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Interactive teaching methods in contemporary higher education

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Abstract

The main strategy of modern education should focus on the student's independent activity, the organization of self-learning environments and experimental and practical training, where students have a choice of actions and can use initiative—as well as flexible training programs where students can work in a comfortable rhythm. Today, we should talk about the use of interactive methods of training, which encourage interest in the profession; promote the efficient acquisition of training material; form patterns of conduct; provide high motivation, strength, knowledge, team spirit and freedom of expression; and most importantly, contribute to the complex competences of future specialists. We will give an overview of the modern teaching methods that are most widespread in the scientific and methodological literature and have the potential to form the competences of future professionals. The training, case study, behavioural modelling, peer feedback, play project, metaphor game, storytelling, basket and action learning methods—and their potential in professional training—are briefly described.

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Introduction

Competence-based approach in the system of higher is intended to increase attention to the effective and technological formation of professional competences. Professional competence we understand as a personal education that determines the productivity of professional tasks and includes knowledge, skills and professionally significant personal qualities, experiences

and value orientations. In this case, competence differs from such traditional concepts as “knowledge”, “ability”, “skills” and “experience” by its integrative nature, determined by personal traits, such as practice-oriented focus, the ability to work in a wide variety of contexts, self-regulation and self-esteem.

Such a definition of professional competence requires significant changes in the pedagogical support of the university curriculum, filling it with teaching methods which could provide the training of future specialists with the required comprehensive result. The traditional methods of the university educational process (lecture, explanation, exercise, etc.) are certainly important for professional development. However, their limitations are felt even more acutely at present

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when a complex phenomenon such as competence is formed. Therefore, we believe that modern education should focus on the student's independent activity, the organization of self-learning environments and experimental and practical training, where students have a choice of actions and can use initiative—as well as flexible training programs where students can work in a comfortable rhythm.

Today, we should talk about the use of interactive methods of training, which encourage interest in the profession; promote the efficient acquisition of training materials; form patterns of conduct; provide high motivation, strength, knowledge, team spirit and freedom of expression; and most importantly, contribute to the complex competences of future specialists.

Hence, we will give an overview of those modern teaching methods which are most widespread in the scientific and methodological literature [1–5]—and have the potential to form the competences of future professionals.

Interactive teaching methods: description and role

Training

Training is a teaching method that aims at developing skills and knowledge in any field by performing sequential tasks, activities or games. This method allows the teacher to give the participants missing information and allows students to form skills of professional and appropriate behaviour in the performance of professional tasks. The advantage of training is that it ensures the active involvement of all students in the process of training.

Training can provide preparation for professional communication and collaboration, execution of organizational or supervisory functions, etc. Training is usually done in several stages.

Introduction

This stage sets the tone for future work, creating a relaxed, democratic atmosphere. It is held in any form or by any means. The teacher informs the students of his/her expectations and hopes regarding the upcoming activity.

Discover

This step is a necessary procedure for the first class of any training. It activates the group for engaging in interaction and developing communication skills. It should be done even if the students know each other already. Through games such as “interview”, “Know

Me” and “exchange of business cards”, participants can see a new side of and feel concern for each other.

Expectations of the participants

Participants' expectations are clarified—for example, “in a circle”—with the help of the training issues that they meet at the time. Addressing the needs of the student not only directs their interest but is also an important benchmark for the activities of the teacher.

Determination of the order of the training

When all of the participants talk or write about their expectations, the teacher always tells them the training procedure, regardless of how long it lasts.

Adoption of the rules of the group (the “agreement”)

For the participants to feel responsible for their training from the very beginning it is recommended that they accept the rules of the training or make an “agreement”. The articles of the agreement are usually recorded: e.g., we do not come late, speak out of turn, listen to off-topic conversation, etc. Each article is discussed, approved by majority vote and displayed in an accessible place. It will help create an appropriate working atmosphere, mutual respect and trust. It also needs to improve the learning of the material. Every student is responsible for the execution of the “agreement”.

Assessment of group information level is one of the tasks for the teacher

A questionnaire or checklist with the questions on the training theme are usually used for this purpose. Polling results show the level of students' readiness and help the teacher correct the content and balance of the topics, adapt the training and make the exercises easy to understand. A questionnaire repeated after the training is over is very effective. Comparing the results, the teacher will be able to assess how students increased their readiness, which is an important measure of training efficiency.

Actualization of the problem

To develop the motivation for modifying professional behaviour and activity, the participants should be encouraged to discuss the training theme to arouse interest and make this issue relevant to everyone. The teacher can do a role play in the end.

Education

Direct interaction between teacher and students is to implement the key goal of the training at this stage.

This stage of training involves two steps. The first one is information: it can start with answering the items from the questionnaires which caused the most embarrassment. In addition, the main course material is presented at this stage by using such methods as lectures, talks, role playing, discussions and small group work. The second stage is practice-oriented: it is designed to help the participants acquire practical experience. Role playing, dramatization, discussion, “brainstorming” and other interactive forms of work can be used for this purpose. The choice depends on the conditions.

