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FEATURES OF STUDENTS' TRAINING FOR MASTER'S DEGREE IN EDUCATION

Vizniuk, Inessa, Polishchuk, Anna. Features of students' training for master's degree in education.

Introduction. Today, in the conditions of lockdown when staff have to work remotely, the problem of staff's information and communication competence has gained special importance.

Aim: to determine the features of future translators' training at the classical university.

Results. The article deals with the development and verification of the author's program for the formation of information and communication competence of Master's students in the field of education at the Vinnytsia State Pedagogical University named after Mykhailo Kotsubynsky. The author analyzes the features and methods of studying information and communication competence of students of Master's program in education, the levels of the research component of their information and communication competence, and different definitions of cloud technologies, as well as proposes various tasks to study students' information and communication competence. The article presents the author's training program for the formation of information and communication competence of students of Master's program in education and compares the indicators of students' information and communication competence before and after the training program.

Conclusion. The author's training program for the formation of information and communicative competence of Master's students in education has been proved to be effective: the high and sufficient levels of the research component of Master's students' information and communicative competence have grown statistically significantly.

Key words: information and communication competence, students of Master's program in education, research component, international databases, author's program.

Визнюк Инесса, Полищук Анна. Особенности профессиональной подготовки будущих магистров в сфере образования.

Введение. Проблема информационной и коммуникативной компетенции очень актуальна в наши дни, особенно в условиях карантина, когда приходится сидеть дома и работать удаленно.

Цель – определить особенности профессиональной подготовки будущих переводчиков в классическом университете. В статье исследуется, как разработать и проверить эффективность использования авторской программы по формированию информационно-коммуникативной компетентности будущих магистров в сфере образования на базе Винницкого государственного педагогического университета имени Михаила Коцюбинского.

Заключение. Определены критерии, показатели и **методы** изучения компонента информационно-коммуникативной компетентности будущих магистров в сфере образования, уровни формирования исследовательской составляющей информационно-коммуникационных компетенций будущих магистров образования, понятия «облачные технологии».

Ключевые слова: информационно-коммуникативная компетенция, будущие магистры образования, исследовательская составляющая, международные базы данных, авторская программа.

Introduction. The modernization of education calls for a new educational paradigm to train students not only in solving work-relevant problems but also in using modern information and communication technologies (ICT) in their future work, which can promote their social mobility. Modern translators should be able to set aims and carry out educational and cognitive tasks related to information retrieval, develop and use information resources, use ICT for innovative educational process modeling, as well as for personal and professional self-development. Solving these problems

requires future translators' personal maturity, which will allow them, using their cognitive activity, to anticipate the demand for knowledge. The integration of these translators' personal qualities with their competencies will enable them to develop new competencies to be at the current level of the information society. In this case, one can talk about the development of linguistics students' information competence.

The study analyzed the available research on the use of ICT in education (Konoshevskiy, 2011; Rwodzi, de Jager & Mpofu, 2020). Some researchers propose innovative approaches to using social media in teaching English as a second language, including blogs and wikis (Garcia Santiago, 2016). O.Bihych & V. Strilets (2020) explored the advantages and disadvantages of ICT translation tools: translation databases (context Reverso); electronic dictionaries (ABBY Lingvo, Multitran); electronic text corpora as a source of authentic linguistic materials, machine translation systems (Google Translate) and means CAT (Trados, SmartCAT), which can facilitate the compilation of target texts. S. Ahmed, B. Qasem & S. Pawar (2020) noted the need to improve English language skills and the inclusion of social media in language teaching as teachers have to develop new teaching strategies that include digital teaching aids.

Despite numerous scientific studies on the problem under consideration, the problem of future translators' classical university training needs in-depth research.

The purpose of the article is to determine the features of future translators' training in a classical university. The authors *hypothesize* that future translators' self-realization is the result of their independent activity and the use of ICT, which promotes their information competence. **The objective** of the study is the development of M.Ed. students' information-and-communication competence.

Research methods and organization. The main purpose of the experimental study is to develop and test a special M.Ed. students' ICT competence development program.

Sample. The study, which had several stages, was conducted at Vinnytsia State Pedagogical University named after Mykhailo Kotsyubynsky in 2019-2020.

At the first stage we analyzed educational programs and curricula for training Master's program students at the university. It was found out that M.Ed. students' programs had been designed to develop students' in-depth academic and/or professional knowledge and research competencies needed for doing their Master's theses.

We found that academic disciplines did not have any IC content, so the students' ICT competence was formed spontaneously. The academic disciplines did not focus on developing students' ICT competence, which could help them in their scientific research.

The **methods** of experimental study included:

- observation (for additional verification of data) and facts collecting;
- surveys (questionnaires, interviews) to determine the levels of students' IC competence;
- problem-searching and individual projects;
- statistical methods (for quantitative and qualitative analysis of empirical data). The reliability of

the experimental results was assessed using ranks correlation by Pearson's criterion χ^2 .

