Psychological and Pedagogical Aspects of Distance Learning

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Abstract The article gives the psychological and pedagogical characteristics of distance learning, reveals its advantages and disadvantages from the point of view of the educational process subjects. The research was carried out at Mari State university with 2–4th year students of intramural and extramural forms of study. In total, 100 students of the psychological and pedagogical direction of training took part in the study. There were noted such problems of distance learning that worried respondents, such as insufficient technological preparation of teachers for the use of distance learning tools, insufficient control of the level of knowledge assimilation and development of skills, incomplete correspondence of distance learning programs to the educational needs of students, and low quality of educational material. From the psychological point of view, students are worried about the situation of uncertainty in the knowledge assessment system, the decrease in contacts with the teacher and fellow students, the unpreparedness of a number of teachers to use digital technologies in the educational process. It was emphasized that distance learning requires the formation of students' responsibility, dedication, independence, attention, memory, thinking, etc. It is concluded that distance learning is somewhat inferior in its psychological and pedagogical characteristics to blended learning, which is preferred by students. However, a serious analysis of a variety of experimental data on distance learning will increase its effectiveness and minimize negative risks.

Keywords Distance learning · Blended learning · University · Student · Information and educational environment · Digitalization of education

1 Introduction

The boom in distance learning, which occurred as a result of the COVID-19 epidemic spread, has also intensified scientific research in this direction in different countries. Of course, it cannot be claimed that until 2020 this problem has not been investigated in any way. National and foreign authors proved the main methodological issues

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related to the organization of distance learning back in the nineteenth century since the time of "correspondent" and "remote" learning. Modern authors have analyzed the specifics and dysfunctions of distance learning [1], the possibilities of virtual reality technologies [2, 3], online learning in social networks, the use of chatbots, e-platforms [4], networks and mobile technologies in the educational process [5], the significance of digital technologies in vocational training [6], etc. The purpose of this study is to analyze the psychological and pedagogical aspects of distance learning, to identify its advantages and disadvantages from the point of view of the educational process subjects.

2   Materials and Methods

The aim of our research was to explore the positive experiences and difficulties of distance learning. The objectives of the study were to reveal the attitude of students to distance learning, to determine its advantages and disadvantages, and to formulate conclusions. The study used methods such as individual and group conversations, brainstorming, interviewing, mathematical processing and analysis of research results. The research was carried out at Mari State university with 2–4-year students of intramural and extramural forms of study. In total, 100 students of the psychological and pedagogical direction of training took part in the study.

A survey was conducted to assess the effectiveness of distance learning. The questionnaire included the following questions and tasks: What form of the educational process do you consider the most acceptable? Which of the distance learning methods did the teachers in your training use? Which of the individual forms of communication with teachers did you use? What are the most relevant criteria for distance learning? Rate how successful the distance learning process was for you, how easy it was to learn with this form. Evaluate the quality of the teaching materials (whether the teaching material is conveniently organized, meets the needs of students, etc.). Are you satisfied with the quality of the distance learning courses? Point out the main problems in the organization of distance learning. Point out the advantages and disadvantages of distance learning, etc.

3   Results

Let's analyze the data we received on some issues. So, when choosing the forms of education (see Fig. 1), students give preference to blended learning. In their opinion, it is the form that allows them to study at an individual pace, without isolating themselves from communication with fellow students and teachers. The students did not choose the distance form, although they noted that it is still attractive. It increases the level of independence in the study of various materials. It is more relaxed. During the distance examination period, there are no special experiences in contrast to the
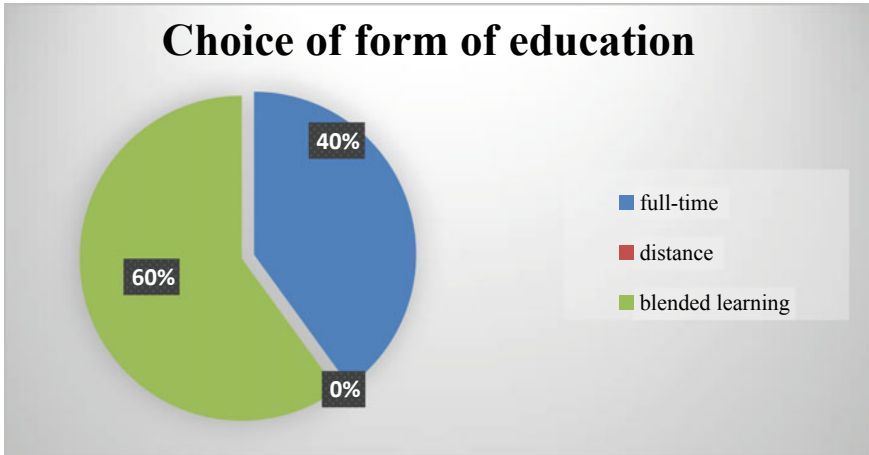
Choice of form of education

Fig. 1 The most acceptable form of the educational process for students

passing of exams/tests in full-time learning. There is minimal risk of virus infection. It is possible to refer to additional information at any time. Students who chose the full-time form of study justified their choice by the fact that it is better to study in the classroom, when you see and hear the teacher personally, the material is much better remembered and the results are higher.

