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## Use of interactive methods of collaboration between educational process participants in the conditions of distance learning

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### ABSTRACT

The purpose of the article was to study three groups of factors of perception of the introduction of interactive methods of distance education in the educational environment of Higher Education Institutions. The research used general scientific research methods, questionnaire methods, methods for integrated assessment, mathematical methods of data processing: calculation of consolidated characteristics of motivation, sign test. The study revealed a low level of student knowledge about distance education technologies and, by contrast, a high level of student interest in mastering interactive distance education methods. The article detects the influence of the educational environment of the HEIs in the formation of the disposition of the students to use interactive technologies of distance education. The article considers properties of interactive methods such as mobility, openness, accessibility and the use of interactive distance learning technologies. The article aims to study the peculiarities of the students' attitude towards the introduction of interactive distance learning technologies in the educational process. Other research perspectives are in the creation of a system for monitoring the preparation of students for the implementation of innovative technologies in relation to the constant development of scientific and technological progress.

KEYWORDS: methods; distance learning; technologies; education; effectiveness.

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## Uso de métodos interactivos de colaboración entre los participantes del proceso educativo en las condiciones del aprendizaje a distancia

### RESUMEN

El propósito del artículo consistió en estudiar tres grupos de factores de percepción de la introducción de métodos interactivos de educación a distancia en el entorno educativo de las Instituciones de Educación Superior. La investigación utilizó métodos de investigación científica general, métodos de cuestionario, métodos para la evaluación integrada, métodos matemáticos de procesamiento de datos: cálculo de las características consolidadas de la motivación, prueba de signos. El estudio reveló un bajo nivel de conocimiento de los estudiantes sobre las tecnologías de educación a distancia y, por el contrario, un alto nivel de interés de los estudiantes en dominar los métodos interactivos de educación a distancia. El artículo detecta la influencia del entorno educativo de las IES en la formación de la disposición de los estudiantes para utilizar tecnologías interactivas de educación a distancia. El artículo considera propiedades de los métodos interactivos como la movilidad, la apertura, la accesibilidad y el uso de tecnologías interactivas de aprendizaje a distancia. El artículo tiene como objetivo estudiar las peculiaridades de la actitud de los estudiantes ante la introducción de tecnologías interactivas de aprendizaje a distancia en el proceso educativo. Otras perspectivas de investigación están en la creación de un sistema de seguimiento de la preparación de los estudiantes para la implementación de tecnologías innovadoras en relación con el desarrollo constante del progreso científico y tecnológico.

**PALABRAS CLAVE:** métodos; educación a distancia; tecnologías; educación; efectividad.

### Introduction

In today's information society, it is impossible to utilize man's creative potential in science, culture, industry, business, and other spheres of life without mastering interactive technologies and the ability to use computer facilities. The concept of "active methods and forms of learning" – a group of pedagogical technologies that help to reach high level of students' activity, has long been used in the teaching practice.

Recently, the term "interactive learning", which is directly related to the introduction of distance learning methods, has become widespread. The use of interactive technologies is one of the most effective ways to increase motivation and individualization, develop creative abilities and produce a favourable emotional atmosphere. Moreover, it allows to move from

an explanatory-illustrated way of teaching to activity orientated one, in which a student participates actively, what contributes to responsible acquisition of new knowledge.

Creation and development of information society involves the widespread use of interactive technologies in education, which is determined by a few factors. Firstly, introduction of interactive technologies significantly accelerates the transfer of knowledge, technological and social experience of mankind not only from generation to generation, but also from one person to another. Secondly, modern interactive technologies, improving the quality of education, allow people to adapt to the environment and to social changes more successfully and quickly. Thirdly, active introduction of interactive technologies in education is an important factor in creating an educational system that would meet the requirements of information society and the process of reforming traditional educational system.

The purpose of the introduction of interactive technologies is to create a single information space of the educational organization, a system in which all participants of the educational process are involved and connected at the information level: administration, teachers, students and their parents. This goal can be achieved by using distance learning methods.

Despite the broad coverage of the research topic, the issues of the effectiveness of the acquisition of professional competencies by the participants of the educational process while using interactive methods of interaction remain unexplored. Thus, the purpose of the study is to identify the effectiveness of usage of interactive teaching methods in distance education.

The specified goal involves implementation of the following tasks:

1. Investigation of the potential of introduction of IDLT into HEI.
2. Analysis of students' readiness for introduction of IDLT in HEI.
3. Exploring the influence of the educational environment of HEI on the students' readiness to implement IDLT in HEI.

