveness in teaching and training was studied in a target group of 'students' because of their ability to state their position most clearly and reasonably.

Keywords: lecturer, roles, competencies, high technologies, trained.

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1. Introduction

From the very beginning, we should note that such a study was made and described by Sinto Yulzari, in the pedagogical specialties of 'Angel Kanchev' University of Ruse. Nowadays, we use the indicators and the matrix to test the teaching roles and competencies in the age of high technology. The specificity of the teaching activity is expressed in its interdisciplinary and psychological complexity, as well as in the unconditional content and technological comprehensiveness. There is no need for a specific deepening to say that the teacher should master the 'didactics' professional field in order to direct and organise in a certain direction the collective, mainly intellectual and psychological activity of their subject, the learners, whether children, pupils', students' or adult audience. In addition, he is also obliged to act as an educator, insofar as through his effects he forms certain psychic qualities, formations and competences of the trainees. The lecturer also uses information on the social interaction to provide content with specific content. For this reason, he must necessarily be a professional in the discipline he teaches, i.e., be a historian or a mathematician or a physicist or in other social or natural sciences serving the content of the learning process. It is not possible for the trainee to broadcast information with certain content without prior, introspective and conscious, in-depth and complete, to be competent and to process it in a convenient manner to provide the audience with a look. We talk about both traditional and innovative learning. In recent years, the so-called 'blended learning that combines innovations and traditions' (Harakchiyska, 2006). In reality, exercising its activity, the teacher is provoked to apply different professions → to an organiser; facilitator of the intellectual and social activities of the audience; the social psychologist who has the command of the learners; the social pedagogue, solving their mental problems; of computer science with competences in the field of modern presentation technologies and skills, methods and tools; an artist using the variety of verbal and non-verbal communications, and more and more. 'In the present stage of the development of the educational sciences, education and pedagogy mean not only the process of transmission and acquisition of a certain range of knowledge but also the practical training in a problem-oriented practical guide for it. It is logical that the paradigms of person-oriented learning and education unlock new expectations for educators, which consequently lead to the need to build new competencies both in the future and in acting is teachers' (Engels-Critidis, 2017). Generally speaking, so far, a faint and incomplete attempt has been made to identify the professional areas to which the teacher touches in his entire work. Moreover, in this publication, we have no intention of discussing the conglomerate and the exceptional variety of purely human personal qualities and competences that a successful lecturer should possess—moral, cognitive, intellectual, social, organisational, etc. They define the good teacher as a complex and mentally accomplished person (Petrovska, Sivevska, Popeska & Bocvarova, 2015; Sivevska & Cackov, 2011).

2. Exposition

Without seeking to conduct a detailed theoretical analysis of the assessment, we need to share some methodological statements defining it as a psychological phenomenon and as an interpersonal process. We underline the definition of 'interpersonal process' because, in its essence, assessment is a psychological phenomenon that operates only in interpersonal relationships between at least two individuals. It is a fact: 'A weak matter in the scientific discussion is the assessment of the conformity of the training of the teachers and their teaching in accordance with the requirements of the labour market' (Beloev et al., 2014).

The first theoretical stand for the assessment is that it should be considered as a subject-object phenomenon as a subject-object process. Through it, the subject, i.e., the author of the assessment expresses his conscious attitude to the actions and qualities of the object, the recipient of the assessment. The same is an expression of the relationships between the subject and the object in the evaluation process.

On the other hand, purely psychologically, evaluation is an expression of the psychic activity of both the subject and the object. The object manifests its activity when, through its actions and impacts, it displays, it exteriorises its qualities and peculiarities. The activity of the evaluating subject is manifested in the fact that he consciously perceives the impacts of the object, interprets their content and forms a definite personal attitude towards the qualities of the object, set in his actions (Alexandrache, 2013). As a result of this deliberate interpretation of the object impacts, through its assessments, the subject expresses its more specific or more holistic attitude towards the subject of the assessment. There is a logical chain: object qualities → object relationship → object evaluation.

