

EDU WORLD 2018
The 8th International Conference

**LEARNING TECHNOLOGIES AS A METHOD OF
ORGANIZATION OF PUPIL'S EDUCATIONAL ACTIVITY**

Olga Selivanova (a)*

*Corresponding author

(a) Vyatka State University, Mostovitskay, 4-225, Kirov, Russia, selivanog@mail.ru

Abstract

The urgency of the article is determined by the need to change the position of the pupil in the educational process in the conditions of a postindustrial society. The article contains an analysis of psychological and pedagogical studies of the modern education paradigm, in the context of which the activity of the pupil is a priority. The analysis showed, that the majority of researchers associate the pupil's activity in the educational process using pedagogical technologies. However, the pupil as a subject of the learning has the ability to organize his educational activity, if he has the skills of self-analysis, self-determination, self-planning, self-organization, self-control, self-assessment and self-correction, which compose the bases of the learning technology. *The aim of the study* is to characterize the learning technologies and to analyze their effectiveness in organizing the pupil's educational activity. *The methodological basis* of the research is the person-centered approach. On the basis of this approach we developed the learning technologies "I want to learn", "I can learn", "I have skills to learn", which represent different methods of organization of the pupil's educational activities. The main result of this study is as follows: on a sample of 450 respondents, the ability of pupils of different levels of subjectivity to experiment with the learning technology was experimentally proven.

© 2019 Published by Future Academy www.FutureAcademy.org.UK

Keywords: Pupil's subjectivity, learning technologies, educational activity.



1. Introduction

The central figure of the educational process in modern Russian education becomes a pupil. So there is a need to have the changes in the organization of the educational process: a pupil as a subject can organize his educational activity, if he has the skills of self-analysis, self-determination, self-planning, self-organization, self-control, self-assessment and self-correction. The totality of these skills makes up the learning technology, which we consider as a system of pupil's actions for achieving personal and socially significant goals in the learning.

2. Problem Statement

As the analysis of psychological and pedagogical research has shown, many scientists consider the person-centered approach as a response of the education system to the challenges of a post-industrial society. Thus, in September 2014, an international conference on "Rethinking Teaching and Learning in the 21st Century" was held in South Africa on this issue. An important research revealing the essence of person-centered approach is the work (Zucconi, 2015), where the author considers a new education paradigm as the main way to prepare a new generation as a carrier of values of a postindustrial society. In his works, the professor from South Africa (Sitwala, 2017) emphasizes the importance of reorienting education from the activity of the teacher to the activity of the student. Some scientists (Wingate & Tomes, 2017) used a person-centered approach to study individual differences in academic performance. Their findings identify conscientiousness, intellectual ability, motivation and anxiety as the strongest predictors of academic performance and academic variability. Many scientists note the importance of implementing the person-centered approach in educational practice and the lack of development of ways to solve this problem. For an example, Ezechil (2015) underlines the necessity of a reform in Romania targeting to restructure the content of pupils' behavior in the classroom, the relation teacher-pupil, pupil-pupil and the relation of the pupil with himself.

Studies of ways of reorienting education on the activity of a pupil are conducted in the context of the development of the pedagogical technologies, that take into account the individual characteristics of children of the third millennium.

Some scientists (Coertjens, Vanthournout, Lindblom-Ylänne, & Postareff, 2016) devoted their work to studying the variability of students' approaches in different learning environments, compared these approaches and came to a conclusion about their dependence on contextual ideas about teaching.

Students encounter different difficulties in the process of learning – cognitive, emotional, personal, social and functional; they may arise for various reasons (Rozek & Stobäus, 2016). Teachers know about their learning difficulties; however, they do not know what the nature of the difficulties is, and what they arise from. Insufficient awareness of teachers of the learning difficulties of students is associated with two main reasons:

- 1) teachers find it a challenge to ask students about their learning difficulties;
- 2) when asked directly about their learning difficulties students struggle to express these difficulties explicitly and clearly (Prusak, 2017).

These facts demonstrate the importance of enabling students to describe their difficulties and encourage students to actively participate in their own learning process according the technology «Corresponding with the Professor».

