

THE CAPACITY FOR PEDAGOGICAL REFLECTION IN LECTURERS OF HIGHER MEDICAL SCHOOL: THE SURVEY FINDINGS

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The article describes the results of a study at the Faculty of Postgraduate and Further Professional Education at Saint-Petersburg State Pediatric Medical University. To achieve the research objective, an author's questionnaire was developed, containing questions and tasks roughly divided into two blocks. To define the quality of the questionnaire task performance, criteria were developed to determine this capacity development level in the respondents. As a result, the survey organizers have managed to provide an insight into the values and priorities that teachers put into the process of students' professional education, to find out what instructional goals educators of future health professionals set for themselves, to see the range of those educational means they use to address their challenges. The obtained results indicate a need to revise both the professional development program for specialists lacking pedagogical qualifications and the ways to implement it whereas it is necessary to develop the propensity of teachers to pedagogical reflection.

Keywords: pedagogical reflection, educational process, higher medical school, professional education

I. INTRODUCTION

The increased interest in reflexive activity in the Russian pedagogical science and practice is accounted, first of all, for a change in the educational paradigm, for philosophical rethinking of education both as the process and as the result of an activity, for the assertion of principles and for the student-centered education ideology spread.

The modern student- and professionally oriented educational system of a medical school is based on the concept of reflexive psychology and pedagogy, which is tightly interwoven with the essence of the competency-based approach, which has become widely used in Russian practice.

The competency-based approach declares the teacher's capacity for pedagogical reflection to be one of the mandatory conditions for professional teaching activities [1].

With regard to the conceptual, procedural, and functional aspects, reflection is associated with such categories as self-observation, introspection, retrospection, self-awareness [2; 3; 4].

From the perspective of the Western science, reflection is considered to be a generic concept for all activities. Thanks to reflexive processes, an individual revises

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the available potential and the accumulated experience in order to rethink relations, activities, well-formed ties. Reflection helps a teacher to distribute the power balance between their abilities and the actions of a learner [5]. Some of the European authors draw attention to the fact that there is a close relationship between reflection and the recipient of education [6]. Thus, it can be stated that the nature of reflection consists in self-analysis of one's own activities and its results.

In modern pedagogical science, the concept of 'pedagogical reflection' is interpreted as an active process of comprehending by an individual their teaching activity based on their own experience [7].

In the opinion of both Russian and European colleagues, pedagogical reflection allows a teacher to justify the need to choose other forms, other methods of teaching and educating, types and means of pedagogical communication that ensure a higher result of the educational process on the basis of analysis and subsequent evaluation of teaching activities [4; 8; 9].

Pedagogical reflection that underlies this analytical-synthetical activity, from the authors' point of view, can become a 'litmus test' manifesting the worldview position that forms a generalized-holistic attitude to one's own professional activity, to the choice of means for its implementation [1; 10].

According to Western colleagues, there must be preconditions for reflection in any professional activity [11].

Thanks to reflexive processes, a teacher organizes and regulates the teaching activities dealing with its further planning, forecasting, and, in the end, pedagogical decision-making; in fact, pedagogical reflection allows taking appropriate actions [12].

Some authors point out that a teacher takes up a certain position within the pedagogical community by means of pedagogical reflexive analysis [13; 14]. The consequence of this action is a personal attitude to the problems arising in teaching practice, understanding their extent and significance, identification of possible ways to overcome the emerging difficulties.

According to the researchers, the lack of reflection in teaching activities always affects not only their nature, but also the result, in particular, the formation of competences in students [14; 15].

Thus, pedagogical reflection exercises a regulative function; it is due to this ability that a teacher evaluates the results of their teaching activities and has the opportunity to change their tactics, in particular, in higher education [16].

Higher medical school employs professionals most of whom have a higher medical education, but how ready and able are they to exercise pedagogical reflection?

The study has involved a survey and a subsequent comparison of the capacity for pedagogical reflection in lecturers of clinical and humanities departments of higher medical school. Attending the research of this phenomenon is determined

by the fact that, according to the authors of the publication, the capacity for pedagogical reflection is the 'key' to a qualitative process, both of training and education in a medical college.

The process of educating students has become the target of lecturers' pedagogical reflection. In modern pedagogical science, what is considered to be pedagogical reflection is the propensity for an active process of comprehending the results of one's own teaching activity by an individual based on their own experience.