Another theoretical aspect of the assessment is that it represents a process of profound personal experience for both the subject and the object. This side of the assessment is particularly typical of teacher–learner interactions, where pupils or students are the subject of assessment, and the teacher, with his activity, is in the role of an object. Expressions of student experiences are the emotions, feelings, moods they experience, perceiving the words, actions, sign, posture and other means of verbal and non-verbal communication that the teacher uses in the course of the learning process. In other words, by experiencing contact with their teacher, the learners form within themselves his image, which transforms the image into the subject of their active personal evaluations.

2.1. The objective of the study

Establish the content of the assessment, in this case by the students, of the work of their teachers outlining the specific parameters and importance of each of them.

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The idea of our study is to answer at least the following questions: what, in general, does the teacher represent as the subject of student assessments? What does he look like in the eyes of his students? To what qualities of teaching done by the lecturer, are the students more sensitive and consider them more significant and impressive? What would be the ladder of teaching skills built up by summarising student assessments? We assume that by drawing such a ladder, we will be able to form the portrait of the successful, influential and student-accepted lecturer.

2.2. Design of the study

Our intent is that can the strategy and algorithm of the research be clear and concrete, consisting of the following: we have formulated certain indicators that identify different aspects of the teaching process and outline the 'portrait' of the presenter in front of the students. The function of the indicators is to guide students in what they have to specifically assess in their teaching activities. With them, they make their own judgments. The evaluation itself takes place during or after the lecture.

2.3. The technology of the research

It was a certain vote by the students, with two types of ballot papers marked 'Yes' and marked 'No'. At the beginning of the lecture, we evaluate and present the ballot collection. In it, students voluntarily release their ballots either at the end of the first hour or at the end of the second or in both cases. Naturally, the 'Yes' and 'No' news bulletins are distributed to each student at the beginning of the first hour, and the participants in the break can take their own ballots. The voting procedure was accepted by the students as attractive and they enjoyed their right to participate in it.

At the beginning of the first hour, we state a list of the seven indicators on the whiteboard and this exposure stands during the 2 hours of lectures. We put the following instruction at the audience: 'Student, you will participate in one experiment today. You are asked to rate my (the teacher's) job. The presentation in front of you has demonstrated seven indicators that outline my work and on which you will be able to carry out the evaluation. Each indicator fixes a specific aspect of it. Only metric № 7 is "General," i.e., does not point to a particular aspect but reflects my work as a whole. Each metric points you to what you can assess in teaching, which is its sides and aspects. Each of you has two bulletins, one "Yes" and one "No." Please, while listening to the lecture or at the end of the lecture, on the back of the relevant newsletter, note the impressions of my work. Reflect your impressions with your own words by noting the relevant indicator, but your thoughts and assessments in relation to it. In one newsletter, you can mark thoughts on more than one indicator. The metrics only target you, but you do not have to tell them literally. Your positive impressions are marked on the back of the "Yes" bulletin while the negatives on the "No" bulletin. Ratings are completely anonymous—do not place any characters, marks and/or initials other than the date and group. Each of you can use more than one newsletter and can participate in the evaluation with both newsletters'. We realise that the instruction is, in a sense, versatile, but we need to make sure that students are aware of the experimental voting procedure. After the students put their ballots in the ballot box and left the room, we proceed to the interpretation of the marks. Every freely shared student opinion refers to a relevant indicator, and so we get the 'picture' of the student's assessment of teaching in the lecture. This was also the focus of our experimental tactics—to analyse and interpret shared thoughts, assessments and impressions of students and to arrive at a certain interpretation of their specific and comprehensive assessment of teaching work. This interpretation, referring to the estimates of the entire sample, will lead us to summaries arranged at a given rank scale, a kind of student assessment for teaching work.

On the other hand, the voting procedure revealed another opportunity. Knowing when (the date marked) and by whom (the noted group) the vote was made, we can relate the results to the topic of the lecture and to the own (the teacher's) impressions of their work. This gives the opportunity for a correlation between the students' assessments and the self-assessment of the teacher. In this way, the 'picture' of the student's assessment is more complete, it becomes important for the pursuit of self-perfection of the teacher, helping him to self-assess and to realise the quality of his own activity. But the teacher's self-assessment is another topic.