Summing up

Typically, this procedure is designed to ensure that the participants share their impressions and feelings and express their wishes. Summing up can involve filling the “sheet of revelation,” letters, questionnaires or surveys. An important component of training is the documentation of the student's progress, e.g., via photography. While summing up, these photos can be viewed to remind how the work was proceeding.

Thus, training efficiently forms students' professional competence through establishing a confident and comfortable environment and the possibility of practically drilling the steps that are essential for future professional activities in general.

Case study method

The case study method is training by solving specific cases. The essence of this method is a collective analysis of a situation, finding a solution and a public defence of said solution. In the process of reviewing the cases, students gain the skills of teamwork, independent modelling of the solution, independent reasoning and defending their opinion. The method was first applied at Harvard Law School University in 1870.

This method involves ambiguity in the solution of the presented problem, which creates a challenge for discussing the reasoning of proposed solutions and choosing the most appropriate one. Therefore, the result is not only knowledge but also professional skills and a well-formed personality and set of values.

The case which is viewed by the students, is usually taken from a real professional area and is supported by visual materials, statistical data, charts and graphs, descriptions of how it is viewed by different people, reports, data from the media, Internet resources, etc.—i.e., the information that allows us to understand

what is described in the case. When future teachers are trained a case may be, for instance, a conflict between a teacher and parent based on a student's progress recorded in the class register; the decisions of teacher's councils and boards recorded in the minutes; the student's character as described by classmates, teachers and a school psychologist; and other documents, including school statutes.

The structure of the case has three parts: two for the student and one for the teacher. The subject section describes the situation and allows the students to characterize all of its circumstances; the information section reflects the details of the support upon which a final decision is made; and the methodical section, designed for teachers, determines the location of the case in the structure of the course, tasks for students and pedagogical support for solving the situation.

The solution of the situations offered to the students involves a variety of analytical methods: problem-based, cause and effect, praxeological, axiological, situational, prognostic and other types of predictive analysis.

The actions of students as part of the method are productive in the following succession: 1) familiarity with the situation, its content and features, 2) the allocation of the main problems, the factors and personalities that can really act, 3) offering solution concepts, 4) analyzing the consequences of the decision and 5) selecting the optimal variant, predicting consequences, an indication of the potential problems, mechanisms, prevention and solutions.

The activity of a teacher using this method includes two phases. The first includes creating the case, formulating the questions for analysis and developing methodological software support materials for the students and their independent work. The second phase includes the classroom activities of the teacher in discussing the case, where he/she makes introductory and closing remarks, organizes discussion or presentation, supports a business atmosphere in the audience and acknowledges the contribution of students in the analysis of the situation.

Thus, studying and analyzing work experience based on real situations, students comprehensively enrich the knowledge and skills that undergird the professional world, demonstrating a productive effect on the formation of their professional competences.

Behavioural modelling

Behavioural modelling is a method of teaching interpersonal skills and professional conduct. The

method is carried out in the following sequence: 1) the presentation of a model of professional behaviour which is to be learnt; 2) the most accurate reproduction of the proposed behavioural model; and 3) feedback, indicating the degree of success of mastering the relevant behaviours.

Behaviours that are offered to students using this method should sufficiently comply with actual professional situations, so that future specialists have the opportunity to maximize immersion in professional activities and rapidly adapt to specific conditions. For example, he/she may be practicing job interview skills, conflict or emergency response, discussion of career prospects, transfer or acceptance of a position, etc.

Behavioural modelling is effective under the following conditions: firstly, the proposed case is attractive to students and arouses their confidence and willingness to follow the proposed model; secondly, the case demonstrates the desired sequence or correct procedure in the standard situation; and thirdly, the students see that compliance with the desired sequence of activities is rewarded (time savings, insurance against errors, problem solving, etc.).

Thus, the presented method of behavioural modelling can enhance the quality of training by promoting appropriate behaviour in ways typical of future employment situations.

The method of peer feedback

The method of peer feedback is where one student provides another student ongoing feedback about his/her actions, deeds and decisions. A look at their actions and reactions from the outside allows the future specialist to better understand his/her strengths and weaknesses and develop adequate self-esteem. The method of peer feedback is based on information (objective and honest feedback) when performing tasks associated with the development of new skills and performing current professional duties. The participants (the one who acts and those who analyze and give feedback) are absolutely equal.

Feedback can be provided after discussions, performances, educational tasks, etc. Practical training, in which students directly solve professional problems, has extraordinary value and opportunities for the implementation of this method. For example, such feedback for future teachers can be given after the lecture or additional training and educational activities, etc.

The students, of course, need to be trained to give objective feedback to make informed judgements and

become competent to provide information before using this method.

Thus, the method of peer feedback provides more efficient development of the competences of future professionals through continuous monitoring of activities and opportunities to provide timely assistance and correction of deficiencies.