The purpose of study (Warhuus et. al., 2017) is to ask: what effect does moving from individual to collective understandings of the entrepreneur in enterprising education have on the student's learning? And given this shift in understanding, is there a need for a new paradigm in entrepreneurship learning?

Jonathan Bergmann and Aaron Sams developed an interesting approach to the organization of the educational process and named it Flipped Learning (Gasparič, 2017). Its essence is based on the subject's cognitive experience of the student: the existing knowledge of schoolchildren is initially updated according to the problem previously studied by him, and then generalizations and conclusions are made by the teacher. A technology of critical thinking (Radulović & Stančić, 2017), widely used in modern educational practice, is used to develop the student's analytical abilities, which is necessary when working with a large amount of information in modern conditions.

In the Russian education the researches of the individual cognitive style of the pupil are conducted (Bitjanova, Azarova, & Zemskich, 2007) and technologies are developed (Galeeva, 2017), allowing them to be taken into account in the educational process. Comprehensive analysis and generalization of developments in the field of pedagogical technologies is presented in the work of Korshunova (Korshunova, 2016), who showed that modern pedagogical technologies are an effective tool for the teacher in organizing the educational activity of a schoolboy.

The implementation of pedagogical technologies presupposes pupil's activity, but does not put him in the position of the organizer of his educational activity.

3. Research Questions

The problem lies in the fact that pedagogical science and educational practice need theoretically substantiated and approved teaching technologies that allow the pupil as a subject of learning to realize their educational activity. The main research question is: how to ensure the activity of the pupil in learning process?

4. Purpose of the Study

The aim of the research is to reveal the essence of learning technologies as a method of organizing the pupil's educational activity and to prove their effectiveness.

Please replace this text with context of your paper.

5. Research Methods

We have analyzed the requirements to the results of pupils and have identified a set of skills, that make up their educational activities:

1. Self-analysis - have knowledge about their cognitive features (features of memory, attention, reasoning) and, as a consequence, can rationally use them in the learning process;
2. Self-determination - set goals own activities
3. Self-planning - plan their own activities

4. Self-control - analysis their difficulties in situations of choice, methods of solving educational problems

5. Self-esteem - understand the requirements of the teacher to the result of their activities, do not own their own methods of reflection activities

6. Self-correction - see opportunities to work on the mistakes made.

We consider, that these skills may be formed in different degree, so we have developed 3 learning technologies, which reveal the purpose, content, algorithm of interaction between the teacher and the student, the expected result.

The learning technology "I want to learn" is intended for pupils with low motivation for teaching, who are dissatisfied with themselves, teachers and school and presumes the schoolchild's performance of a system of individual tasks aimed at developing intellectual abilities.

The leaning technology "I can learn" is designed for students with a situational manifestation of a positive attitude to the teaching and assumes the teacher's support for the activity of the schoolchild at all stages: setting goals, learning the material, choosing methods and reflection.

The learning technology "I have skills to learn" is designed for children with conscious educational needs and formed educational skills, and the role of the teacher is to accompany the student in achieving the goals of the teaching.

We used pedagogical experiment as the main method of study.

In an empirical study of 2017-2018 took part in 140 elementary school students, 166 -, and 144 main - older. Total 450 respondents in schools Kirov region Russian Federation. They were asked to answer a questionnaire revealing the main components of their educational activities. Wording of the questions were focused on the age of the students. We can say that used three versions of the questionnaire.

Then experimental and control groups were formed. In the experimental group, schoolchildren worked according to the educational technologies they chose, and in the control group they did not. As a result of the experiment, the skills of schoolchildren were again diagnosed to organize their educational activities.

6. Findings

We used modern qualimetric methods for assess the results of our study. Each skill is represented as a hierarchy of levels and weight is defined - the significance in the structure of the quality being tested, expressed in a numerical index. The weight of each indicator and the totality of skills as a whole is a constant value and determined by the method of expert review. The calculations made showed that the estimates of the studied qualities in both groups are similar.