The following assessment tools were used: 1) questionnaires (to find out students' use of ICT in research and their skills with computers, Microsoft Office programs, cloud technologies, distance learning, visualization of theoretical material, and multimedia, etc.

At the assessment stage of the study, we measured the levels of students' IC competence using a set of specially designed tools. Since most respondents were shown to have IC competence at the average and low levels, we decided to develop a program to train students' IC competence, in particular its research component.

The program:

- involved students in active scientific communication and organization of scientific events using the use of IC support;
- created a personal educational and scientific environment for future scientists;
- used forms and methods of distance learning;
- developed students' knowledge and skills needed for work with cloud services, scientometric databases, computer programs, e-learning tools, etc.

The experimental group took part in a special M.Ed. students' IC competence development program, which included a system of special activities and exercises. The control group worked according to the traditional program.

Based on the analysis of the scientific literature, we developed the criteria for and measures of the research component of M.Ed. students' IC competence. For this purpose we used the motivational-value, operational-active, and reflexive criteria and different research methods (see Table 1).

Table 1

Criteria for, indicators and methods of studying the research component of M.Ed. students' IC competence

Criteria	Indicators	Methods
Motivational and valuable	- formation of the need to use ICT tools for scientific activities; - positive attitude to using ICT in research; - desire for scientific communication and success in scientific activities.	Questionnaire, interview, observation
Operational and active	- skills and abilities to work in the IC-educational environment for the search and storage of information data, scientific communication on the Internet, registration of research results using ICT; - skills and abilities to work in a distance learning environment; - ability of creative activity for development and introduction of electronic educational resources, presentation of scientific research results.	Problem-searching and creative tasks
Reflexive	- ability to adequately assess the available ICT tools and self-assessment of their own capabilities and prospects for the use of ICT tools in research; - desire to improve their own IC competence, desire for self-development and self-improvement in the field of ICT; - readiness to master innovations in the field of ICT for scientific activities.	Analytical task, interview

The levels of research component of M.Ed. students' IC competence were determined according to the ICT Competence Standards for UNESCO teachers (UNESCO, 2008):

- the 1st level (level of technical literacy) - mastering theoretical and practical knowledge;
- the 2nd level (level of in-depth knowledge) - development of practical skills and knowledge and their effective use in real life situations;
- the 3d level (level of knowledge creation) - the use of existing knowledge and skills to produce new knowledge.

The results of the study into the dynamic characteristics of student's unconscious activity show that the stress protection intensity (SPI) varies depending on the year of study (Table 1).

Table (sample)

Dynamic characteristics of students' stress protection intensity from the first through the fifth year of studies

Definition	Curriculum				
	1	2	3	4	5
Motivation	66.59	69.58	66.36	62.18	68.21
Readiness	67.34	70.22	68.29	60.79	67.57
Competence	63.57	67.59	72.14	68.34	73.56
Cloud technologies	65.72	67.45	70.15	66.24	68.22
Mobile learning	64.25	66.78	72.46	69.14	71.98

There are some general patterns in the dynamics of the rate of SPI from the first through the fifth year of studies (Table 1). It is established that by the second year the SPI indicator is characterized by a statistically significant increase ($t = -2.11$; $p = 0.03$). The intensity of the defenses in the second year is the highest.

From the second to the third year, the indicator of SPI tends to decrease. No statistically significant changes were detected. In the third year, the high intensity of the protection remains. The tendency to reduce the intensity of the tension of the defenses from the third to the fourth year is maintained and even intensified.

No statistically significant changes in the rate of SPI between the third and fourth year were found, but there was statistical probability of its decrease in the fourth year relative to the second year ($t = 3.7$; $p = 0.0003$). This allows concluding that the reduction in the intensity of the protection covers the period from the second to the fourth year of studies. The nature of changes in the rate of SPI from the fourth to the fifth year had a statistically significant tendency to increase ($t = -2.23$; $p = 0.03$).

The analysis of this problem-solving task showed that most respondents completed the task quite formally, some of them almost completely copied presentations from the Internet, slides had different designs and did not meet the requirements of fonts, colors, etc. Creativity, originality, high-quality visualization of the theoretical information, as well as original idea presentations were demonstrated only in few students.

The vast majority of the respondents (EG - 100, 87%; CG - 93, 81%) chose Microsoft Office PowerPoint for, while this program's advanced features were used rarely. 28 people (EG - 13 people, 11.3%; CG - 15 people, 13%) tried to visualize the theoretical material of the scientific report using an interactive poster and smart card, online services, text fragments and images (Internet multimedia resources, audio, video, and animation were ignored). 9 respondents (EG - 4, 3.5%; CG - 5, 4.3%) demonstrated the ability to make a search, as well as extraordinary thinking and creativity in performing tasks in Glogster, Prezy, Cacao environments.

Results and discussion. The respondents' IC competence assessment conducted after the training found that:

- the respondents from the experimental group had IC competence mostly at average (47.8%) and sufficient (25.2%) levels. 15.7% and 11.3% of the respondents had IC competence at low and high levels respectively;

- the control-group respondents' IC competence was much lower: only 2.6% of them had IC competence at a high level, 10.4% at a sufficient level, 44.4% at an average level, and 42.6% at a medium level.

