XV International Conference "Linguistic and Cultural Studies: Traditions and Innovations", LKTI 2015, 9-11 November 2015, Tomsk, Russia

# Characteristic Features of Technological Support of Competence-oriented Educational Program for High School

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**Abstract**

Characteristic features of technological support of competence-oriented educational programs of higher school have been stated. Competence potential of active educational technologies has been shown. Didactic examples reflecting problems solving of developing practice of competence-oriented technologization of higher education have been presented. The article materials are based on the data received at using research methods: theoretical analysis, enquiry (interviewing), and analysis of documents and teaching aids of higher education institutions in Tomsk.

*Keywords:* Higher education; competence-oriented educational program; competence; active educational technologies.

## 1. Introduction

In Russia, competence renovation of higher education is first of all connected with implementation of new educational standards – Federal State Educational Standard of Higher Professional Education of the third generation FSES HPE (FSES-3 + Higher Education). These educational standards determine results of modern programs of higher education – competences, which are different from the former form. New form of educational results of academic training alternative to knowledge-skills-experience requires new understanding of higher education didactics tasks. Didactic means of implementing the tasks of competence transformation of higher education practice is competence-oriented educational program (COP) (Zimnyaya, 2009; Smyshlyaeva, 2010).

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Implementation of COP of higher education (COP HE) is connected with transformation of all didactic aspects of educational process: goals setting, results planning, syllabus development, determination of the forms, methods and means of organization of educational interaction, productivity estimation methods. The main characteristic feature of COP HE is that during educational process along with teachers and students potential employers (or their representatives) and specialists of real sector of economy take place.

In the course of the process of education in high school based on COP, the question of choosing the most appropriate and adequate pedagogical technology for developing students' competences as their professional competency seems very important. It is supposed that for establishment of professional competency (which is the key goal of COP HE) the students should have definite subjective characteristics. Such characteristics connected with transformation of the set of values as well as intellectual, emotional, characterful, communicative characteristics will determine significant and visible manifestations at the level of the behavior (activity) of personality.

To meet challenges of education formulated in «the competence-based format» it makes sense to use such educational technologies, which result in establishment of the student's subjective position in the educational process. Resulting from actualization of the problem of the student's subjective status establishment during implementation of COP HE consideration of active educational technologies (AET) needs special attention. In scientific-pedagogical, psychological-pedagogical and methodical literature technologies with the help of which the students are intentionally motivated to take active subjective position refer to AET **(**Verbitsky, 1991; Klarin, 1999; Panina, 2006; Selevko, 1998).

## 2. Methodology

From our point of view the classification of educational technologies presented by Zeyer (2005) is very useful for considering peculiarities of technological support of COP of higher education. Thus educational technologies can be classified as cognitive-oriented, pragmatist-oriented and personal-oriented. Such approach to the classification of educational technologies, and to AET, should be referred to the competences typology according to their "individual" accentuations. According to Baidenko (2006) cognitive-oriented, pragmatist-oriented and personal-oriented competences (according to their accentations**)** can be mentioned. As the majority of specialists point out, the structure (component content) of the competence includes three components – *cognitive* (component of "knowledge and comprehension"), *pragmatist* (component of "action, operation, procedure") and *personal* (component of "personal characteristics, system of values") (Baidenko, 2006; Zeyer, 2005; Zimnyaya, 2009; Smyshlyaeva, 2010). The main criterion for determining accentuation of the competence is the dominant form of its manifestation in human activity (in educational or professional situation): cognitive-oriented competences – *demonstration of comprehension;* pragmatist-oriented competences – *demonstration of action* (objective, verbal, communicative, intellectual and other); personal-oriented competences - *personal demonstration* (position, quality, etc.).

Competences classification and educational technologies correlation denoted above is the basis for making didactic solutions connected with implementation of COP HE (Smyshlyaeva, 2010).

## 3. Results and Discussion

Understanding possibilities of AET for developing these or those competences according to their accentuations will provide solution of the didactic problem in terms of implementation of COP HE – the problem of choosing necessary AET by the teacher for achieving the goals of the educational programs. Characteristic of the competence potential of AET obtained by using theoretical analysis is presented in table 1 (Verbitsky, 1991; Klarin, 1999; Panina, 2006; Selevko, 1998; Smyshlyaeva, 2010).

Table 1. Competence potential of active educational technologies.

| Educational technology | Technology possibility for developing competences as educational programs results |
|---|---|
| Project method | Productive for developing cognitive and pragmatist components of the competences in situations when used in individual project activities; solves the tasks of developing all competences components when used in pair and group projects due to actualization of interaction resources. |
| Case study method | Provides solution of didactic tasks connected with the development of cognitive and pragmatist component of competences (productivity of this or that competence component development depends on the content of case studies and situational tasks). |
| Discussion | Results in solution of didactic tasks of developing cognitive and personal competences. Productive when used for developing activity-oriented competences connected with speech activity of the person. |
| Game | Leads to the development of all components of the competences: cognitive, pragmatist and personal. |
| Training, video training | Provides mainly the development of personal and pragmatist competences components. When used in specialized training it provides purposeful development of cognitive-oriented competences. |