As the study showed, in both groups there was a formation of the skills to realize their educational activity. However, the final diagnosis showed that the pupils of the control group improved their results only in the skills of self-analysis (by 5%) and self-organization (by 3%). Skills of self-determination, self-planning, self-control and self-correction remained in the students of the control group at the same level. Not one pupil reached level 3 or level 4. At the same time, the number of pupils in the experimental group who mastered the ability of self-analysis, self-determination at the 4th level amounted to 8%, self-

organization - 14%, self-esteem - 6%. These data indicate that the greatest difficulty for pupils is the development of the ability to self-correction.

Each skill was represented as a sequence of levels of their development (academic, algorithmic, heuristic, creative) in accordance with the diagnostic features. The complex estimation was calculated using the formula $\sum K(n, j) M(n, j) = K$, where K is the development quality factor, M is the weight, that is, the significance of the diagnostic sign having a numerical value, n is the considered level, and j is the number of the characteristic. From the table we see that the weight of the integrated assessment after innovative training in the experimental group is higher than in the control group. It is equal to $\sum K(n, j) M(n, j) = 22.83$ out of 36 possible, which is 63.4%. At the same time, the total score in the control group is $\sum K(n, j) M(n, j) = 18.16$, which is 50,4%. The effectiveness of the proposed approach is proved by the fact that as a result of innovative training, a positive dynamics of indicators was obtained.

Final diagnosis of the results of the experiment was carried out for each reason and a comprehensive assessment was carried out (Table 1).

Table 01. Comprehensive assessment of the formation of the pupil's skills to realize the educational activities before and after the application of learning technologies

Integrated assessment	Initial estimate	% of the maximum possible result	Final estimate	% of the maximum possible result
Experimental group	15,56	43.8%	22, 83	63,4%
Control group	15,78	43.8%	18, 16	50,4%

Thus, the result of our study was the differences in the level of pupil's skills to realized their educational activities that occurred during the period of innovative education.

First of all, pupils, wishing to work on the technology "I want to learn", asked to get acquainted with the requirements for the result of their activities in the lesson, because they often see the teacher as having a negative attitude towards them. His task was suggested to be compared with the standard - a model of a complete and correct answer. The ability of self-control is formed when the pupil determines the time and resources that are necessary for him to complete the assignment. Great difficulties caused teachers and pupils to need to orient themselves in the situation of choice, when it becomes necessary to determine the task, the time of its implementation, the form of presentation of the results. The final of the work on this technology is directly related to the formation of skills in self-determination. There is nothing strange in that this ability is completing the work, because the pupil by this time accumulates positive cognitive experience and can base on it the goals of his own educational activity.

The learning technology "I can learn" was applied to both individual pupils and groups. Innovative education of pupils on this technology gives the greatest effect. About 30% of pupils working on this technology decided to continue its development in the next class. As shown by innovative education, the great difficulty was the achievement of the value-semantic unity of subjects of education: teachers, pupils and their parents. The discrepancy between the positions of parents with high social expectations about the academic success of their children and teachers demanding knowledge, skills and abilities of able pupils was felt. The resolution of this contradiction was found in the process of mastering the educational

technology "I can learn" by teachers, which allowed to reconcile the social and personal goals of instruction and ways of achieving them in each specific case.

The educational technology "I have skills to learn" aroused interest among pupils who have expressed interest in a particular subject area, showing outstanding abilities to study the subject. As the forming stage of the experiment has shown, pupils who have cognitive needs of a high level simply did not know about the possibilities of constructing educational activities in the lesson. It should be noted that the educational technology "I have skills to learn" allowed them to realize their potential in preparing for the Olympics of different levels, for exams and testing, for participation in contests and tournaments.

7. Conclusion

In this article the pupil is considered a central figure of the educational process and it is the leading educational activities and includes self-analysis, self-determination, self-planning, self-control, self-concept and self-correction. The activities of the teacher is to create pedagogical conditions and ensuring the achievement of socially and personally meaningful goals teachings.

The practical significance of the study is that it allows to balance the subjective and objective position of the teacher and pupil. Since their misalignment causes negative effects, namely: the dominance of object positions leads to the curtailment of the functions of a humanistic education; the absolutisation subject position of the pupil creates a real threat of loss of teachers influence on the process of subject-activity development.