The authors have assumed that pedagogical education of teachers can serve a kind of a pedagogical reflection guarantor and have undertaken the study with the purpose to investigate and compare the capacity for pedagogical reflection in respondents with different core education, i.e. medical or pedagogical one. As a target of pedagogical reflection of higher medical school lecturers, the process of educating students has been chosen.

It is no mere chance that the study of lecturers' propensity for pedagogical reflection has been carried out on the basis of the educational process analysis: for now, the educational component has significantly lost its importance in the educational process of medical higher school, but the foundation of the future doctor's personality, their attitude to the professional activity is laid at the very stage of professional education in higher medical school. Educational work in this case discharges the function that ensures personality development of a competent specialist. As a result, it has made it possible to understand the importance attached by the respondents to the education of students in the process of professional clinical training, to see the pedagogical priorities of this education.

The research findings indicate that the lecturers of clinical departments hardly ever give a thought to the values of students' professional education. They have difficulties analyzing priorities in education, do not try analyzing their academic subject area in terms of its reflecting the educational tasks, characterize only some of the educational means they use in their work, do not always have on mind the effectiveness of their educational work and, as a result, do not try giving it an estimate.

A low development level of the capacity for pedagogical reflection was established in these respondents. In turn, lecturers of humanities departments demonstrated results corresponding to the high development level of their capacity for pedagogical reflection.

Confidence level of the results is $p < 0.00042$, Student's t-test = - 3, 72.

The data obtained by the authors can serve as an illustration of the fact that the process of education is not often a subject of discussion for lecturers of clinical departments. Perhaps, it is in these terms that there are the difficulties experienced by students – future doctors in the organization of communication with a patient, in attitudes to them and to their health condition.

All the above said points to the need to review both the professional development program for specialists lacking pedagogical qualifications and the approaches to its implementation in light of the need to develop teachers' capacity for pedagogical reflection.

II. MATERIALS AND METHODS OF RESEARCH

The research was carried out at the Faculty of Post-Graduate and Additional Professional Education at the Saint-Petersburg State Pediatric Medical University in the context of refresher courses for lecturers of higher medical school.

The total number of participants in the study amounted to 720 people (100%), of them: 642 people (89.2%) worked in the Saint-Petersburg State Pediatric Medical University, 78 people (10.8%) worked in the Institute of Osteopathic Medicine named after V. L. Andrianov.

The main group was represented by 360 lecturers of clinical departments with higher medical education and subsequent specialization.

In the main group, 120 teachers (33.3%) were women aged 46 to 52 (the average age being 48); 240 teachers (66.6%) were men aged 48 to 54 (the average age being 52).

The period of the respondents' teaching service at a medical college ranged from 15 to 20 years.

The control group also consisted of 360 people, but they were lecturers of the humanitarian subject departments and had a higher pedagogical education.

In the control group, 140 teachers (38.8%) were women aged 45 to 52 (the average age being 47); 220 teachers (61.1%) were men aged 47 to 52 (the average age being 50).

The period of the respondents' teaching service at a medical college ranged from 15 to 20 years.

To examine the capacity of the teachers for pedagogical reflection, the questionnaire 'Reflexive analysis of the process of educating students', developed by Yelena Romanovna Zinkevich, assistant professor of the Department of General and Applied Psychology of the St. Petersburg State Pediatric Medical University, was used.

In the proposed questionnaire, all the questions and tasks were roughly divided into two blocks: the first block of questions was aimed at revealing the axiological values of professional educational activity, whereas the second block of questions and tasks involved the analysis of one's own pedagogical activities focused on the process of educating students. The questions were offered as open-ended and provided for a free written response.

Table I provides the content of the questionnaire.

TABLE I: THE QUESTIONNAIRE 'REFLEXIVE ANALYSIS OF THE STUDENTS' EDUCATION PROCESS'

<i>Questions and tasks</i>	<i>Answers</i>
Specify and analyze the values you bring to the process of professional education of students.	
Specify and analyze your priorities in the education of students.	
Analyze the syllabus content of your academic subject in terms of its reflecting the educational tasks.	
Specify and analyze the range of educational tools you use in your pedagogical work.	
Express your point of view about the effectiveness of your educational work with students.	
Evaluate your educational practice in the process of teaching medical students.	