The study was carried out with 123 students from Pre-school and Primary School Pedagogy and Primary School Pedagogy and Foreign Language (bachelors, full-time) and Preschool and Primary School Pedagogy (bachelors, part-time forms of education). The surveyed students registered a total of 189 evaluation judgements that we analysed. In the statistical processing, the ratio of the number of positive scores to the total number of estimates—189 is sought. In this way, a coefficient of the student rating X is calculated according to the formula:

X = number of estimates by indicator (189 × 100/in %)

Here, it is important to make a note, clarification. Statistical treatment is only the registered positive ratings—those on the back of the 'Yes' bulletin. Why? Not because there was no negative vote. But, first, because he was far less than the positive—all nine bulletins with 'No' and, secondly, because it was totally common, i.e., not identified by any specific indicator but only by the 'General' indicator (№ 7). Thus, specific, statistically based conclusions on the negative student assessment cannot be made; moreover, we find that students do not understand and find it difficult to address the concrete negative aspects of teaching work, but evaluate it at all as poor. We come to the conclusion that student denial can be considered imprecise, unlike approval, which is specific and justified.

Thus, in the present study, we approve and offer attention to the following system of indicators of student assessment for teaching work (by Yulzari, S.). Each individual metric implies a particular part

of the teaching process. For clarity, we point to each metric the questions that its content answers, and which explain what its essence implies.

Indicator № 1: Content of the material. What do students learn? What are they getting information for?

Indicator № 2: Knowledge of the material. Does the lecturer have certainty in handling information? Does it show the ease of presentation? Does the teacher seem convincing in her presentation?

Indicator № 3: Teaching style. In what way does the teacher place his students in teaching? What tools (innovative, obsolete, etc.) are used to bring information to student understanding? What is the quality of the teacher's impact on students by presenting the information to them? What is the quality of the perception and awareness of the students in the process of teaching?

Indicator № 4: Communication style. How does it interact, how does the teacher communicate with students? How do students feel during the lecture? How do they experience their social role as a 'student'?

Indicator № 5: Expression style (language). How does the teacher speak verbally? What does his speech sound like?

Indicator № 6: Activate audience. What is the position of the students involved in the teaching process? Is their cognitive and intellectual activity somehow induced? Do they express a personal position, opinions or decisions during teaching? Do they have the opportunity to interpret the theory in practice?

Indicator № 7: Overall rating. Lack of any assessment arguments.

2.4. Analysis and summary

Content parameters of the 189 student assessments after registering the impressions and opinions of the participants in the study. All of their judgements were carefully analysed and, according to their content, each one was related to a relevant indicator. Thus, the seven indicators gained a specific substance. Each student's benchmark includes certain student judgements that can indicate the content of student ratings. Thus, the content parameters that are found in this way give the whole study a certain practical and applied type as it orients the reader in what the students appreciate and respect in the work of the lecturer, what impresses them positively in it and what they want to exist in every one presented lecture.

The system of content parameters for the different indicators is as follows:

- Content parameters content of the material by indicator № 1:
  - the importance of information on the profession of the teacher;
  - interesting information;
  - practical application of the information;
  - links to the acquired knowledge with the real life.
- Content parameters possession of the material by indicator № 2:
  - understanding of the material by the lecturer;
  - the depth of presentation of the material;
  - reveals the essence, the most important in the information;
  - logical structure in the knowledge display;
  - ordering information;
  - systematisation, structure and the indifference of the teacher's thought;
  - comprehensiveness, without going into unnecessary detail;

