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INFORMATION AND COMMUNICATION TECHNOLOGIES AS A TEACHER'S SELF-DEVELOPMENT TOOL

Abstract. The article is devoted to the problem of self-development of a pedagogical employee of a general secondary education institution. An overview of the teacher's self-development model in the context of informal education, using information and communication technologies, was made. The analysis of various studies showed that ICT for educational activities has a significant impact and is a Russian lever in providing quality educational content. Mastery of basic principles, skills and abilities with the use of digital tools is currently a priority task for all institutions of general secondary education. Competence with ICT is currently the basis for self-development and self-organization of a teacher in the process of sustainable development of a specialist's personality. But having modern and practical skills in the use of ICT for a teacher is more necessary than a simple desire for improvement. The approach to teaching using ICT tools of teachers of different cycles can be implemented, taking into account the following confirmation: new approaches to teaching, increased flexibility; user orientation, greater autonomy for students; support and use of new technologies; strengthening network connections between institutions and partnerships between interested parties in the field of education (stakeholders); improved access allows those with fewer resources to only advance in knowledge. Separate components of the teacher's self-development: internal and external. The first group approves work on oneself, acceptance and manifestation of oneself in the world. The second is a balanced deep work with him, which is his own personality. The external components of a teacher's self-development include the following characteristics: environment, relationships, priorities, activities. external aspects that need development, the teacher should not look for internal ones that are the driving force in this process: self-knowledge, understanding, planning, implementation. An analysis of the results of the survey was made regarding the use and use by teachers of secondary schools of the Internet platform and resources before and after the introduction of quarantine restrictions.

Keywords: self-development; ICT; informal education; teacher; adult education

Statement of the problem in general. At the stage of restructuring the Ukrainian education, the pedagogical community needs continuous development. In the last 20 years information technologies have been increasingly implemented and successfully used in the practice of teaching. Digitalization of education is the highest priority of the educational process, its impulsive force on the way to quality educational activities. According to Article 8 of the Law of On Education of Ukraine, a person ensures his right to lifelong learning through formal, non-formal and informal education. The state recognizes these types of education, creates conditions for the development of subjects of educational activity that provide appropriate educational services, and also encourages the acquisition of education of all types " (Verkhavna Rada Ukrainy, 2017).

As far as we are concerned, informal education as priority and most expedient direction of educational activity can be considered because for a teacher who has received a qualification, confirms it annually at advanced training courses in accordance with the "Procedure for in-service training of pedagogical and scientific-pedagogical workers" (Kabinet Ministriv Ukrainy, 2019), the most valuable and appropriate will be self-educational activities, lifelong

learning, which will contribute to the comprehensive development of personality, and thus affect improvement of the teacher as the expert and the master in his field.

Analysis of recent research and publications. Many researchers of education, such as: T. Alessander, M. Knowles, S. Zmeyov, as well as the Ukrainian ones, S. Arkhipov, L. Lukyanov, T. Sorochan, etc. were engaged in the analysis of various types of education. Some aspects of usage of information and communication technologies are highlighted in the research papers of M. Zhaldak, Y. Ramsky, S. Semerikov, A. Smoliuk (Smoliuk, 2018, p.39), O. Spivakovsky and others. However, aspects of the using ICT in the prism of self-education have not been given enough attention. The appliance of modern ICT and pedagogical technologies are considered in the research (Pokryshen, 2018).

One of the sections of General pedagogy, in which the merits of people who study is the main object is called Axiological pedagogy (Goncharenko, 1997, p.21). This research will be based on these issues of values.

In order to ensure the proper quality of teacher training and to make a valuable orientation of the educational process, many researchers suggest using the axiological approach as a methodological basis. Among them are N. Astashova, O. Bondareska, B. Gershunsky, I. Isayev, V. Slastenin, V. Nechaev, E. Shiyarov, I. Yarmakeev, O. Yefimova, which is reflected in their works.

Formulation of the goals of the article. The purpose of the study - is to develop a model of teacher self-development in terms of informal education, using information and communication technologies; analysis of the results of the survey on the using and operating the Internet platforms and resources by secondary school teachers.