To appraise the task performance, criteria were elaborated to determine the level of development of teachers' capacity for pedagogical reflection:

- a high level of development of teachers' capacity for pedagogical reflection: the teacher attaches great importance to the education of students in the process of professional training, determines the values of professional education; specifies and elaborates on their priorities in the education of students, carries out a proper pedagogical analysis of their academic subject in terms of its reflecting the educational tasks, describes a sufficient range of educational tools they use in their work, has a well- formed viewpoint on the effectiveness of their own educational work, evaluates it adequately – 6 points;
- an average level of development of teachers' capacity for pedagogical reflection – the teacher attaches some importance to the professional education of students in the process of education, but does not define its values; cannot reveal their priorities in the education of students; makes attempts to analyze their academic subject in terms of its reflecting the educational tasks, describes a limited range of educational tools they use in their work, does not have a definite point of view about the effectiveness of their own educational work, finds it difficult to give it an estimate – 4 points;
- a low level of development of teachers' capacity for pedagogical reflection – the teacher does not ponder over the importance of educating students in the process of professional training, does not define its values; has no priorities of their own in educating them, does not try analyzing their academic subject in terms of its reflecting the educational tasks, describes some educational tools they use in their work, does not give a thought to

the effectiveness of their own educational work and does not try giving it an estimate – 2 points [13].

As a method for processing empirical data, the statistical significance analysis was applied using Student's t-test.

III. RESULTS

In course of the research, it has been established that the teachers of the main group, consisting of lecturers of clinical departments have a low level of development of the capacity for pedagogical reflection; the average score received by the respondents of this group is 2.4 points.

These data provide quite strong evidence that, on the one hand, a pedagogical education is a condition for developing the capacity for pedagogical reflection of future teachers and serves as a kind of a guarantor of success in professional teaching activity. On the other hand, it becomes obvious that the approaches to organizing the process of proficiency enhancement for the teachers who do not have pedagogical qualifications should be built taking into account not only their age and psychological peculiarities, but also professional ones conditioned by the specifics of the professional activities implemented in clinical instruction. In turn, the subject of discussion in the classroom with lecturers of clinical departments should be problems arising in the process of clinical and teaching activity, which will positively affect the development of their capacity for pedagogical reflection.

IV. DISCUSSION

Let us dwell on the results demonstrated by the lecturers of clinical departments, and comment on them.

Discoursing upon the values that teachers put into the process of professional education of students, a significant number of the participants in the main group – 46.2% – acknowledged the need to arrange a purposeful process of professional education for future health professionals, ensuring the formation of their worldview, which would be based on the deontological values of medical practice.

To illustrate the above, the following respondents' opinions can be provided as an example:

'Education plays a decisive role in the development of human person. If we are talking about becoming a professional, then you cannot do without a purposeful education. The main educational value is the attitude towards a human patient';

- 'The importance of professional education in training students is invaluable, but only in the case that education is performed by specialists who are knowledgeable in this complex and controversial matter! The main value that should be accepted by students is deontology, i.e. the science of attitude toward human patient';

- ‘I have never given a thought to the values of professional education... A human, an attitude to them, life, and health. That is, probably, the array of these values. Yet, these values are not discussed with students in classes; they are observable in relations with patients and in relation to patients’.

However, according to 52.6% of the teachers, professional education in the preparation of students is of little consequence, and they did not mention the values of professional education. Their explanations resolved themselves to the following:

- ‘It is too late and useless to mentor adult people!’;
- ‘The school’s task is limited to making a professional. When entering a university, a person makes the choice themselves’;
- ‘At the clinical departments, there is no time to purposefully engage in the educational process: it’s time to treat patients...’;
- ‘When I went to first medical school, I do not remember anyone mentoring us, we were made to study and were taught to treat the sick. That’s all the mentoring!’.

The rest of the respondents – 1.2% – left this question unanswered.

Considering the problem of their own priorities in the education of students, 17.8% of the main group respondents declared such priorities in education as the development of personal qualities and personalities of students, the evolvement of their motivation for learning, the formation of a value- conscious attitude to the future profession:

- ‘Formation and development of educational and professional motivation, awareness of the profession choice’;
- ‘Development of medical judgment, developing the skills to analyze, compare, subordinate; forming responsibility, discipline’;
- ‘The formation of a student team, as in the doctor’s professional activities it is necessary to be able to cooperate with the work colleagues’.

A significant number of the respondents – 62.6% – simply stated the problems that are most disturbing for them in course of the academic studies:

- ‘Studying supplementary materials in addition to the compulsory ones, attendance of SSS’;
- ‘Accomplishment of tasks on practical work followed by the discussion of the results in a group’;
- ‘Unfortunately, it is impossible to bear any real influence on the individual development of each student, since communication with the group is limited to one skills building session per week, so the only real impact is exerted on personal development of the students belonging to the student scientific society’.