We compared the levels of the research component of M.Ed. students' IC competence in experimental and control groups (Table 2).

Table 2

Levels of M.Ed. students' IC competence

Level	Before experiment				After experiment			
	EG		CG		EG		CG	
	individuals	%	individuals	%	individuals	%	individuals	%
High	4	3.5	3	2.6	13	11.3	3	2.6
Sufficient	12	10.4	11	9.6	29	25.2	12	10.4
Average	49	42.6	49	42.6	55	47.8	51	44.4
Low	50	43.5	52	45.2	18	15.7	49	42.6
Total	115	100	115	100	115	100	115	100

To establish the similarity-difference (comparison) between the empirical and theoretical frequency distributions and check the difference from 0 coefficients of conjugation (ϕ , K_{ch} , C) Pearson's criterion χ^2 (chi-square) is used.

In order to compare the results of the experimental and control groups, we formulated the following statistical hypotheses:

H0: The proposed program is ineffective for the development of M.Ed. students' IC competence, and the results are random.

H1: The proposed program is effective for the development of M.Ed. students' IC competence, and the results are not accidental.

Let us calculate the relative frequencies f_{exp} and f_{contr} .

Table 3

Correlations between indicators of achievement levels of M.Ed. students' IC competence in EG and CG

Level of achievement	Relative frequency of experimental group f_{exp}	Relative frequency of control group f_{contr}	Frequency difference module
High	0.113043	0.026087	0.086956
Sufficient	0.252174	0.104348	0.147826
Average	0.478261	0.443478	0.034783
Low	0.156522	0.426087	0.269565

Among the obtained modules of the differences in relative frequencies by levels of achievement, we choose the largest of the modules, which is d_{max} .

In our case $d_{max}=0.2696$.

The empirical value of the criterion is determined by the formula:

$$\lambda_{emp} = d_{max} \cdot \sqrt{\frac{n_1 \cdot n_2}{n_1 + n_2}}$$

where n_1 and n_2 are the number of people in the experimental and control groups, respectively.

Substituting d_{max} , n_1 and n_2 we obtain the value.

In order to draw conclusions about the similarity of the results obtained by this criterion, we compare the experimental and critical meanings, determined by the tables of critical meaning.

Given this, we determine the critical meaning according to the table.

Thus, the null hypothesis is false and the groups on the basis of this feature differ significantly.

So, the proposed M.Ed. students' IC competence development program is effective, and the results are not accidental.

Conclusions. The results of the experiment allow suggesting that the proposed M.Ed. students' IC competence development program can promote students' IC competence, which proves the research hypothesis.

It should be noted that an important prerequisite to developing students' IC competence is a unified information and educational space as a product of globalization of education and an integrated network environment formed within every institution of higher learning.

The study does not solve all problems in the development of M.Ed. students' IC competence and the use of ICT in research. Areas of research may include: theoretical and methodological foundations of the development of computer-based environment for training future PhDs in colleges of teaching; higher-education-relevant forms and methods of IC support at different stages of research; updating the content of IC competence in the conditions of computer-oriented educational environment.

Prospects for further research include the promotion of international student exchange programs and cooperation for developing programs and projects in the context of the Ukrainian education reform.

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Візнюк Інесса, Поліщук Анна. Особливості професійної підготовки майбутніх магістрів у галузі освіти.

Вступ. Проблема інформаційної та комунікативної компетенції в наш час є надзвичайно важливою, особливо в умовах карантину, коли нам доводиться сидіти вдома і працювати віддалено.

Метою є визначення особливостей професійної підготовки майбутніх перекладачів у класичному університеті. У статті йдеться про розробку та перевірку ефективного використання авторської програми для формування інформаційно-комунікативної компетентності майбутніх магістрів у галузі освіти на базі Вінницького державного педагогічного університету імені Михайла Коцюбинського. Показано критерії, особливості та методи вивчення складової інформаційно-комунікативної компетентності майбутніх магістрів у галузі освіти, рівні сформованості дослідницької складової інформаційно-комунікаційних компетентностей майбутніх магістрів у галузі освіти, визначення поняття «хмарні технології». Були запропоновані різні завдання для вивчення інформаційної та комунікативної компетенції магістра. Впроваджено авторську програму формування інформаційно-комунікативної компетентності майбутніх магістрів у галузі освіти. Порівнювались показники згаданої компетентності майстрів до і після експерименту.

Висновки. Запропоновано авторську програму формування інформаційно-комунікативної компетентності майбутніх магістрів у галузі освіти в рамках експериментальної групи, яка виявилася ефективною та не випадковою. Виявлено загальне збільшення показників високого та достатнього рівнів для формування дослідницької складової інформаційно-комунікативної компетентності майбутніх магістрів у галузі освіти.

Ключові слова: інформаційно-комунікативна компетентність, майбутні магістри в галузі освіти, дослідницька складова, міжнародні бази даних, авторська програма.

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