Presenting of the main material. After analyzing the work of researchers, we came to the conclusion that ICT for educational activities have a significant impact and is an impulsive force in providing quality educational content. ICTs undoubtedly improve the teaching and learning of all disciplines without exception. Thanks to the practical skills of using ICT, teachers become creators of the pedagogical environment. ICTs help teachers to present their teaching in an attractive and understandable way for students at all levels of educational programs and with any skills.

In the spring of 2020, Ukrainian education became hostage to a pandemic caused by the SARS-Cov-2 virus, which irreversibly changed all stakeholders in the educational process, divided education into "before" and "after". Bill Gates wittily remarked: "Quarantine confirms that technology will not replace teachers, but every problem is a new opportunity. For students - to learn to learn. For teachers - to learn to use digital technologies" **Помилка! Джерело посилання не знайдено..** Distance learning has been established in secondary education institutions. From March 12, 2020, education is moving to a new level, closely related to digital technology, a level where teacher-computer-student-parent become interconnected and inseparable parts of the educational process.

On October 16, 2020 according to the Regulation on distance learning of secondary general education, approved by the order of the Ministry of Education and Science of September 8, 2020 № 1115, registered in the Ministry of Justice of Ukraine on September 28, 2020 for № 941/35224 (hereinafter - the Regulation), The Ministry of Education and Science provided recommendations to general secondary education establishments on the organization of the educational process during distance learning. According to the Regulations, educational institutions were to provide educational services in synchronous and asynchronous modes, and, consequently, to actively use various gadgets and devices during teaching. Asynchronous mode provided the development of teachers' own lessons, their further placement on the platform of general secondary education in the Internet via other methods available to teachers and students, its further carrying out within the time specified by the teacher in the task, and checking and providing feedback by the teacher.

Synchronous mode, in its turn, foresaw teaching online, in using a variety of applications, platforms, resources, such as Skype, Zoom, Google Meet. This turned out to be a rather difficult process for the teaching staff, the age of which in most educational institutions is over 40 years. It is definitely caused by the dissatisfaction of most stakeholders with the quality of educational services provided by teachers, in summer and autumn in all secondary schools express training of the entire teaching staff was conducted, where computer science teachers, competent persons, ICT trainers, employees of postgraduate pedagogical education taught to develop lessons on various platforms, explained the principles of operating computers, laptops, tablets, etc. It became clear that the knowledge of ICT teachers is insufficient.

Mastering the basic principles, skills and abilities with the use of digital tools is a priority now for all general secondary education institutions.

Teaching teachers, as it turns out, is not always an easy process, but it is possible if you have the skills of self-organization and skill, the desire to learn. That is why the mastery of ICT should be carried out through the prism of informal education, thereby developing and improving educators, helping the teacher to be a modern, intelligent, educated and experienced user of digital technologies.

In today's dynamic life, teaching staff has less and less time and desire to learn and improve themselves. This is due to the unstable economic and political situation, the war in the East of Ukraine, and the depressed outlook in society. We are in favour of the opinion, that teacher must cultivate a desire for self-education, must realize, understand its importance at the present stage of development of education to provide quality educational services.

The above problems led to the development of a model of teacher self-development in terms of informal education, using information and communication technologies. Thus, you need to outline in detail the components of teacher self-development. They can be divided into internal and external aspects. The first aspect will be about working on oneself, personal accepting and manifesting in the world. The second is a balanced self-work **Помилка! Джерело посилання не знайдено.**)

The external components of teacher self-development include the following characteristics: *environment, relationships, priorities, activities*.

The **environment** is the lever, the key to the success of the whole process of self-development, which encourages the teacher to move forward, to be in constant dynamics. Working in an educational institution has a huge impact on a young teacher who has just crossed the entrance of school and aims to share experiences, teach and provide quality educational services. If the head of the institution aims to improve the teaching staff constantly, encourages employers staff to act, then, the teacher will definitely be able to develop and improve, constantly improving his professional skills and qualifications. Researching and accepting himself in a particular educational environment, the teacher gets a clear idea of the strategies and goals of ICT usage. This information provides a solid basis for reflection on career guidance and will help correctly determine the purpose of one's own training. From that point of view, this goal should be aimed at developing skills that will be useful in the future. This issue was considered by LS Vygotsky when it came to the area of immediate development, in the educational establishments there should be an appropriate environment for sustainable development of the teacher.

