Higher School Instructors’ Pedagogical Skills Improvement as a Basis of Educational Strategy for Development of Students’ Professional Training

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Abstract: The article substantiates the expediency of acquaintance of higher school’s teachers with the essence, rules and regularities of pedagogical skills improvement. The necessity of developing a strategy for improving pedagogical skills of the instructors of non-pedagogical institutions of higher education (IHE) are emphasized, as evidenced by the coverage of this problem in many scientific researches of philosophical, psychological, pedagogical directions. It is generalized that the development of pedagogical skills involves understanding by instructors the essence and productive effectiveness of own pedagogical activity regardless of the disciplines’ content they teach. Pedagogical skills provide the disclosure of teacher’s creativity, understanding the meaning of developing professionalism, which is required from modern instructor of IHE according to the level of solving new tasks of education. In the article, the theoretical basics of the research are connected in four groups. The first group includes the fundamental works of scholars, who opened the essence of the basic principles of the philosophy of education. The second group – works, which reflect ontology and phenomenology of pedagogical skills as higher expression of the freedom of being a teacher in professional activity, as the highest level of quality of instructor’s work. The third group consists of the scientific works, where the structure of pedagogical skills as the top of teacher’s creative activity, in which the harmony, perfection and beauty are realized, is revealed. The fourth group includes scientific-methodical materials, the main purpose of which is directing of instructors on the formation and development of different aspects of pedagogical skills as the criterion of teacher’s professionalism. A particular attention is paid to the disclosure of methods for improving pedagogical skills of instructors of non-pedagogical IHE that is considered as an advanced training of scientific and pedagogical staff. Considering this, special courses were organized in I. Horbachevsky Ternopil State Medical University in 2018 in order to perfect instructors’ pedagogical skills. Classes were conducted in the form of lectures and study trainings in order to expand pedagogical knowledge and ideas about the essence of pedagogical skills and possibilities of educational technologies use in the professional training of future specialists in medicine. Instructors acquainted themselves with the extra active regime of information exchange, peculiarities of the organization interactive cooperation, were aware of the feasibility of interactive technologies use in IHE, tested in practice methods of doing exercises “Press Method”, “Six Thinking Hats” – the method of parallel thinking by E. de Bono. As a result of the final questionnaire, it was found that most instructors seek to increase their own level of pedagogical skills in different directions.

Keywords: strategy in education; instructor; pedagogical skills; higher school; methods.

1. Introduction

Strategy changes in the educational field of every country are based on the adoption of relevant legislative documents, in which the main directions of improvement and progressive development of the education are described. The National Doctrine of the Development of Education of Ukraine in the XXI century is a strategic basis of the development of personality, society, nation and state in Ukraine. Scientists call society of the XXI century “the society of knowledge” (Kremen, 2011, p. 328), and argue that the achievement of the educational level in Ukraine is possible through the reformation of its conceptual, structural and organizational principles, systemic analysis of results of the higher educational institutions’ activity, identification of priorities for the next steps of its transformation in market conditions for the closest future and perspective (Kremen, 2011, p. 398). After all, only the country, in which intellectual professions have got massive character, and investments in the development of human potential are the most significant and effective, can become a full-fledged and active participant of the globalization processes in the world (Pasko, 2008, p. 20). That is why the strategy of modernization the professional training of different directions of future competent specialists in the institutions of higher education (IHE) of Ukraine foresees the increasing of pedagogical skills of instructors, which form the basis of scientific and pedagogical staff of higher school.

However, the significant part of instructors from the specialized IHE (medical, economical, juridical, technical etc.) has high level of professional competence of the specialty they train students for (future doctors, economists, lawyers, engineers etc.), and their knowledge, abilities, skills of the pedagogical mastery are mostly formed in the process of their own long-term teaching activities. Therefore, the problem of providing a scientific basis and purposeful training of IHE instructors to the mastering various aspects of pedagogical skills is actualized.

Thus, studying the ontology of pedagogical skills, O. Subetto emphasizes the expediency of familiarizing teachers with the essence, rules and regularities of that phenomenon, which define the direction of metamorphoses in pedagogical science, educology. According to the scientist, mastering pedagogical skill involves understanding the essence and productive effectiveness of own pedagogical activity regardless of the content of disciplines he/she teaches, and involves disclosing the creativity of the teacher, understanding the meaning of developing professionalism,
which is required from modern instructor of IHE according to the level of solving new educational tasks that are predicted by the historic global-problem situation for humanity in the 3rd millennium (Subetto, 1999). Afterwards, the necessity of developing strategies in improving pedagogical skills of non-pedagogical IHE instructors is a topical problem that indicates its coverage in many scientific studies of philosophical, psychological, pedagogical directions.

