

Experience in using distance technologies under online learning conditions

Irina Burlakova^{1*}, *Tatyana Reva*¹, *Rezeda Azmetova*¹, *Marina Golovyashkina*¹, and *Nadezhda Palanchuk*¹

¹Moscow State University of Technology and Management named after K.G. Razumovsky, Institute of Social and Humanitarian Technologies, Moscow, Russia

Abstract. The pandemic situation has revealed some problems in education, which should be solved by educational entities. One of such problems is unreadiness of teachers to organize online classes. More complex aspect is organization of feedback. Some platforms used for online learning demonstrated their incompetence for widescreen education. Not all teachers managed to create comfortable learning digital space for students. This article analyzes the existing situation in vocational training due to transition to distance learning. Some scientists believe that the educational community evidenced revolutionary shift in the pedagogic paradigm. The opinion of other scientists is that today there are no preconditions for changing classic paradigm in pedagogy and only temporary modifications occurring under pandemic conditions should be considered. This article is devoted not only to identification of problems of organization of educational process in distance format but also to proposing solutions to the highlighted problems, verified by the authors, since the circumstances faced by all teachers forced to accelerate transition to digitalization of educational environment. The educational route is now arranged with consideration for digital experience acquired during the pandemic. Due to the experience orientation the article attracts interest not only of university teachers, forced to modify on the go their pedagogical style and to adapt it to the context of current situation, but also of school teachers facing similar problem and locked in forced professional isolation.

Keywords: digital pedagogy, online learning, distance technologies.

1 Introduction

We became involved in the pandemic, which completely altered our understanding of pedagogy. The world has plunged into absolutely new reality: digital. For 90% of students the world of education has narrowed to sizes of screen: notebook, tablet, smartphone. In order to achieve efficient education, all participants in learning process were forced to master the foundations of digital pedagogy [1]. This notion was introduced to define the science and practice, which described arrangement of educational process in new realities of digitalization. Currently numerous seminars and conferences are carried out in digital

* Corresponding author: iiburlakova@mail.ru

format, inviting scientists and teachers for discussion of the mentioned urgent agenda [2-7]. The circumstances faced by teachers forced acceleration of transition to digitalization of educational environment. It is obvious that educational route is now arranged with consideration for digital experience acquired during the pandemic.

2 Methods

This article described the experience of individually oriented educational practice; the methods of involved observation, survey and analysis of responses of participants in educational process were applied.

3 Results

Leading Russian scientists in the field of digital pedagogy, E. Kazakova, L. Ilyushin, V. Pugach, T. Galaktionova, I. Pisarenko, and others, have described in details opportunities of digital pedagogy and presented practically oriented recommendations, which were followed during the lockdown both by university and high school teachers [6].

Nevertheless, we highlight four determining properties of digital pedagogy.

3.1 Quality of student's motivation

Quality of student's motivation. Education motivated both externally and internally is by far more efficient than forcedly initiated learning activity. Motivated learning activity produces independence, creativity, and activity [8]. An external motivator can be either a teacher or parents, or friends. Learning cycle is comprised of the following components: motivation, formulation of objectives and tasks, selection of content of educational material, selection of technologies of arrangement of educational activity, adjustment and final assessment of results. To what extent are students able to complete the training cycle on their own? Under conditions of distance learning, this skill is mandatory, since it is impossible to reach learning results without it. Performing algorithmized learning actions, a student learns to draw his own road map and to understand, at which step he is and what action should be performed to transit to another step. When a student is unable to self-organization, this function is taken over by the teacher [6].

The most discussed topic causing anxiety and perplexity among teachers is the lack of willingness to learn among most students. Upon transition of educational entities of all levels and types to digital didactics, development of powerful variative tools of distance and online learning, the problem of motivation acquired new meanings.

Nonmotivated work leads to searching for strategies to avoid activity. Such strategies are more expressed in distance learning in comparison with conventional classroom system.

Searching for approaches to create positive motivation to achieve high results in online learning results in the following conclusions. External motivation can appear only under conditions of strict compliance with the rules. The key word in this case is control. Under conditions of online learning, its efficiency significantly decreases and sometimes is totally lost. Internal motivation, as demonstrated by studies, is related with qualities of student's personality: curiosity, joy and pleasure in the process, and results of execution of learning and cognitive actions; understanding of meaning of undertaken efforts and desire to follow strategic life target. Internal motivation cannot appear by itself. Development of the internal motivation strongly depends on the practice of positive assessment, where the teacher notes and comments on the student's achievements, and the student independently detects and corrects errors. Herewith, he is governed by self-control system, which includes not only

opportunity to check against the correct solutions/answers but to objectively evaluate his performance using predetermined quality criteria.