Relationships. It is necessary to consider the relationship from the perspective of personal growth. People need quality and meaningful communication. It would be rational to add that high-quality communication is made by people who are competent and experienced in the field of development, that can interest the teacher. Such people can give the teacher invaluable information, that will help them to avoid a huge number of mistakes and waste of their time. Communicating with such people will allow teachers to see the wider picture of the world, to critically reevaluate it. A teacher should start constructing such kind of relations by working at

webinars, seminars, trainings, master classes, etc. Currently, the Internet provides a very wide opportunities for teachers to participate in such activities. In the fall of 2020, the course "Effective Google solutions for using education cloud cooperation" was developed in partnership with Google Ukraine and the Ministry of Education and Science of Ukraine for wider implementation of distance learning in educational institutions under quarantine restrictions caused by the COVID 19 pandemic. According to the information of Ministry of Education, 14,825 educators joined the course, and 8,119 (or 55%) of them received a certificate of successful completion of the course " **Помилка! Джерело посилання не знайдено.**

Priorities. To move the teachers self-development in the right direction, it is necessary to understand the hierarchy of its priorities and values. They can relate to various spheres of life: material, spiritual, intellectual. For example, in the work of N. Astashova **Помилка! Джерело посилання не знайдено.**) the author highlights personal, professional, pedagogical and socio-cultural values. Of course, selected components can be adjusted over time, but having a clear career plan will help a teacher to focus on aspects of self-development.

The **activity** must be conscious. Awareness of ICT opens the teacher a new horizons, gives the chance to visit different corners of the planet and to adopt that invaluable experience, that baggage of knowledge, abilities, skills that will make it full, capacious and what is of main importance, self-realized. Activities can include courses, conversations, trainings, coachings, reading books, professional websites, cinematology (film analysis), webinars, communicating with colleagues at conferences, meetings, forums, online, etc.

In addition to the external aspects that need development, the teacher must not neglect the internal ones (as they will be the driving force in this process): *self-knowledge, understanding, planning, implementation* (Lesnik, 2011, p. 303).

At the stage of **self-knowledge** the teacher needs to understand and comprehend the need for development and self-improvement. You need to objectively assess your capabilities, perhaps even do a SWOT-analysis to clearly understand your strengths and weaknesses. It would be appropriate to add that the pandemic has made adjustments in the self-knowledge of teachers, in realizing that learning to use and implement ICT in the educational process in order to provide quality educational services is essential.

At the same time, we are approaching the stage of **understanding** that the teacher is not only a scholastic, he is the same student who constantly strives to enrich knowledge, to get answers to incomprehensible complex questions, to master programs that seem to have never been able to implement in practice the teacher of a certain cycle (for example, physical education teachers could not have imagined that their educational activities would be closely linked to digital technologies). The stage of comprehension is very important as after it the teacher can move to the next step.

Action planning and **implementation**. Approaching this stage, the teacher has already done a lot of work, deep introspection self-analysis and is ready to take decisive action. Right now the teacher makes a clear plan of action with the deadlines and resources needed for achieving the goals which must be generated with his external position, with his own level of competence, worldview, motives, beliefs, fears, purposes. These goals will have an educational character, because they are aimed directly at changes within the person, the teacher.

Following the principles and ideas of this model, the teacher can easily acquire the necessary skills and abilities, which will be further actively implemented and tested in their educational activities.

ICT competencies are currently the basis for self-development and self-organization of teachers in the process of sustainable development of the specialist's personality. But we should note that for a teacher who finds himself in a situation where the smooth flow of work is replaced by a dynamic process of lifelong learning, sometimes it becomes stressful, therefore the approach to teacher training and self-development should be constant and consistent.

A consistent approach to the training of ICT teachers can be described as a system of activities placed in a workable, understandable to the teacher, taking into account the characteristics of the individual teacher and the entire teaching staff of the school, aimed at mastering, applying and implementing information technology in lessons to provide quality educational services (Vorotnykova, 2019, p. 107).

A consistent approach to teaching ICT for teachers of different cycles can be implemented, pointing at the following statements: new approaches to teaching, increasing flexibility; user-orientated direction, greater autonomy for students; supporting and using of new technologies; strengthening networking between institutions and partnerships between education stakeholders; Improved access will allow those with fewer resources to take advantage of knowledge better.