The materials presented in Table 1. were discussed with the teachers of National Research Tomsk Polytechnic University during refresher courses for teachers at the scientific-methodical seminar "Professional education of the students of technical university in a foreign language: theory and practice" (April, 23-24, 2015), Institute of Humanities, Social Sciences and Technologies, Department of Methods of Teaching Foreign Languages; and during implementation of the master training program in Tomsk State Pedagogical University (Psychological-pedagogical Education, Pedagogical Faculty, the course "Competence approach in education". According to the results of interviewing teachers and Master's Degree students (teachers of general and extended education of children of the Tomsk region) 92% of the respondents noted significance of the presented didactic matrix for solving the tasks of competence renovation of the higher and general education practice education functioning at present on the basis of FSES of the competence generation. Besides, 81% of the interviewed teachers considered the system usage of the possibilities of AET very productive, in particular, for using their potential not only for developing competences, but for diagnostics and evaluation of competences development as the results of COP HE).

According to the method of theoretical analysis, methodical materials for evaluation of the productivity of COP using competence potential of AET were prepared (see Table 2).

Table 2. Indicative provision of evaluation of the competences development using AET.

| Teaching method | Indicators for competences development evaluation |
|---|---|
| Project method | - Students perform special diagnostic tasks for evaluating development of separate project skills (to set the tasks and goals, to formulate the problem, to plan the process of the project work realization, etc.);<br>- students defend projects in public;<br>- students evaluate quality of personal projects (according to given criteria, parameters and indicators) and other students' projects; |
| Case study method | - Students work with cases including situations for evaluating the level (degree) of separate competences development;<br>- students design the content of the cases (situations) according to the given problem individually (in pairs or groups);<br>- students critically evaluate the solutions of the developed cases; |
| Discussion | - Students define the topics for discussion on urgent problems in different fields of their future professional activity individually (in pairs or groups);<br>- students prepare detailed scripts of discussions on definite problems and |

| | topics individually (in pairs or groups);<br>- students participate in discussions initiated by the teacher;<br>- students write essays reflecting evaluating (reflexive understanding) of the held discussion productivity;<br>- students formulate assessments and judgments on the quality of separate participants presentations;<br>- students reflexively evaluate (in written form) their behavior during discussion; |
|---|---|
| Game | - Students simulate the game plots individually (in pairs or groups) according to given topics (problems) connected with different aspects of their future professional activity;<br>- students reflexively self-evaluate their acted roles;<br>- students change the content of game plots suggested by the teacher;<br>- students write educating essays reflecting game productivity evaluation for<br>- developing certain competences; |
| Training, video training | -Students develop educating topical exercises of the training for developing necessary competence individually (in pairs or groups);<br>- students do special diagnostic tasks during training;<br>- students mark lack of individual competence by watching and analyzing video training materials;<br>- students write essays about the tasks of personal professional mastering on the basis of personal training experience. |

It can be seen from the table that in terms of AET, certain indicators can be determined for evaluating competences development. Let us make on didactic example of using methodic materials (see Table 1 and 2) in implementation of General Educational Program of Bachelor training at TPU "Physical training" (Sports Pedagogical Technologies), educational subject - "Management of Physical Training and Sport". In terms of the educational subject such general professional competence as the "ability to organize and perform mass sports events" is set as one of the planned educational results. The competence is determined as personal-pragmatist-oriented (according to its accentuation). Consequently, the game technology can be used for its development (see Table 1).

For developing this competence, the students were suggested the following didactic games:
- to hold a family sports event;
- to hold basketball competitions in a secondary school for children of the 7-8 form;
- to organize students mass sport football tournament;
- to organize competitions among children in a Youth Sports School.

To evaluate the level of development of this competence, the following tasks were suggested for students: to simulate individually the games for evaluating given competence; to self-assess personal roles determined by the teacher; evaluate actions of other participants during activing according to the roles pre-set by the teacher; write an essay reflecting expertise of the game productivity in the context of solving the task of competence development.

## 4. Conclusion

To sum up, it should be noted that one of the urgent tasks of contemporary practice of higher education is development of technological support of implemented COP. To solve the task effectively, it is first of all necessary to use the knowledge accumulated in pedagogics, adapt it to conditions of high school practice in the context of its competence renovation. Consequently, one of the most important directions of perfection of pedagogical professionalism of high school teachers is development of their ability to choose appropriate educational technologies for developing certain competences of their students and readiness to apply methodical methods of creating corresponding learning and teaching recommendations.

Development of these professional qualities should be considered to be the planned results of the refresher courses programs (RCP) for high school teachers by their readiness to implement COP NE. To develop these competences of teachers, it seems appropriate to use such format of educational format of refresher courses when it is organized as reflexive-communicative ground intended for understanding and analysis of problems and difficulties arising during pedagogical practice during implementation of COP HE, and search for the most effective ways of their solution.

Such organizational methodical form of refresher courses of teachers in our opinion can be denoted as product specific. The final work of the refresher courses in this form becomes methodical product, on the bases of which there is a definite methodical solution necessary for solving the tasks in terms of the taught educational subject. The program of refresher courses for teachers is aimed at providing final result product on the whole, which in its turn makes it possible for refresher courses participants to master their professional pedagogical competence in the context of solving the tasks of the development of the competence-oriented technologization of higher education on the basis of after action review of individual pedagogical experience.

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