The problem of the conducted research is to uncover the methods of improving the pedagogical skills of instructors in medical institutions of higher education, which is considered as an advanced training of scientific and pedagogical staff.

2. Literature review

A significant contribution in solving the problem of matching modern education with the challenges of the 21st century have made the scientists, who studied methodological and socio-educational problems of Ukrainian higher education modernization (Andrushchenko, Mykhalchenko, Kremen, 2002), looked through the innovative aspects in the strategy of realization results of education and science in Ukraine (Kremen, 2005). The problem of mastering pedagogical skills basics is thoroughly studied by researchers in the context of the training of students in pedagogical institutions of education (Babich, & Kondratenko, 2002; Barabash, & Pozinkevych, 2006; Hrynova, Zolotukhina, & Balbenkoet, 2006; Ziaziun, Karamushchenko, Kryvonoset, & Ziaziun, 2008; Nychkalo, Ziaziun, Pykhovska, et. al., 2005; Bielcheva, Izabash, & Elkintain, 2010), at the same time, considering instructor’s pedagogical skills as a criterion of professionalism (Bida, 2013). Such scholars as Melnychuk, Rebukha, Zavgorodnia and Bloshchynskyi revealed organization of distance learning in the English language on "Nursing" specialty: methodological and legal aspects (Melnychuk, Rebukha, Zavgorodnia, & Bloshchynskyi, 2018). At the same time, the attention of researchers only sometimes was focused on the problem of improving the pedagogical skills of instructors of non-pedagogical IHE (Melnychuk, 2018).

So, it should be noted that the scientific and pedagogical activity of a higher medical school instructor is a highly skilled work in the training of future specialists in the medical industry. Knowledge, erudition of the scientist and the art of the instructor, high culture with intellectual and moral maturity, awareness of duty and sense of responsibility are connected in that activity. However, the success of instructor’s teaching activity at medical
university depends on the harmonious combination of such components: his professional competence, professionalism, scientific knowledge on professional direction discipline, that is a basis of training future doctors, dentists, pharmacists, specialists on nursing; pedagogical abilities and skills of methodical art of the instructor, who is able to form professional competence among medical students; expression by instructor of his personal “I”, professional and pedagogical technique in the integrated profession of doctor-teacher with the purpose of self-realization of the doctor’s personality in pedagogical activity. Afterwards, the pedagogical skills of the medical university instructor is considered as his creative activity, aimed at the expedient use of methods and means of pedagogical mutual influence in each situation of training and education of future specialists in medicine (Andrushchenko, Sysoieva, Huzii, Kichuk, et. al., 2005).

The purpose of the article is the revealing of the main methodological aspects of conducting the courses of instructors’ pedagogical skills improvement in Horbachevsky Ternopil State Medical University that is one of strategic directions of professional training development of students in medical field.

3. Materials and Methods

Theoretical bases of research

Theoretical bases of the research are grouped in four categories. The first group of theoretical basics of scientific study includes the fundamental works of scholars who revealed the essence of the basic principles of the philosophy of education (Kremen, 2011). In the strategy of the development of modern education an important place takes analysis of the problem (for example, the essence of pedagogical skills of higher school instructor), its essence and meaning, which has not only world-view but also social character. It is not possible to be solved fully by any form of social consciousness, except for philosophy. If the strategic purpose and content of education is the formation of citizen’s personality, that involves comprehensive development, full value, good faith and other positive qualities, then, of course, it is understandable the relevance of the education philosophy. Obviously, from its position it is possible maximally to promote man socialization, his/her optimal adaptation to life in society in accordance with the requirements of European choice and tasks for the realization of the national educational program (Kremen, 2011, p. 268).

The second group of scientific researches, which present the theoretical basics of the research, includes the works where the ontology and
phenomenology of pedagogical skills as a higher expression of the freedom of being a teacher in professional activity are reflected (Subetto, 1999). Scientists reflect the essence of pedagogical skills in interconnection and interdependence with new sciences (creatology, acmeology and qualitology), the development of which begins from the end of 20-th century (Subetto, 1999, p. 30). Scientists connect philosophical understanding of pedagogical skills with the essence of teacher’s activity and substantiate world-view and philosophical basics of the formation of this phenomenon (Pasko, 2008).