## 1. Literature Review

Let us consider the concept of "interactive" and its derivatives. The term "interactive" means the moment of interaction or being in the mode of conversation, dialogue with something (for example, a computer) or someone (a person) (Irvine et.al, 2013). In other

words, “interactive” means “dialogical” or the one that interacts between a person and the media (interactive television, interactive survey) (Francescucci & Rohani, 2019). The term “interactivity” was borrowed from the Latin word “interactio”, deriving from “inter” – “mutual information exchange with the information environment” (Rodríguez-Rodríguez et. al, 2020).

Interactive learning is a special form of cognitive activity, when the learning process is organized in such a way that almost all students are involved in the process of cognition (Soomro et. al, 2017).

Education involves a set of acquired knowledge, skills, abilities, system of values, experience and competencies of a certain volume and complexity for the purpose of intellectual, spiritual, moral, creative, physical and (or) professional development of a person (International Telecommunications Union, 2017).

Interactive learning is dialogical learning, based on the interaction of students with the teachers, learning environment and educational environment (Heitin, 2017). In the process of studying, students carry out joint activities, everyone contributes to the work, there is an exchange of experience, knowledge and skills, so the learning is based on the students’ life experience (Awadhiya et. al, 2014). Thereat learning takes place in a friendly atmosphere and with mutual support.

Interactive methods of education establish the following goals:

1. Development and enrichment of socio-personal experience through the involvement of students into interpersonal interaction.

2. Creation of conditions in which students willingly and independently gain the missing knowledge from various sources, learn to use them for solving cognitive and practical problems, develop research skills and systematic thinking.

3. Creating comfortable learning conditions under which the student feels his/her success and intellectual ability, which makes the whole learning process productive and effective (Setiawan, 2020; Ribble, 2017).

The interactive form of distance learning allows the teacher to find an individual approach to every student, to build subject-subject relationship between the teachers and their students. Interactive methods are based on teaching how to act, as with the help of

actions a person better remembers and learns what he/she does with his/her hands, gains invaluable experience through increased pedagogical interaction (Cook & Dupras, 2004).

IDLT are based on reproduction (imitation), model representation in learning, and can be divided into simulative and non-simulative ones. Simulative IDLT are based on simulative or simulative-gaming modelling of real phenomena, i.e. reproduction of the real processes in a learning environment to various levels of adequacy. Construction of models and organization of work with them allow to reflect in the educational process various kinds of professional context and to form professional experience in the conditions of quasi-professional activity.

Non-simulative IDLT do not require construction of models of the studied phenomenon, process or activity, but the activation is achieved here through the selection of problematic educational content, specially organized classes and usage of technical means of conducting them, as well as ensuring dialogical interaction between a teacher and a student.

Since interactive learning technologies are based on the principles of interaction, students' activity, building on the group experience, obligatory reflection, it is necessary to create an environment of educational communication, characterized by openness, constant interaction, equality of arguments of all participants, accumulation of general knowledge, allowability of mutual evaluation and control. The significance of interactive technologies cannot be overestimated, as they are aimed at personality development, as well as the development of teachers and students, the improvement of academic management.

A number of domestic and foreign researchers have studied the peculiarities of the organization of the interactive distance learning. Gewin (2020) in his article covered the issue of transferring the educational process to the Internet in connection with the COVID-19 pandemic. Cook and Dupras (2004) were the pioneers of developing practical principles for the implementation of interactive distance learning. Altinay et al. (2021) consider the importance of interactive forms of learning in the formation of essential skills and competencies. Dawn (2017) discusses the use of online, blended and technologically advanced learning. Esterhuyse and Scholtz (2015) dwell on the problems of implementing distance learning in developing countries. Miglani and Awadhiya (2017) see into the peculiarities of mobile learning in the work of open universities. Arthur-Nyarko et al. (2020) consider the students' readiness to implement interactive forms of learning. Fowler (2019) in

his doctoral dissertation explores the impact of synchronous orientation of an online course on students' exhaustion. Tzafilkou et al. (2021) review the development and validation of the scale of students' attitudes to distance learning (RLAS) in higher education. Liu et.al (2021) envisage the interactive study of multimedia and virtual technologies in artistic education.

## 2. Methods

For this study, the following diagnostic tools (research methods) were used:

– study and analysis of modern psychological-pedagogical and scientific-pedagogical literature, normative legal and organizational documents, reference literature on the research topic;

– lesson observation of students' educational activities;

– questioning and interviewing the students;

– testing the students;

– analysis of the obtained results using the methods of mathematical statistics.

The experimental work took place in three stages.