Qualitative novelty of learning technologies ("I want to learn", "I can learn", "I have skills to learn") at they represent a system of actions for the pupil to achieve socially and personally significant goals and is implemented on his initiative. The choice of pedagogical technologies (technologies of support, assistance and accompaniment for the development of the pupil's subjectivity in educational activities) is carried out in accordance with the level of the pupil's subjectivity.

The practical significance of the study also lies in the fact that the theoretical conclusions made in the course of the research contribute to the formation of new pedagogical thinking and are intended to facilitate the transition to personality-oriented education paradigm; new approaches have been developed to build the interaction of subjects of the educational process to effectively address the urgent problem of modernizing education; the ways of transition to the person-oriented learning, contributing to the development of the pupil's subjectivity, are determined by the teacher using the recommended pedagogical and learning technologies.

References

- Bitjanova, M.R., Azarova, T.V., & Zemskich, T.V. (2007). *Profession is a schoolboy. The program for the formation of an individual style of cognitive activity in younger schoolchildren. teaching method. Help. for teachers*. Moscow: Genesis.
- Coertjens, L., Vanthournout, G., Lindblom-Ylänne, S., & Postareff, L. (2016). Understanding individual differences in approaches to learning across courses: A mixed method approach. *Learning and Individual Differences*, 51, 69-80. <https://doi.org/10.1016/j.lindif.2016.07.003>
- Ezechil, L. (2015). The Necessity of a Pedagogical Reform in the Pre-university Education in Romania, *Procedia - Social and Behavioral Sciences*, 180, 559-564. <https://doi.org/10.1016/j.sbspro.2015.02.160>

- Galeeva, N.L. (2017). *Educational technology of MIS. We implement the requirements of GEF and the professional standard of the teacher*. Moscow: 5 for knowledge.
- Gasparič, R. (2017). Jonathan Bergmann & Aaron Sams, Flipped Learning: Gateway to Student Engagement, International Society for Technology in Education (Book review). *Center for Educational Policy Studies Journal*, 7(3), 173-176. Retrieved from http://pefprints.pef.uni-lj.si/4837/1/CEPS_pp_173-176.pdf
- Korshunova, O.V. (2016). *Learning theory. Pedagogical technologies: textbook*. Kirov: Vyatka State University.
- Prusak, A., & Shriki, A. (2017). «Corresponding with the Professor»: A Didactic Tool for Fostering Students' Ability to Identify Scholastic Difficulties and Ways of Coping with Them. *Creative Education*, 8, 1702-1719. <https://doi.org/10.4236/ce.2017.810116>
- Radulović, L., & Stančić, M. (2017). What is Needed to Develop Critical Thinking in Schools? *Center for Educational Policy Studies Journal*, 7, 9-26. Retrieved from <https://ojs.cepsj.si/index.php/cepsj/article/view/283/170>
- Rozek, M., & Stobaus, C.D. (2016). Teachers Dealing with Learning Difficulties during the Process of Schooling, *Creative Education*, 7, 2696-2709. <http://dx.doi.org/10.4236/ce.2016.717252>
- Sitwala, I. (2017) In Search of a Psychology of Teaching and Learning for the 21st Century. *Journal of Psychology*, 8(2), 83-94. <https://doi.org/10.1080/09764224.2017.1409330>
- Warhuus, J.P., Tanggaard, L., Robinson, S., & Ernø, S.M. (2017) From I to We: collaboration in entrepreneurship education and learning? *Education + Training*, 59(3), 234-249. <https://doi.org/10.1108/ET-08-2015-0077>
- Wingate, T., & Tomes, J. (2017). Who's getting the grades and who's keeping them? A person-centered approach to academic performance and performance variability. *Learning and Individual Differences*, 56, 175-182. <https://doi.org/10.1016/j.lindif.2017.02.007>
- Zucconi, A. (2015). Person-Centered Education. *Cadmus*, 2(5), 59-61. Retrieved from <http://www.cadmusjournal.org/article/volume-2/issue-5/person-centered-education>