Students noted that teachers use various means and methods of distance learning: electronic textbooks, computer presentations, distance learning resources, information retrieval systems, testing programs and interactive games, but in different percentages (see Fig. 2).
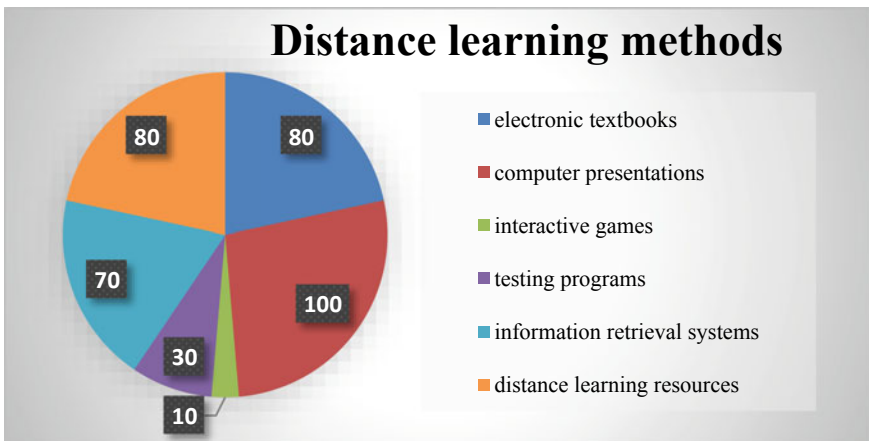
Distance learning methods

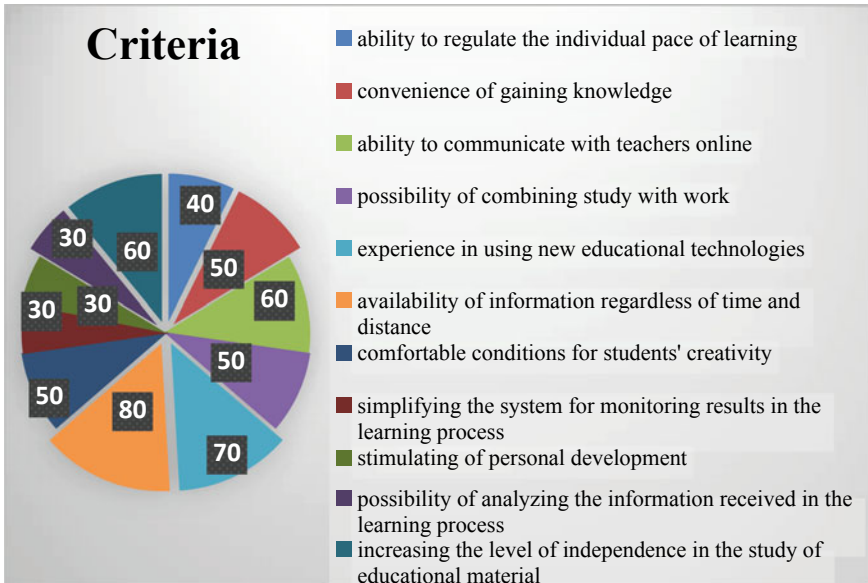**Fig. 2** Distance learning methods used by teachers in the learning process

Fig. 3 Most relevant criteria for distance learning

Describing the most relevant criteria for distance learning, the respondents, first of all, note the availability of information regardless of time and distance, experience in using new educational technologies, the convenience of gaining knowledge, the ability to regulate the individual pace of learning, and the possibility of combining study with work. The possibility of analyzing the information received in the learning process, stimulating of personal development, simplifying the system for monitoring results in the learning process was also indicated. A number of students noted that it was much safer for them to study remotely knowing that the learning outcome depends only on them, and there is no social pressure (see Fig. 3).

As the most popular form of communication with teachers during distance learning, students called chat as the most efficient form of communication. Communication with the teacher on social networks and by e-mail was also actively used. Communication with the teacher via the group e-mail was practically not used (see Fig. 4).