The study used questionnaires for psychological and pedagogical research (Seredenko, 2010) with a high level of reliability of the results. The survey method requires respondents to comply with a number of ethical requirements, namely independent answer to all questions honestly and impartially. Ethical criteria such as the honesty of the respondents, professional responsibility, competence, social responsibility, inviolability of personal boundaries and respect are put forward for the research.

Experimental work at the first – indicative – stage of the experiment (2020-2021) included:

– studying of the distance education system in HEI;

– analysis of the formation of information-educational environment through the introduction of distance learning in the educational process of HEI; learning from the experience of application of IDLT in various HEI; determining the level of students' readiness to use IDLT.

Experimental work at the second – formative – stage of the experiment (2021) included:

– setting up the Program of experimental work;

- introduction of pedagogical conditions for the preparation of students for the use of IDLT;
- carrying out control over the course of the pedagogical experiment with the help of questionnaires;
- analysis and processing of the results, obtained during the experiment;
- summarizing the results of the pedagogical experiment.

Experimental work at the third – final – stage of the experiment (2021) included: systematization and generalization of the results of experimental work, formulation of the findings of the study. The given plan corresponds to quantitative research methods and consists in polling and studying the opinion of the specified number of respondents.

Objectives:

The purpose of the study is to test the hypothesis that the introduction of interactive methods contributes to the effective formation of the HEI students' readiness to use IDLT.

Sample:

Experimental work on the formation of the HEI students' readiness to use IDLT was conducted on the basis of the National Pedagogical Dragomanov University (Kyiv, Ukraine). 192 students of all faculties and university-wide departments were selected to take part in the research by means of a remote questionnaire, made in Google Forms.

Methods:

The method of expert assessment was used for comprehensive assessment of the level of HEI students' readiness to use IDLT, namely the motives for using distance learning technologies, as well as professional knowledge, skills and abilities of using IDLT. The following quantitative indicators were used in the study: 1 point – low level, 2 points – average level, 3 points – high level. The mechanism of expert assessment of indicators of students' readiness for the application of IDLT by levels is presented in Table 1.

Consolidated characteristics of motivational, cognitive and technological components by indicators and levels in percentage terms were calculated by the following formula:

$$(\sum_{i=1}^n K_i)/(n*192)*100\%;$$

Where K is the number of answers to each question, i is the number of questions, n is the quantity of questions, 192 is the total number of respondents (university teachers, who participated in the experiment).

Table 1. The mechanism of expert assessment of students' readiness for the application of IDLT by levels.

Indices	The level of points for each indicator		
	Low level	Average level	High level
<b>Motivational component</b>			
Willingness to participate in the formation of information and educational environment of HEI.	1	2	3
Willingness to introduce new information and communication technologies in the educational process.	1	2	3
Interest in creating and using new forms of learning and their integration with other forms of learning.	1	2	3
Willingness to use the opportunities of the information educational environment of HEI.	1	2	3
Endeavours to participate in various innovative competitions and research papers, conferences, seminars	1	2	3
<b>Cognitive component</b>			
Knowledge of methods, techniques and tools required for the application of IDLT.	1	2	3
Understanding of the role and importance of using IDLT.	1	2	3
Knowledge of the main objectives of the introduction of IDLT in the educational process of HEI.	1	2	3
Knowledge of types and basic systems of distance learning, their main advantages and disadvantages.	1	2	3
Knowledge of the main advantages and disadvantages of different distance learning systems.	1	2	3
<b>Technological component</b>			
The ability to work in the distance learning system.	1	2	3
The ability to use the basic capabilities and techniques of distance learning.	1	2	3
The ability to use the basic capabilities and techniques of the distance learning system to visualize the training material.	1	2	3
The ability to use the basic capabilities and techniques of the distance learning system to assess and control knowledge.	1	2	3
The ability to use the basic capabilities and techniques of the distance learning system to ensure communication between different participants of the educational process.	1	2	3

Source: Setiawan (2020)

Let us assume that the accidental variable  $X$  characterizes the state of the level of students' readiness to use IDLT in the considered collection of objects at the fundamental measurement of this property (input control), the accidental variable  $Y$  characterizes the state of the same property in the same collection of objects at the second measurement (output control). There are two series of observations:

$x_1, x_2, \dots, x_i, \dots, x_N$ ;

$y_1, y_2, \dots, y_i, \dots, y_N$ ,

over the accidental variables  $X$  and  $Y$  obtained by considering two dependent samples. Based on them,  $N$  pairs of the form  $(x_i, y_i)$  were compiled, where  $x_i, y_i$  are the results of double measurement of the same indicator in the same object (respondent).