The third group of theoretical basics of the declared research includes scientific works, in which the structure of pedagogical skill is described (Babich, & Kondratenko, 2002; Barabash, & Pozinkevych, 2006; Hrynova, Zolotuhina, & Balbenkoet, 2006; Ziaziun, Karamushchenko, Kryvonoset, & Ziaziun, 2008; Nychkalo, Ziaziun, Pykhovska, et. al., 2005; Bielcheva, Izabash, Elkintain, 2010; Bida, 2013). Scientists consider the skill as the top of teacher’s creative activity, where the harmony, perfection and beauty are realized, according to I. Ziaziun this is a beauty of pedagogical action (Ziaziun, Karamushchenko, Kryvonoset, & Ziaziun, 2008). It is the teacher-master, who can combine the essence of the subject of his work (for example, to teach future doctors) and creativity, what allows instructors to use their own pedagogical style, innovative methods and technologies for students teaching.

The fourth group of theoretical bases of the research combines scientific and methodological materials, the main purpose of which is orientation of teachers and instructors on the formation and development of various aspects of pedagogical skills: pedagogical creativity (Andrushchenko, Sysoieva, Huzii, Kichuk, et. al., 2005), pedagogical technique (Dobenko, & Bondarenko, 2000) and in general instructor’s teaching skills as a criterion of his professionalism (Bida, 2013).

**Methods of the research**

To realize the set purpose, methods of theoretical analysis, comparison, substantiation, generalization, systematization of theoretical and practical materials, studying the results of instructors’ self-assessment regarding the formation of their pedagogical skills in order to substantiate the expediency of organizing and conducting “Courses of Pedagogical Skills” in non-pedagogical institutions of higher education on the example of Horbachevsky Ternopil State Medical University; formulation and systematization of conclusions were used.
4. Results of Research

In order to establish the content filling of the organization of pedagogical skills courses for IHE instructors the questionnaire of 186 persons was conducted, who are part of scientific and pedagogical staff of three universities: I. Horbachevsky Ternopil State Medical University (126 persons), Kharkiv State Academy of Design and Fine Arts (35 instructors), Vasyl Stefanyk Precarpathian National University (25 persons). The majority of respondents (176 instructors, that is 94,62%) showed the expediency of familiarizing themselves with modern pedagogical technologies for using them in teaching students.

In order to improve the pedagogical skills of instructors of non-pedagogical IHE, special courses in I. Horbachevsky Ternopil State Medical University were organized (on February and November) in 2018 (duration of each session is 108 hours) in the form of lectures and study trainings to extend pedagogical knowledge and imagination on the essence of pedagogical mastery and the possibility of using educational technologies in professional training of students in medicine. In total 168 instructors took part in the courses. Some training classes were also conducted in Ternopil National Economic University at the Faculty of Law for improving pedagogical skills of instructors within the “Reloading” program (information can be found on the Website https://m.facebook.com/story.php?story_fbid=2113222532078069&id=10001710283445). The main accent in conducting classes has been made on the instructors’ awareness of their own level of pedagogical skills, in particular, the ability to use innovative pedagogical technologies. The necessity of instructors’ mastering the methodology of using pedagogical technologies is illustrated the scheme in Figure. 1.
Individual instructor’s skill is equal to 20% of the pedagogical activity success
Pedagogical technologies make up 80% of success in instructor’s work

**Figure. 1.** Essence of educational process in higher school

During the interview, instructors marked, that the important component of pedagogical skills is organization of effective pedagogical communication. One of the necessary requirements to speech in the process of pedagogical communication is simplicity and conciseness as important features of oral expression. Simple, uncomplicated sentences which can be easily perceived by students should prevail in the instructor’s speech. Similarly, it is necessary to teach students to answer questions clearly and exhaustively. That is why instructors training was directed at the formation abilities to organize the work of students so that in a short period of time it could be possible for everyone to show their level of readiness to class. It was recommended to use training exercise “Press Method” for that. This method helps to learn how to find meaningful arguments, to formulate your thoughts on a problem question in the form of a clear and logical structure for 30 seconds, that is shown in Table 1.