A part of the teachers – 16.5% – attempted to give examples of discussions they hold with students to overcome the psychological discomfort in the classroom and to form their reasonable self-esteem asserting that these, from their point of view, are the main priorities:

- ‘Conversations are aimed at removing a state of uncertainty, increased anxiety from a part of students; it has been found out that some of them begin to experience the situation of a failure in examination long before the examination period’;
- ‘Conversations are encouragement, reassurance of students during the exam, removal of the state of fear, which reduces their abilities, grips their memory, thinking’;
- ‘The organization of work with passive students in order to overcome their own behavioral stereotype, with those who hesitate to ask for help from a teacher or fellow students (they are prevented by the fear of showing their incompetence, a feeling of embarrassment), so they accumulate ‘incomprehensible’ material’.

Other teachers – 3.1%, – refrained from answering.

The obtained results indicate that the majority of lecturers in clinical departments pay considerable attention to educational activities. Intrinsically, a student in the learning process assimilates the totality of social, ethical, and other values that become a kind of regulators of the doctor’s behavior. But assimilation of the indicated values is only possible as a result of consistent, purposeful work of both a sole teacher and the whole teaching staff, a deep understanding by the teachers of these values importance in the process of the future doctor’s personhood achievement.

According to the authors, there is a direct correlation between the content of teaching activity and the possibilities of its analysis, which is based on the knowledge of pedagogy and psychology of higher school.

Carrying out a review of the subject syllabus in terms of its reflecting the educational tasks, 19.7% of the teachers stated that the educational tasks in their syllabus are mainly related to development of academic work skills and formation of medical judgment in students:

‘The main educational task is fostering medical judgment, it permeates all the studies: from lectures to practical exercise sessions’;

‘My task as a teacher is reduced to the development of academic work skills and to a greater extent to the formation of medical judgment owing to which the personality of a future doctor is raised’;

‘A lecturer’s task in a medical school reduces itself to forming medical judgment and the development of special skills necessary for a health professional’.

48.8% of the respondents stated that the academic content of their subject is the least at all directed at solving educational tasks:

- ‘Educational tasks are not stated in my syllabus, as there are subjects of the humanitarian cycle that provide a solution of such problems’;
- ‘In my opinion, in order to solve such tasks, there are classes held on deontology and medical ethics’;
- ‘There are no such tasks in the syllabus, but in the classroom they are solved through the relevance of the educational material for clinical life, objectivity, exactingness – all this, ultimately, contributes to the formation of a doctor in the traditions of the Russian infection school’.

The rest of the respondents in the experimental group – 31.5% – refrained from answering.

These studies indicate that a lecturer of clinical department in higher medical school can only design their own teaching activities circumstantially rather than purposefully, taking into consideration the values of personality development and their education. In particular, teachers do not take into account the fact that a huge resource of educational impact lies at the point of interaction and cooperation between representatives of different generations, the actual meeting of a doctor and a student, but this fact has not been reflected in the educational tasks that the teachers designate in their syllabi.

As the main educational means, 18% of the teachers consider the personality of a teacher, their behavior pattern, voice, appearance – everything that relates to pedagogical technology, which is a component of pedagogical excellence. One cannot but agree with that. Indeed, these are the most important educational tools.

46.5% of the teachers mentioned books as the means of education, which they use in their teaching practice. The respondents cited such examples:

- ‘Book has always been considered an educational tool. I like to use Pirogov’s works. Especially the ones concerning education...’;
- ‘I have put together a collection of case problems that, from my point of view, solve educational tasks; for example, they cultivate attitudes toward medical practice, the patients who need treatment and psychological help’;
- ‘I keep on telling students that a book is a necessary condition for the development of a professional. Read more, both specialized and fine literature. A book develops thinking and speech, which are the main tools in medical practice!’

6.9% of the respondents indicated such an educational tool as evaluation and made the following statements:

- ‘Assessing the educational and cognitive activities of students, we use such an educational tool as evaluation and express our point of view on

the quality of preparation for classes, lectures, etc. This is an effective tool – evaluation!';

- 'The grades teachers give to students for the learning outcomes can become a powerful educational tool'.