The elements of each pair  $x_i, y_i$  are compared in size, and the pair is assigned to a sign "+" if  $x_i < y_i$ , a sign "-", if  $x_i > y_i$ , and "0" if  $x_i = y_i$ . According to the results of the study, the laws of distribution of accidental variables  $X$  and  $Y$  are the same. Then the equality is fulfilled as follows:

$$P(x_i < y_i) = P(x_i > y_i);$$

for all pairs  $(x_i, y_i)$ , which means that the probability that the fundamental measurement ( $x_i$ ) in the pair  $(x_i, y_i)$  is lower than the second measurement ( $y_i$ ) is equal to the probability that the fundamental measurement in the pair is higher than the second measurement, for all  $n$  pairs.

The validity of this equality can be verified by a sign test. Thus, the null hypothesis will look like:

$$H_0: P(x_i < y_i) = P(x_i > y_i);$$

for all  $i$ . When using the sign test as an alternative hypothesis, the following hypothesis is selected:

$$H_1: P(x_i < y_i) \neq P(x_i > y_i)$$

for all  $i$ . Thus, in this study, during the analysis of the results of experimental work the following null hypothesis  $H_0$  can be tested: the level of readiness of most students to use IDLT has not changed after the implementation of pedagogical conditions, but at the alternative  $H_1$  the readiness of most students to use IDLT has been formed after the implementation of pedagogical conditions.

In the case when  $y_i$  tends to exceed the value of  $x_i$ , the hypothesis  $H_0$  should be tested  $P(x_i < y_i) \leq p(x_i > y_i)$  – at the alternative  $H_1: P(x_i < y_i) > p(x_i > y_i)$ .

$H_0$  deviates at the level of test significance  $\alpha$ , if the experimental value is  $t > n - t_\alpha$ , where the value of  $n - t_\alpha$  is the coefficient.

#### Instruments

The survey was conducted using Google Forms and the mathematical package of statistical data processing Statistica 6.1.

### 3. Results

The total score by all indicators of the components of the HEI students' readiness to use IDLT varies from 19 to 57 points. The choice of intervals in determining the level limits for all indicators in this study was determined using the method of Creswell (2014), according to which the activity will be mastered after the correct execution of 70 or more percent of the tasks. High and low levels are determined by 25% deviation of the assessment from the average in the range of estimates.

To assess the level of students' readiness to use IDLT, control was carried out, which reflects the formedness of motivational, cognitive, and technological components of students' readiness to use IDLT. The following correspondence of the selected answer and the levels was used: "no" – low level, "not sure" – average level, "yes" – high level. Based on the received results we constructed the diagram reflecting the formedness of a motivational component by various indicators (Fig. 1).

According to the obtained data, it is possible to acknowledge high readiness of students to implement IDLT. A significant part of students (over 60%) feel the need to acquire competencies in distance education which, in general, allows us to state high degree of students' motivation to implement IDLT.

In order to check the level of formedness of the cognitive component of students' readiness to use IDLT, we conducted a study of respondents' self-assessment of their knowledge of application of IDLT with the following correspondence of the selected score and levels: 1 point – low level (I do not know at all), 2 points – medium level (I have some idea), 3 points – high level (I know perfectly). Based on the obtained results, we constructed a diagram reflecting the cognitive component formedness by indicators (Fig. 2).