**Table 1. Stages of use «Press Method»**

<table>
<thead>
<tr>
<th>№</th>
<th>Task</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Express your opinion in one sentence</td>
<td>I think that…………………</td>
</tr>
<tr>
<td>2</td>
<td>Explain the reason of the opinion</td>
<td>Because……………………</td>
</tr>
<tr>
<td>3</td>
<td>Give examples of arguments in support of your position</td>
<td>For example……….</td>
</tr>
<tr>
<td>4</td>
<td>Summarize and formulate conclusions</td>
<td>Thus……………………</td>
</tr>
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</table>
To test the use of the “Press Method”, the instructors, who worked on a practical lesson in a training group of 20 people, were asked to express their views on the assessment of their own level of pedagogical skills. The analysis of the results showed that the majority of instructors (16 persons that is 80%) could not clearly formulate their opinion with one sentence, what was required by the rules of this method. And although the instructors’ responses had substantiated nature, it took longer time (1-2 minutes). Reflection after exercise “Press Method” gave opportunity to every member get the conclusion that it is necessary to learn how clearly and exhaustively formulate your thoughts to teach students. All the instructors unanimously expressed the opinion that they will definitely use the “Press Method” in their teaching activities. As a result, instructors were demonstrated a scheme, in which the essence of dialogical interaction in “Press Method” is represented in Figure. 2.

![Figure 2. Essence of dialogic interaction](image)

As the practice of work in IHE proves only that instructor can avoid routinization at lecture classes, whose skills element is the ability to pedagogical improvisation. Pedagogical improvisation (from lat. – unexpected, sudden) – is the instructor’s activity, which is carried out in the process of pedagogical communication without long previous comprehension, cogitation. Its purpose is quick and flexible response to a specific unpredictable pedagogical situation, its fast and effective solution. That is why it is recommended at the courses that instructors should use different types of lectures: with using feedback, with pre-planned mistakes, problem lectures, lecture-discussions, with the analysis of concrete...
situations, in the form of press conference etc. However, the instructor should be prepared conscientiously for use such improvisations, using the methodic of interactive interaction organization.

To prove the expediency of using interactive technologies in IHE instructors were demonstrated the scheme of extra active regime of information exchange, which can be noticed during the traditional lectures (Figure. 3), where a significant part of information streams passes “past” the students.

Figure. 3. Model of extra active regime of information exchange

Confirmation of such result of the organization of the extra active regime of information exchange during lectures is Pyramid of cognition by J. Martin that demonstrates the effectiveness of study information assimilation (Figure. 4).
To emphasize the expediency of taking into account the main directions of increasing the efficiency of getting studied information, the “Picture” exercise was used. Part of participants (10 persons) went out from the room. Another group was listening to description of the picture, on which the usual “children’s” drawing (a house and its surrounding) was painted with colored felt-tipped pens. Then the participants of the first group went in turns to the audience, where they firstly were listening to the information about picture’s content, after that retelling it to next participant. The task of the last participant was to draw what he/she heard. When the two drawings (first and last) were compared, instructors generalized that the difference between them was more than 90%. Photographs of both pictures can be found on the Web-site https://m.facebook.com/story.php?story_fbid=2113222532078069&id=100001710283445.

Analyzing such results, instructors emphasized that for better memorizing any information it is necessary to accompany the theoretical presentation of the material by its visualization.

The participants of the courses generalized, that for more productive teaching of students it is expediency to use interactive technologies of study, during which an intensified interpersonal communicative interaction is organized according to the scheme presented in Figure. 5.

**Figure. 4.** Pyramid of cognition by J. Martin

![Pyramid of cognition by J. Martin](image-url)
Usually instructors are acquainted with a few interactive methods and technologies, which they use in teaching of students. Questionnaire of courses participants gave opportunity to identify the most common of such methods: didactic-simulation games, professional-communication exercises, case-method, dialogs, discussions etc. In order to interest the instructors and motivate them to use new interactions in training future doctors, practical class with method “Six Thinking Hats” – the method of parallel thinking by Edward de Bono in interactive study was organized.

“Six Thinking Hats” – is one of the most popular methods of organization of thinking, which gives a possibility to construct and make more effective any mental activity, both personal and collective. Under conditions of traditional training, thinking is based on controversy, discussion. However, with such an approach not a better solution often wins, but one that progressed more successful in the discussion. Parallel thinking – is the constructive thinking, at which different points of view and approaches do not encounter, but coexist. “Six Thinking Hats” method – is a simple and practical way to overcome such difficulties by separating the thinking process into six different regimes, each of which is represented by a hat of a certain color. Instead of thinking about everything at the same time, we can study how to operate by different aspects of our thinking in turn.
After finishing work all these aspects will be collected together and we will receive “full-color thinking”.