  - the actuality of child and primary school age at work in kindergarten and primary school;
  - relevance to work in the family environment;
  - the teacher gives an inner conviction and competence in the handling of information.
- Content elements teaching style by indicator № 3:
  - logical, clear and concrete explanations;
  - curious information;
  - understandable and accessible information;
  - convincing by clarifying the theoretical statements;
  - convincing through examples of the practice and reality of the profession;
  - animation, the attractiveness of the information;
  - ease of presentation of the information;
  - illustration and use of original presentations;
  - lack of congestion with information—reduction of the volume of information to the students' possibilities of understanding;
  - the teacher does not read from notes, but speaks freely and spontaneously;
  - the teacher does not dictate the information, but offers interpretations and own transformation of its content;
  - introducing a common sense in information—examples of life and life;
  - use of innovative, high-tech methods and tools, etc.
- Content parameters communication style by indicator № 4:
  - the teacher in no way affects the dignity and self-confidence of students;
  - the teacher gives signals of friendliness, goodwill and collegiality;
  - the trainer captures, reports and responds correctly to mood swings and prevents fatigue of students;
  - manifestations of goodness, understanding and normal human attitude towards students;
  - the teacher strives to provoke positive emotions in the students;
  - the teacher uses humour, at times it is attractive and entertaining;
  - the teacher is smiling and cheerful;
  - the teacher is dressed well, has an appealing look.
- Content parameters style of expression (language) by indicator № 5:
  - clear and precise expression;
  - a specific language;
  - understandable word, easy to understand information;
  - lack of abstract and incomprehensible terminology, and when there is one, it is explained at the moment;
  - language-rich language—beauty and attractiveness of expression;
  - emotional language;
  - good nonverbal expressions—gestures, mimics, posture, face, etc.;
  - moments of humour and entertainment in the teacher's speech.
- Content parameters activating audience by indicator № 6:
  - at certain times, the teacher provokes students' thoughts;
  - at certain times, the teacher seeks the views of the students;
  - problems to solve;
  - the trainer seeks feedback from students about their understanding;
  - the teacher skilfully combines the theoretical content with practical examples;
  - the lecturer, in relation to the content of the lecture, places assignments for transformation into the practice of the students;
  - the teacher spends the time to answer the student's question;
  - presentations with problematic content are used to be solved during the lecture;
  - presentations used provoke problems and require decision-making by students.

- Content parameters overall rating by indicator № 7:
  - a good teacher;
  - liked by student lecturer;
  - a recommendation for the teacher to continue in the same way.

Quantitative estimates of student assessments. Their empirical analysis will be made using the data from the analytical table below (Table 1) and the ladder of teaching qualities (Figure 1).

Table 1. Analytical table of student assessments (indicator values)

Indicator №	Indicator content	Number of assessments obtained	Students assessments (*X*) (%)
1	Content of the material	21	11.11
2	Possibility of material	24	12.70
3	Teaching style	34	17.99
4	Communication style	31	16.40
5	Expression style (language)	29	15.34
6	Activating audience	20	10.58
7	Total (non-specified) evaluation	30	15.87
Everything:		**189**	**100**