Since distance communication is a fairly new form of interaction between teachers and students, the questionnaire included a question about the use of communication norms in communicative interaction. Some of the respondents noted that the teachers adhered to absolutely all communication norms. However, there were also comments on the clarity of the wording, the lack of punctuality of some teachers, and the literacy of speech. There were also cases of ill will and impoliteness among teachers (see Fig. 5).

In general, it must be said that the students are satisfied with the way the distance learning went. The advantages of distance learning were:
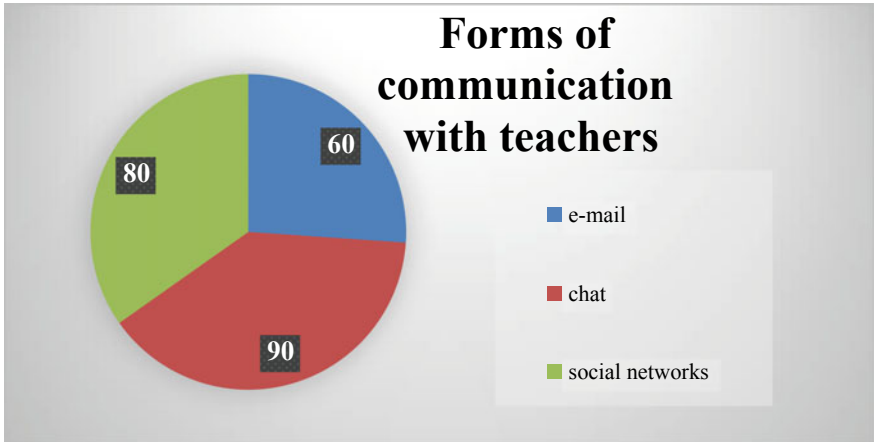
Fig. 4 Individual forms of communication with teachers used during distance learning
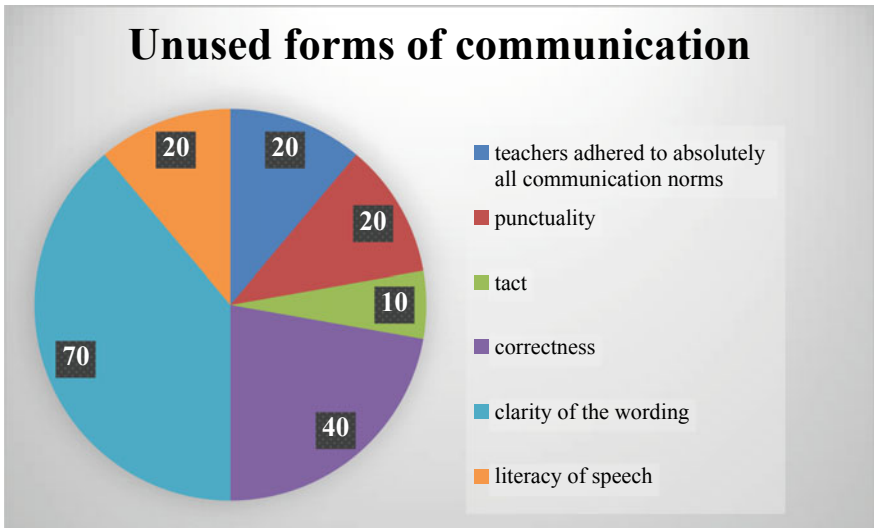

Fig. 5 Communication norms that were not used in the distance learning process

- the ability to master new technologies,
- convenience of time planning,
- an increase in the level of independence in the study of the material,
- the opportunity to study something else, get a second higher education, take online courses,
- comfortable conditions ("everything is close at hand: food, school supplies, Internet"),

- saving time on the road,
- saving material costs,
- the opportunity to study anywhere,
- no need to sit in cold classrooms.
- Although they noted some of its disadvantages:
- insufficient control of the level of knowledge acquisition,
- lack of live communication with teachers and fellow students,
- difficulties in using computer technology,
- untimely check of tasks,
- bad connection,
- the negative impact of the computer on vision,
- physical fatigue from daily sitting at the computer,
- lack of practical activity,
- misunderstanding of some information that requires clarification from the teachers ("the task was not always clear, we had to ask the teachers once again, and sometimes we could not get in touch"),
- incorrect wording of tasks,
- insufficient explanation of how to complete the task ("sometimes they just gave the task and did not explain anything, the students themselves had to figure out how to answer the questions posed").

These disadvantages made distance learning less effective, since it was difficult for them to get used to this form of educational activity. The level of control of the knowledge received by students did not satisfy them. At the same time, students noted that the educational material used during distance learning met all the needs and was conveniently organized (see Fig. 6).