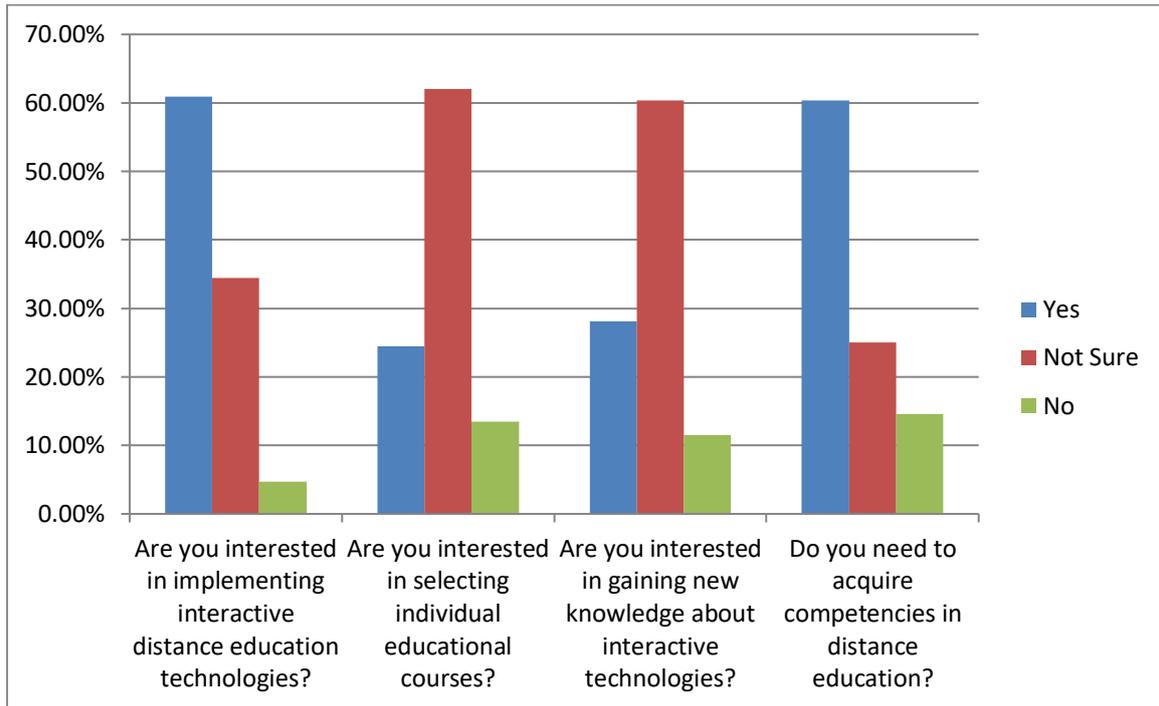


Figure 1. Motivational component of students' readiness to use IDLT  
 Source: Sugiyono (2018)

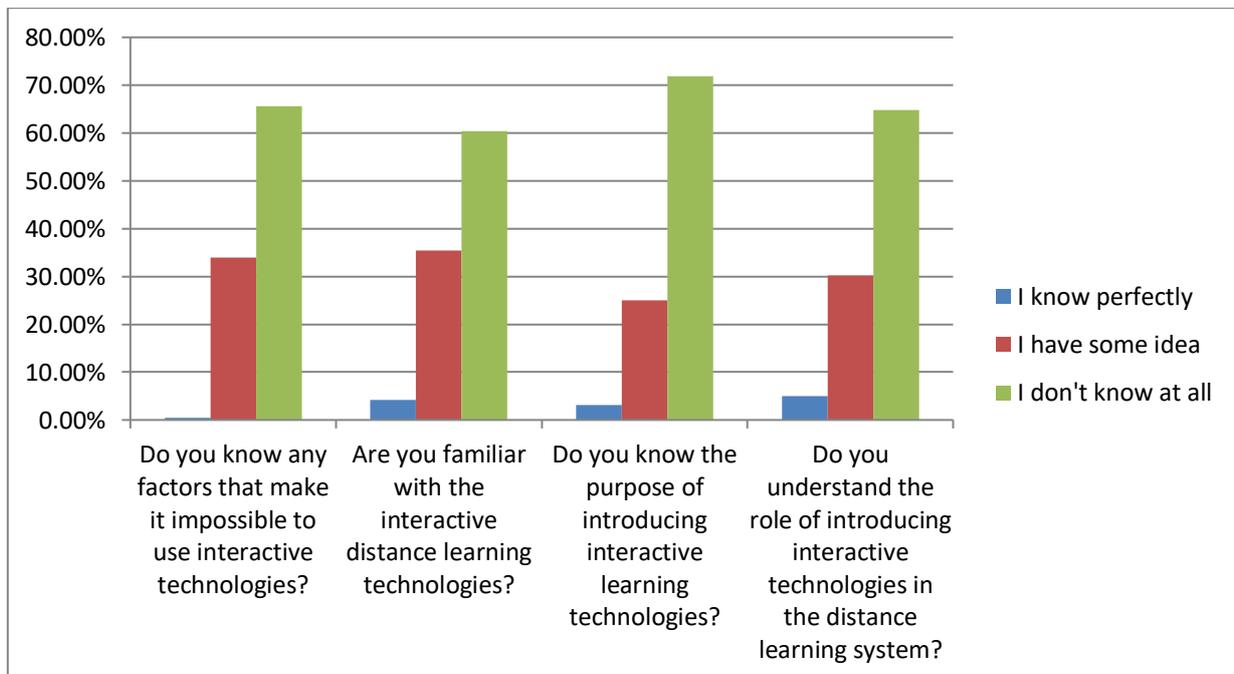


Figure 2. The results of monitoring of the cognitive component formedness of students' readiness to use IDLT  
 Source: Sugiyono (2018)

Analysing the results of the student survey, it was concluded that many students still lack awareness of the tasks, goals, forms and means of IDLT. Undoubtedly, the HEI activities should be aimed at improving the level of students' awareness and their comprehensive integration into the world of modern educational technologies.