So, white color is used to direct attention to the information. In this regime of thinking we are interested in just in facts. We ask the question: What we have already known? What additional information do we need? How to get necessary information? In the regime of interactive cooperation the possibility to express own fillings and intuitive guesses regarding the question, which is considered, without explaining why you think so appears in red color. The black hat allows giving a vote of critical assessments, warnings and cautions. It defends us from unconsidered actions, points out possible risks and pitfalls. The yellow hat needs to switch attention to the search for benefits and positive sides of the idea, which is considered. Under the green hat, participants come up with new ideas, modify the existing ones, look for alternative, study possibilities etc. In general, creativity is given a green color. The blue hat is not intended to work with the content of the task, but to manage the process of activity itself. In particular, it is used at the beginning of interactive cooperation to identify what is necessary to do, and in order to generalize what has been achieved to identify new goals. Moderator (leader) always stays under the blue hat and monitors the process of interactive cooperation. Summing up the results of the class is under the blue hat.

As a result, instructors, identifying the benefits of using interactive method Six Thinking Hats, generalized:
- this method promotes more clear organization of thinking management;
- colored hats – is a metaphor, which memorize good, easily can be used, is a kind of role language, in which it is easy to discuss any problems and switch thinking of all participants, distracted from personal preferences in judgments;
- this method may be used on any level of difficulty of the material, which is studied, if it is necessary to analyze different its aspects;
- thanks to structuring work and avoiding useless discussions, thinking becomes more focused, constructive and productive;
- “Six Thinking Hats” method allows to avoid confusion in understanding certain aspects of the issues being discussed, such as only one type of thinking can be used by the whole group for a certain period of time;
- abovementioned method recognizes the importance of all components of work on the problem – emotions, facts, critics, new ideas, and includes them into work at certain moment, avoiding destructive factors.
Participants tested the possibility of organizing work using the “Six Thinking Hats” method, discussing different aspects and directions of improvement pedagogical skill of IHE instructor.

In general, in the process of conducting courses of pedagogical mastery the instructors of I. Horbachevsky Ternopil State Medical University got acquainted with such aspects of pedagogical skills, which were unknown for them before, or were not used, such as most instructors had basic education in medicine. As a result of questioning it was found that most of instructors aspire to raise their own level of pedagogical skills in different directions during the work of the following courses (Table 2).

Table 2. Results of instructors’ self-assessment of the aspiration for updating students’ teaching strategy using modern pedagogical technologies

<table>
<thead>
<tr>
<th>№</th>
<th>Results of self-assessment</th>
<th>Before the beginning of courses</th>
<th>After participating in courses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>I use and will definitely use new pedagogical technologies in students’ training</td>
<td>22</td>
<td>13,1</td>
</tr>
<tr>
<td>2</td>
<td>I have desire to try implementing pedagogical innovations in the process of students’ study</td>
<td>48</td>
<td>28,6</td>
</tr>
<tr>
<td>3</td>
<td>I doubt the expediency</td>
<td>52</td>
<td>30,9</td>
</tr>
<tr>
<td>4</td>
<td>I am supporter of traditional education</td>
<td>46</td>
<td>27,4</td>
</tr>
</tbody>
</table>

5. Conclusions

The improvement of qualification of scientific and pedagogical staff in higher school involves the purposeful formation of instructor’s pedagogical skills. This aspect of improvement instructor’s activity in non-pedagogical institutions of higher education becomes especially significant, for example, in medical universities, where a considerable amount of instructors does not have a basic pedagogical education. Development of pedagogical skills requires comprehension by instructors the essence and productive effectiveness of their own pedagogical activity regardless of the disciplines content they teach. Pedagogical skills involve disclosing the instructor’s creativity, understanding of the meaning of developing professionalism, which is required from a modern teacher in accordance with the level of solving new problems of education. The perspective
strategic direction in this context is acquaintance of instructors with the innovative pedagogical technologies.

To the directions of further scientific researches we can refer: study of foreign experience in improving pedagogical skills of the higher school instructors; development of special training programs, filled with innovative pedagogical methods and technologies, using of which will promote the expansion of pedagogical knowledge, abilities, skills of instructors of non-pedagogical institutions of higher education.

References