Fig. 6 Satisfaction with the quality of distance learning

Most problems

- insufficient control of knowledge and skills
- poor quality of teaching material
- distance learning programs do not always meet educational needs
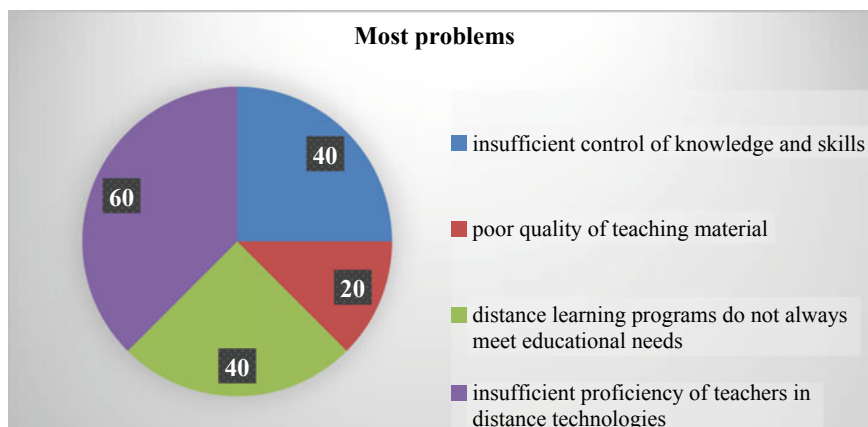- insufficient proficiency of teachers in distance technologies

Fig. 7 The main problems in the organization of distance learning

Analyzing the answers of students about the main problems of distance learning, it can be noted that the majority of respondents associate them with insufficient technological preparation of teachers to use distance-learning tools. In the second place, there are the problems associated with insufficient control of the level of knowledge acquisition and development of skills, incomplete correspondence of distance learning programs to the educational needs of the respondents. A small number of respondents associate the difficulties of distance learning with the low quality of educational material. There were also answers related to excessive control and even a mark of daily presence from the dormitory administrations, which greatly bothered the students (see Fig. 7).

4 Discussion

The data we have obtained make us think about mechanisms for improving the quality of distance learning. Let us turn, first of all, to the pedagogical aspects. Let us start with the teachers, who have a lot of work to do in the distance learning format. It is one thing when a teacher works in a classroom with students in person, he has the opportunity to switch them to another form of activity at any time, conduct an oral survey in a short time, organize a discussion, "brainstorm", use a joke to improve the psychological atmosphere, etc. And it is completely another matter when he has to master a new pedagogical space—an information and educational environment characterized by intensive digitalization. In this environment, it is necessary to design a teaching technology, select and more often develop new didactic material for it, and not only theoretical and practical, but also entertaining (interactive games, quizzes, web quests) to keep students' attention and interest, organize productive educational and communicative interaction, use the best methods and techniques for managing the

cognitive activity of students; to develop and test the forms of control over knowledge acquisition and the development of skills (with the latter it is more difficult in distance learning). This is just the procedure for preparing and conducting the lesson. And after it: checking the completion of tasks by each student (the "uploading" of attached answers takes a lot of time), comments, assessment, re-checking the materials of some careless students who may attach empty files, pictures or materials that do not correspond to the task (hoping that the teacher will not check but put a mark against his name for completing the task), etc.

The psychological aspect of distance learning also requires attention. Remote communication with students does not give the teacher the opportunity to implement fully the principle of individualization, which makes it difficult to choose the optimal style of pedagogical communication. Students are worried about the situation of uncertainty in the knowledge assessment system [1], the decrease in contacts with the teacher and fellow students [7], the lack of readiness of a number of teachers to use digital technologies in the educational process [8]. All this cannot but affect the specifics of the individual virtual educational environment, which is built by each student independently during distance learning and becomes a factor in his socialization, the formation of a new socio-cultural experience [9]. Distance learning requires students to form responsibility, dedication, independence, attention, memory, thinking, etc. Thus, distance learning is somewhat inferior in its psychological and pedagogical characteristics to blended learning, which is preferred by students. The main advantages of blended learning have been analyzed in the works of many authors [10–14]. An equally serious analysis of a variety of experimental data on distance learning will increase its effectiveness and minimize negative risks.

5   Conclusions

Most of the students preferred a blended form of education, no one chose exclusively distance learning. The main methods of distance learning that teachers used were presentations, electronic textbooks, information retrieval systems. Chat has become the most popular form of distance communication between students and teachers. The most important criteria for distance learning, students consider the availability of information regardless of time and distance, experience in using new educational technologies, the convenience of gaining knowledge, the ability to regu-late the individual pace of learning, and the possibility of combining study with work. Half of the students believe that the distance learning process was successful for them, less than half found it difficult to answer. The most difficult problem of distance learning, students believe that teachers do not adequately master distance learning technologies.

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