To check the level of technological component formedness of HEI students' readiness to use IDLT, we conducted a study of respondents' self-assessment of their abilities and practical skills of distance learning technologies taking the following correspondence of the selected answers and levels: "no" – low level, "I cannot give an unambiguous answer" – medium level, "yes" – high level. On the basis of the obtained results, we constructed a diagram reflecting the technological component formedness by various indicators.

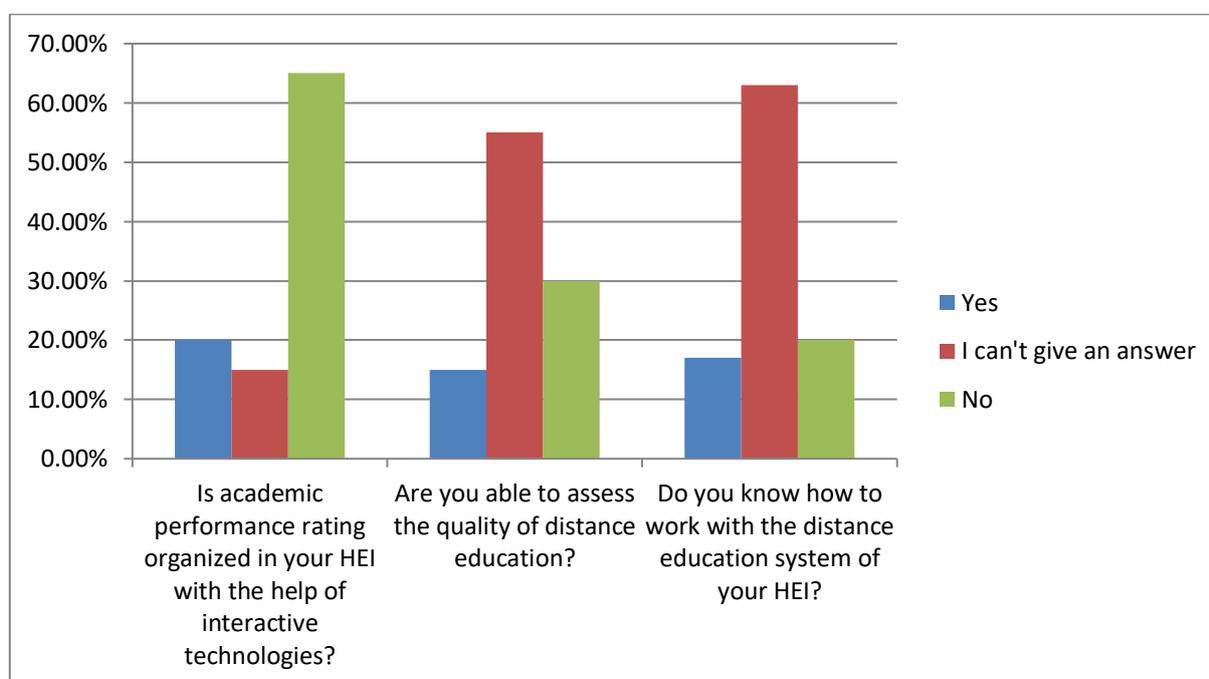


Figure 3. Results of the monitoring of technological component formedness of students' readiness for the application of IDLT  
 Source: Sugiyono (2018)

We found out low level of students' awareness of means and methods of distance education used in their HEI. At the same time, a small number of students 0078 (15%) dare to assess the distance education system itself, which in turn indicates a high degree of students' ignorance of the introduction of IDLT in their HEI.

The results of monitoring the levels of all considered components of students' readiness to use IDLT are shown in the diagram (Fig. 4).