3.2 Quality of content of educational material

Quality of content of educational material, which should be learned during predetermined time interval. The questions about the resources (textbook, site, reference book, etc.) to be used for assignment execution, how to present the result, how the teacher will evaluate the fulfilled assignments form the background for preparation of learning assignments both in everyday reality and in digital environment [9].

3.3 Quality of professional qualification of teachers for working in digital environment

The pandemic has revealed some problems in the field of education, which should be rapidly solved by the entities related with professional training of future teachers, retraining, and advanced training of pedagogical staff [10]. One of such problems is inability of teachers to organize classes in online mode. However, the issue of feedback turned to be more complex. Numerous platforms used for online learning demonstrated their inapplicability for widescreen education. Teachers also could not develop comfortable digital educational space for students, where it would be possible to discuss problem situations in real time.

Quality of educational results is determined by the quality of digital educational environment developed by efforts of all participants in the educational process. Internet environment transforms not only the educational system but also the system of interrelations between teachers, students and their parents. It is mentioned that in order to be efficient, it is required for teachers to understand better the influence of digital technologies and social media on quality of education and development of students [11].

During the forced period of distance learning teachers were forced to act both as moderator and tutor, and as producer, scenarist, animator [6].

3.4 Psychological and pedagogical and information support

Under the existing circumstances, the teacher possesses more information and competence concerning organization and implementation of distance learning. For instance, it would be unreasonable to give large assignments, which could decrease motivation. It is necessary to compile a distinct plan of what and how a student should perform, during which time frames and with which results.

Incorrect assignment can be exemplified as follows: “To write an essay on the topic...”

Correct assignment is as follows: “To write an essay on the topic... with the length of at least... to provide citations... to refer to critics... . The term of execution is... and etc.”

A student should be provided with a distinct algorithm of learning actions with specified criteria to understand and to estimate correct execution of the work. Different students should obtain assignments of different complexity, which assumes differentiation of means and forms of education. Then, the assignments are marked with either “mandatory” or “desirable” level. In online learning, it is the teacher who is able to develop productive business relations with students [12].

The distance learning will be more efficient due to the use of module technologies. Material is subdivided into subject modules. According to V. Pugach [6], each module can be comprised of several elements.

Inductor (input) is accompanied by a problematic question relating to overall unit. If correspondence of this element to digital didactics is considered, then the principle from particular to general is meant.

Then the teacher transfers to the student the material for individual study, such as links to video, web sites, books, reference manuals and educational resources. This element corresponds to two didactic principles: from complex to simple and from actions to knowledge. The student prepares questions to all unclear points in the material. We are deeply convinced that learning and cognitive individual activity teaches, and theoretical training is aimed at reproduction. At this stage, the teacher acts as a consultant. The teacher becomes an assistant in learning activity of student. After consultation it is the time to execute tasks. They are subdivided into three types: knowledge acquisition tasks (tests are allowed), testing of understanding (analytical tasks), and readiness to apply the acquired knowledge in practice (design and research tasks) [6].

Then, checking and feedback follow. The initially proposed problematic question could be a topic for collective or individual reflection. It takes place in online format [13-15].

In the situation of online learning, it is the teacher who is the most vulnerable, since an important aspect of his work is the demand to motivate others. A positive teacher sooner or later comes to the stage of adoption of new rules and activates the mechanism of searching for optimum scenario of professional behavior.

4 Conclusion

Taking into account absolute individuality of each teacher, L.I. Ilyushin [6] proposes four main scenarios, which would assist university teachers not only to cross the threshold of digital educational environment but also to improve their level of professionalism.

1. "Starting". It is suitable for those, who are not advanced users of information technologies. Any teacher works using working program and basic textbook. Exactly these two resources form the base of the starting scenario. The students have textbooks, and the program should be sent to them so that they could understand the logics of subject learning. This should be supplemented by communication channel with students, suitable for the teacher. Mastering of the starting scenario would possibly lead the teacher to addition of new communication tools and new sources helping students to learn the course.

2. "Responsible". This refers to the currently existing practice of extreme attention of educational authorities to the results. Initiated, and probably irreversible, digitization of educational environment undoubtedly makes adjustments to such managerial tradition. The basis of this scenario is the use of wide range of online available simulators.

3. "Searching". It will be selected by teachers having experience of operation with educational network applications. The scenario stipulates for involvement of basic learning and methodological set as well as testing of new tools together with students and self-learning.

4. "Navigation". This scenario was used by teachers prior to official announcement of transition to distance learning. Their students have already got used to involvement of online resources into class studies. Such teachers are interested into rapid selection of the best tool or integration of several network tools so that to act completely as a tutor.

These scenarios are capable to bring teachers to a new level of understanding of digital didactics and improve significantly professionalism and education quality in total.

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