Play projects

Play projects is a teaching method where learning is effected via problem solving. At the first stage the teacher fixes the learning (research) problem, i.e., makes the problem situation a psychological one. At the second stage the students split into two competing groups and craft solutions to the problem. The third stage is a final meeting where students take roles and publicly defend the developed solutions (peer reviewed prior to defence).

Play projects are most successful in practical classes as they involve no explanation of the new material or information exchange between the teacher and the students. Informational, research, creative and applied projects can be done within this format.

Thus, the play project method provides high activity for teaching courses and is more productive because design skills are developed and the specialists will be more flexible and efficient in solving complex professional tasks in the future.

Metaphor game

The metaphor game is a teaching method aimed at developing new activities and changing behavioural attitudes. The main goal of a metaphor game is to find a new way solving a problem within the given metaphor.

The group selects a metaphor and delves into the context to find a way of solving the problem and implementing their solution (define the action strategy). When the game is over, the problem is discussed to find the effective solution and apply it to the work situation.

This form of teaching helps activate the creative skills of the students and view a professional situation in a new way, breaking the stereotypes. The metaphor game develops students' creativity, lessens anxiety in problem solving, encourages students' independence, etc. Proverbs, tales, fables and legends which evoke the future professions' problems can serve as metaphors. For example, a game can be based on the idea of the 'Unsmiling Princess' fairy tale when she chooses a husband. Yet the competitors must not make her smile

but demonstrate some professional skills (e.g., knowledge, command of some professional tools). The ‘Wish’ game can develop another metaphor. It can be based on the “Gold Fish” fairy tale where wishes are instead professionally focused, etc.

Therefore, the metaphor game method develops behavioural examples in situations typical of future professional activities; the set metaphoric context focuses the students on creatively solving professional problems, which is productive for the development of all components of professional competence.

Storytelling

Storytelling teaches future professionals the rules of work with the help of myths and stories from professional life. Speaking about the content of professional work, its specificity and emerging situations, the teacher prepares the student for understanding traditions, philosophy, culture and professional activities. Maximum objective information should be provided to avoid the future specialist's disappointment in his/her occupational choice. The method helps the students quickly learn the specifics of the job, governing documents, career prospects, etc.

This method helps students adapt more quickly to the profession and form value judgements of the professional activities as a whole and their role in society, which is fundamental for the professional competency of the future specialist.

Basket-method

The basket-method is a method of learning based on imitation of the most common situation of specialists, when the student has to perform unplanned activities efficiently. The contents of this method are as follows: student is presented the situation or the role he/she should play and the materials which he/she must use in the exercise; the student performs the proposed actions; the final interview is conducted, in which the student justifies his/her actions, describes the potential impact of an action and assesses personal satisfaction with the result. The teacher analyses the information received from the students, offers an alternative solution, highlights missed opportunities, predicts the results of decisions and makes recommendations for the future.

This method, unlike the others, requires the development of scenarios and role-playing. For example, a student playing the role of a school teacher “is conducting a lesson.” Each “student” acts in accordance with their role unbeknownst to the “teacher”: he/she may

suddenly ask a question about the “lesson”, shout from his/her seat, ask the neighbour for a ruler, etc. In addition, the “head teacher” (appointed from among the students) can enter the classroom during the lesson to chide the teacher, make an announcement to the class, etc. A “parent”, “teacher-colleague”, “school electrician”, etc. can also be incorporated into the scenario. Thus a student who is “conducting the lesson” should promptly and adequately respond to what is happening, but in the end take personal inventory of his/her actions. The teacher and all of the other students at the end of the game give their assessments of what they have seen in the “lesson”. Students studying other concentrations may face such scenarios as unplanned phone calls, urgent tasks, new information on their work, visitors, answering a supervisor's questions, etc. Thus, this method can not only create a practical mode of professional competence. It can also develop the stress resistance of the future professional while playing out possible interventions in the process of solving the present problem.

The method of action learning

The method of action learning has recently become one of the promising areas of modern education, as it provides the organization of self-learning environments. This teaching method allows students to effectively solve problems of practice-focused training.

This method is implemented in group work among students. During the joint work on the problem (which is practice focused), students develop their own way to a comprehensive solution, justify that solution and conduct a presentation of their proposals. A group of teachers discusses the results of the public defence and names the winner, which makes evaluation more objective.

If this method is used by students during the period of work experience, the problems to be solved may be taken from a particular practice, which enhances the teaching potential of the method and the results obtained in the course of its implementation.

Thus, learning by doing has a positive influence on the components of professional competence through practical skills which develop the organization of joint activities and taking responsibility for one's work.

Conclusion

To conclude the review, we note that active learning methods modify the role of the teacher from the translator of information to the organizer and coordinator of the educational process and make it possible to form complex competences in future

professional specialties via student activities that manifest as closely as possible the content of professional work.

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