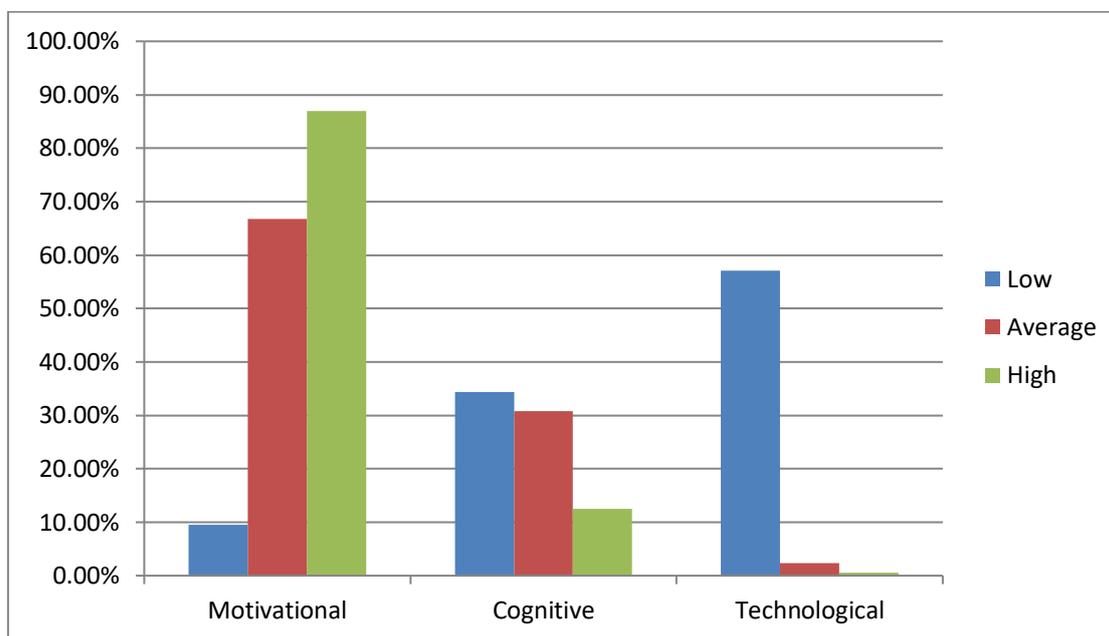


Figure 4. The results of the formedness of components of students' readiness to use IDLT  
 Source: Sugiyono (2018)

Consolidated average absolute and relative indicators of the formedness of motivational, cognitive and technological components by levels are shown in Table 2.

Table 2. The levels of formedness of components of students' readiness for the application of IDLT

Components, levels	Low		Average		High	
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.
Motivational	18	9,5%	83	43,4%	90	47,1%
Cognitive	128	66,8%	59	30,8%	5	2,4%
Technological	167	86,9%	24	12,5%	1	0,6%

Source: Sugiyono (2018)

Although 47.1% of students have a high level of the motivational component formedness, in general, most of the experimental group is not ready to use IDLT judging by the set of indicators of all three components (motivational, cognitive, technological ones).

Nonparametric mathematical statistical methods were used to test the statistical hypothesis of experimental research data. Experimental work is aimed at identifying the

effectiveness of pedagogical tools by comparing the achievements or properties of the same group of respondents in different periods of time (groups of dependent samples) or different groups of respondents (independent samples).

For each criterion we adopted the following structure: the type of experimental data to which we apply the criterion; the nature (discrete or continuous) of the studied property; measurement scale of the results of the experiment.

The sign test was used for the data analysis, as it is intended for comparison of states of some property at members of two dependent samples based on the measurements made on a scale not lower than the order scale.

To apply the sign test, the following requirements must be met:

- 1) random samples;
- 2) dependent samples;
- 3) pairs of properties under investigation are mutually independent;
- 4) the studied property of objects is distributed continuously in both sets of samples;
- 5) the measurement scale must not be lower than the order scale.

In this study, an experiment was conducted to test the effectiveness of pedagogical conditions as a means of forming students' readiness to use IDLT.

To test the hypothesis of the study, 20 respondents were randomly selected out of 192 respondents. The results of input and output control of respondents represent measurements on the ordinal scale (3-point scale: low level – 1 point, average level – 2 points, high level – 3 points) (Table 3).

The value  $T$  (test statistics), equal to the number of positive differences between the results of input and output control, is calculated using a one-sided sign test based on observations to test hypotheses. According to the Table,  $T = 18$ .

Of the 20 data pairs in two cases, the difference is zero, therefore, only 18 ( $20 - 2 = 18$ ) data pairs will be used in the calculations. Thus, in the calculations,  $n = 18$ .

To determine the critical statistics values of the criterion  $n - t\alpha$ , the table of critical statistics values of the sign test is used, since  $n \leq 100$ . For the test significance level  $\alpha = 0.05$  when  $n = 18$ , the value of  $n - t\alpha = 13$ . Therefore, we will have the following inequality:

$$T > n - t\alpha (18 > 13).$$

Thus, the null hypothesis is rejected at the level of  $\alpha = 0.05$  and an alternative hypothesis is accepted: the readiness of most students to use IDLT is formed after the implementation of pedagogical conditions.

The received analysis of the results of experimental work has shown, that pedagogical conditions, implemented in practice, provide effective formation of students' readiness for the application of IDLT.