The opinion of lecturers in clinical departments boils down to the fact that, only assessing the success and failure of students in mastering the content of the curriculum, one can influence their personal and professional development. The authors dissent with this opinion: evaluation should be objective in nature and be a regulator of the quality of education rather than an educational tool. The resource of educational influence, from the authors' point of view, lies, first of all, in supporting and guiding the students' educational and cognitive activities, which is based on the personality-centered education.

15.1% of the teachers expressed the opinion that punishment is the main educational tool, but they could not give examples illustrating punishment in teaching practice.

The positions of teachers about the effectiveness and efficiency of their educational work were as follows.

24% of the lecturers in clinical departments are convinced that their educational practice is both effective and efficient. To provide evidence for this position, they come up with the following arguments:

- 'I sincerely try to convey my love for medicine to students: and they appreciate it, often patterning my behavior as a practicing doctor!';
- 'Believe me, I do not educate anyone on purpose! But I often stay to talk with students, admonish them for their being late, wrinkled lab coats, for the hubbub and noise they unintentionally bring to our cardiology department';
- 'All my life I have been dealing with the problem of early detection and functional microsurgery of middle ear diseases. Students who come to me in the future usually choose the specialization 'Otorhinolaryngology. I would like to believe there is my credit for it as well'.

63.5% of the teachers in the main group expressed doubts about its effectiveness and efficiency. The following statements of respondents can serve as a supporting example:

- 'One can judge on the effectiveness and, which is even funnier, the efficiency of educational work, but only while the child goes to primary school, then it is already too late to say something...';
- 'It is not that a teacher is the only one to educate, but school! How can I estimate the effectiveness of my educational practice?';

- ‘In educational practice, there can be no effectiveness and efficiency, since there are no criteria for educational effect and no criteria that would describe the result!’

These answers are an indirect demonstration of the personal attitude to educational practice and, in particular, to education as a process of personality professional development in medical college.

12.5% of the respondents in the main group left the question of the survey unattended.

55.5% of the teachers in this group were able to give an estimate of their educational practice. Here are their evaluative judgments about the educational practice:

- ‘All my educational practice focuses on training sessions. That’s where I try to solve important educational tasks, from my point of view; therefore, I think that I can mark my educational practice high’;
- ‘I’m wary of the notion of ‘education’. But, in my opinion, a personal example is important in the education of a future doctor. Students pattern themselves upon me in their professional activities. Therefore, this is an educational tool and an illustration of my educational practice’.

1.7% of the people said that ‘it is difficult to give an impromptu answer to such questions’; ‘Answers to these questions do not carry any information’; ‘The purpose of such surveys is disturbing’.

42.8% of the lecturers in clinical departments left this task unattended.

The results obtained may indicate that lecturers of clinical departments hardly ever think about the values of professional education of students. They have difficulties analyzing priorities in education, do not try analyzing their academic subject in terms of its reflecting the educational tasks, describe some of the educational tools they use in their work, do not always think about the effectiveness of their educational work and, as a result, do not try giving it an estimate.

V. CONCLUSION

The data obtained by the authors can serve as an illustration of the fact that the process of education is not often a subject of discussion among lecturers of clinical departments, since their professional ability to analyze this process, to evaluate it, that is, to subject it to pedagogical reflection, is underdeveloped. Perhaps, it is in this realm where there are the difficulties experienced by students – future doctors in the organization of communication with a patient, in attitude to them and to their state of health, but the role of a teacher in the development of their professional position is crucial.

A statement of one of the respondents in the control group indicates how differently the lecturers of clinical departments and the lecturers of humanities

departments approach the process of educating students: 'I often think about my educational practice, but all the time it seems to me that I fail to keep up with the students: as soon as I gain some experience, they become different, they need different methods of education'. The reasons that cause such a situation may probably center around the vocation for teaching activity. However, to make a professional, a teacher needs to master the laws and mechanisms of the pedagogical process. This would allow them to think in pedagogical terms and act accordingly, to find in the theory of training and education some ideas that can be construed at a different level of comprehending clinical and teaching practice.

The results of the research allow drawing the following conclusion: in the process of enhancing the proficiency level of lecturers in clinical departments, more attention should be paid to the educational component, one should make the situations arising in the process of clinical and teaching practice a subject of discussion.

In turn, it would probably fulfill the function of parallel pedagogy: teachers would not only pay attention to educating students in terms of clinical practice, but would also alter the strategy of interaction with students and with patients of the department.

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Hopefully, the survey findings will become one of the ways to change the attitude of the lecturers of clinical departments to the education of present-day students and a source of rethinking their own ideas about the role and significance of education in higher medical school.

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