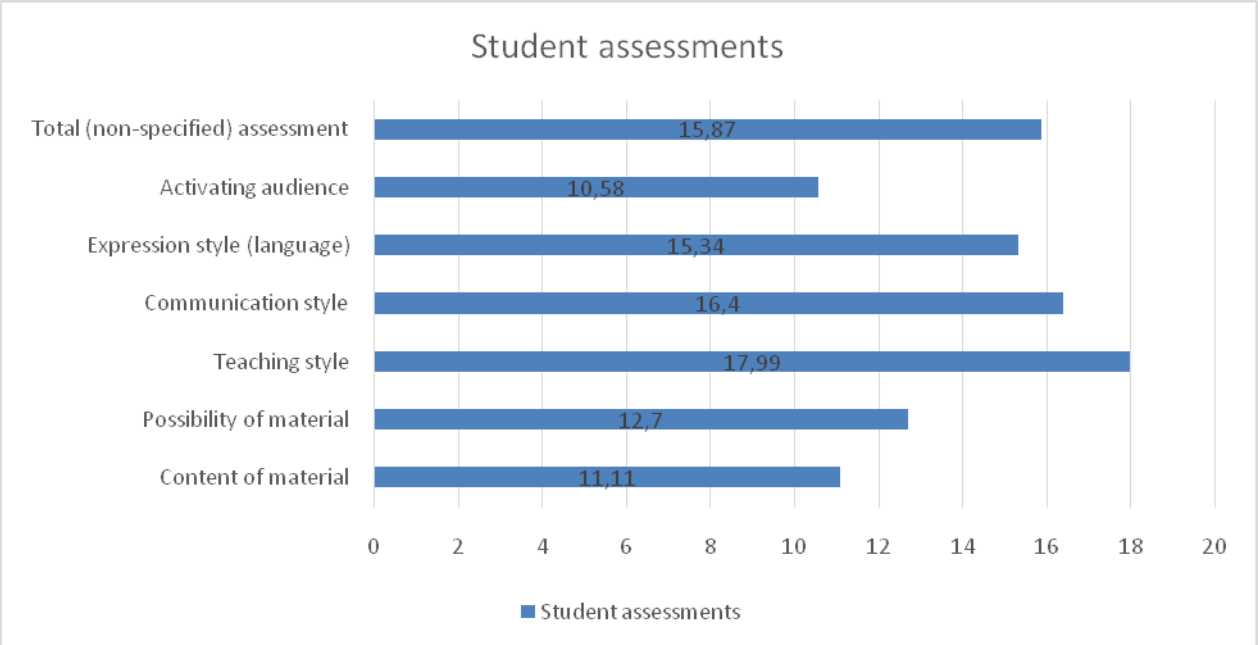

Figure 1. Ladder of teaching skills (picture of teaching)

The scaling of the indicators presented in the analytical table and the ladder of the teaching skills shows the following: the greatest is the relative weight of indicator № 3—'Teaching style' with a coefficient of assessment of 17.99%. This unambiguously shows that students demonstrate sensitivity to the way they are taught, to the tools used by the lecturer to present the information, how they experience his effects and what the overall environment is in the course of the lecture being assessed. Close to indicator № 3 are the values of indicator № 4—'Communication style'—with its 16.4%. We expected this indicator to rank first, as far as it relates to the sensitivity of students to how the teacher treats them. But it turned out that they attach greater importance to the teachers' mastery to present the programming material, which is the essence of the 'Teaching style' indicator. The fact, however, that the 'Communication style' is second, shows that students require collegiality in the attitude of the

teacher towards them, an atmosphere of positivity, calmness and emotionality in communication. Next in importance is indicator № 7—'Overall Assessment' with 15.87%, which sets the overall, undifferentiated approval for the teacher. The following indicators № 2, 1, 6 and 5 are approximate but not as low as the three indicators already analysed. Their arrangement—possession of the material (№ 2); content of the material (№ 1); audience activity (№ 6) and expression style (№ 5)—reflects the gradation in the importance of student opinion on teaching.

3. Conclusion

Assessments by students to the lecturer are continually taking place in the reality of the learning process. They express the subjective attitude of the audience, its role as the most faithful and the most important criterion for the completeness and quality of the teaching work. Evaluation in this sense is one of the essence aspects of the interactions and relationships 'teacher ↔ students'. It is consciously used the term 'activity' rather than 'profession' because of the understanding that teaching should not be seen only as a separate profession but as a specific and multi profile human activity integrating diverse countries from different professions (Pavlov, 2006). The new tendencies have turned to democracy, the quality of education, and the so-called key competences for lifelong learning, whose basic foundations are laid and built at a pre-school age in the kindergarten. Key competences are a transferable, multifunctional package of knowledge, skills and attitudes that all people need for personal realisation and development, inclusion and employment. They should be developed from the end of compulsory school education or training and should act as a basis for further learning as part of lifelong learning. Democracy and the quality of education are realised through the individual approach of the teacher. Qualitative education requires the provocation of imagination, the deepening of knowledge and the formation of skills for searching for effective solutions to practical problems.

So the above-mentioned quantitative and qualitative data gave us answers to many questions, but they also put so many new ones. The teacher needs the student assessment of his activity when he wants to look 'inside yourself' through the eyes of those who train and educate. Those who want and will learn to teach at 'Better than your teacher' level.

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