Table 3. The results of input and output control of a random sample of the experimental group

Result types / respondent	Input control	Output control	Distinctive sign
1	1	3	+
2	1	3	+
3	1	3	+
4	1	3	+
5	2	3	+
6	1	3	+
7	2	3	+
8	2	3	+
9	1	3	+
10	1	3	+
11	1	3	+
12	2	2	0
13	1	3	+
14	1	3	+
15	1	2	+
16	1	3	+
17	2	3	+
18	2	3	+
19	1	3	+
20	2	2	+

Source: Sugiyono (2018)

#### 4. Discussion

The study revealed low level of Ukrainian students' awareness of IDLT compared to foreign students. Rodríguez-Rodríguez et. al, (2020) and Arthur-Nyarko et al. (2020) in their research provide evidence of better awareness of the issue. The level of integration of the

latest educational technologies into the educational process of foreign countries, as evidenced by the research of Hamdan et al. (2021), is also higher.

The article identifies the potential of IDLT for students, which consists in the possibility of creating an innovative information and educational environment (which is considered in the dissertation of Fowler (2019)); mobility, openness, accessibility, interactivity of learning with the use of distance learning technologies; attracting more students from other regions; opportunities to compile an individual educational trajectory for students; economic efficiency of distance learning; visualization of educational information; application of hypertext structure of educational resources; opportunities for inclusive education; reducing the teaching load of university teachers. These findings are consistent with the studies by Miglani and Awadhiya (2017) which also identified the potential for the introduction of IDLT.

IDLT are used in order to optimize the educational process, as well as interest in continuing education and self-education in the fields of information and communication technologies; knowledge, abilities and practical skills necessary for educational activities with the use of hardware and software, information and methodological resources of distance learning, including automated learning systems and automated knowledge control systems, which was also mentioned by Sushchenko et al. (2019) in their study. Students' readiness for changes in learning technology is also considered by Cook and Dupras (2004), who emphasise the need for comprehensive application of educational innovations in the formation of a modern educational environment.

In the article the students' readiness to use IDLT is considered based on the fact that its structure contains the following components: motivational (reflects motives, content, goals), cognitive (includes knowledge and concepts that allow effective use of IDLT in their professional activities) and technological (a set of practical skills required to carry out activities using IDLT). Each of the above-mentioned components includes success criteria of the formedness of students' readiness to use IDLT (high, average, low). Altinay et al. (2021) also examine students' readiness for the introduction of IDLT.

The study did not reveal the impact of interactive distance technologies on increasing motivation, which contradicts the data of the study Onofrei and Ferry (2020), which noted an increase in student motivation when using distance learning technologies. However,

research has shown the important role of the use of remote technologies in creating a new information society, which confirms the study (Hamdan et al., 2021).

Theoretically, as in the research work by (Gewin, 2020), we found out pedagogical conditions of preparing students for the use of IDLT: gradual improvement of students' readiness to use distance learning technologies; creation of an information and educational environment in HEI, which can realize the possibilities of distance learning technologies.

The article does not cover the full range of problems of students' preparation for the use of IDLT in connection with the constant technical and technological development of information and communication technologies, which suggests the emergence of new trends in the use of distance learning in education. The same idea was suggested in the study by (Dawn, 2017).

The main limitations of the study are the remote method of data acquisition. This method does not allow to control the personal participation and integrity of the respondent. Future research should be aimed at covering a larger number of respondents, comparing data obtained from several free economic zones. Also in further research it is necessary to consider each interactive method separately. The theoretical materials considered in the article can be used in the training of future specialists in the organization of higher education. The obtained practical data can be used in designing the infrastructure of the distance education system in the Free Economic Zone in order to take into account the needs of students.

## Conclusion

The article is a timely and relevant study due to the active development of information and communication technologies, including distance learning technologies, and their introduction into the educational process of HEI of Ukraine. However, the problem of forming the student's readiness to use IDLT in terms of unformed methodological approaches to its formation has not been studied sufficiently. The potential of IDLT in HEI lays in creating an innovative information and educational environment; mobility, openness, accessibility, the use of interactive distance learning technologies; attracting more students from other regions; opportunities to compile an individual educational trajectory for students; economic efficiency of distance learning; visualization of educational information;

application of the hypertext structure of educational resources; opportunities for inclusive education; reducing the teaching load of university teachers.

The obtained results can serve as base for diagnosing the level of formedness of HEI students' basic IT competence. During the processing of the results of diagnosing the basic level of IT competence formedness, it was found that the level of 41 students is insufficient. Thus, the analysis of the results of the article showed that the theoretically identified and practically implemented pedagogical conditions provide effective formation of the readiness of most students to the use of IDLT. In the future, there is a need to develop effective methods for monitoring and correcting students' ability to use interactive methods of distance education to improve the level of their interpersonal communication in the educational environment of HEI.

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