Being modern and having practical ICT skills for a teacher is a necessity rather than a simple desire to improve.

Currently there are many free online platforms, where each teacher can easily gain new knowledge, skills, develop new competencies successfully and efficiently implement them in the educational process with the one click.

In order to understand the current picture of the using and operating of Internet platforms and resources by secondary school teachers, we conducted a survey. 300 teachers of three different secondary schools in Ukraine of different profiles participated in the survey of their usage of Internet resources and platforms for self-educational aims.

The questionnaire suggested 9 educational resources that the teacher used or started to use after the beginning of quarantine restrictions. Educational resources were selected from a number of the most required ones on the Internet, namely: YouTube, Google Docs, Mentimeter, Kahoot, LearningApps, Prometheus, EdEra, Moodle, Vseosvita, Naurok.

The answers to the questions were offered in four different variations in order to monitor whether the situation has changed with the onset of quarantine and further restrictions in full-time education in school and whether the activity of using the same resources has increased / decreased. The results of the survey are presented in the summary diagram (Fig. 1).

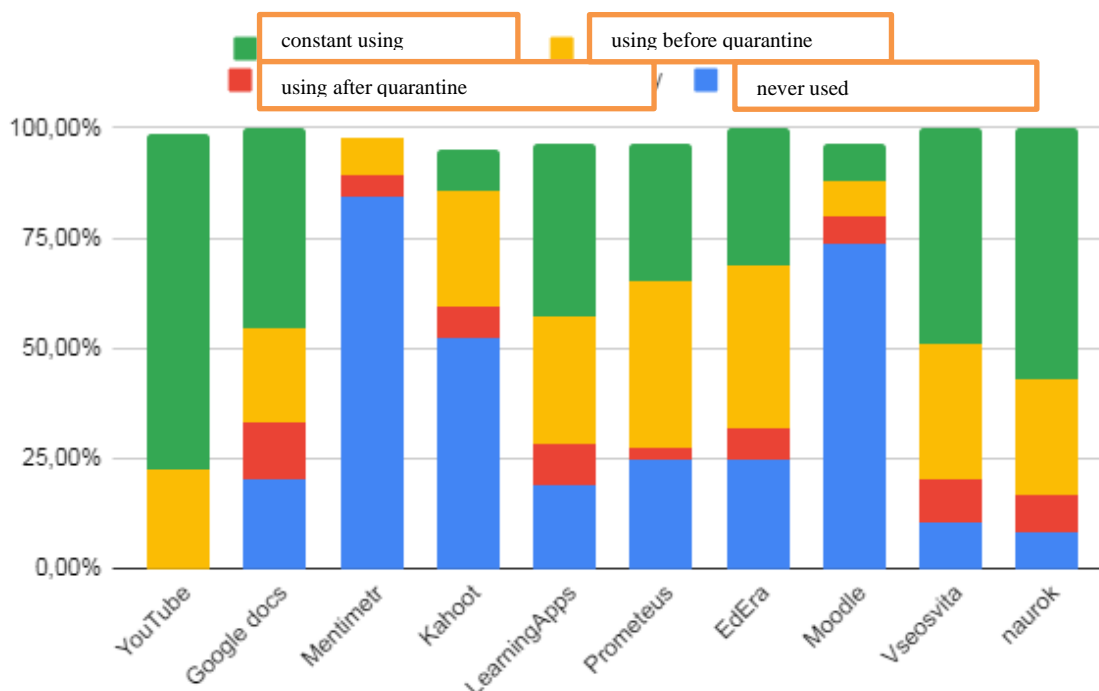


Fig. 1. The activity of using the same resources

After analyzing the results of the survey, we can make the following conclusions:

- Educators are active users and admirers of YouTube content. 77% of respondents regularly improve their skills. This is not surprising, because this resource is the most popular and is demanding not only among teachers, but also all people, regardless of profession;
- 45% of teachers use the free online office Google Docs constantly, we observe a positive increase of 14% after the introduction of restrictions;
- The constructor for online voting Mentimetr was mastered by only 5% of respondents, but this can be considered as a positive indicator;
- Kahoot is more advertised and using designer for online voting among teachers, therefore we see the results that 10% were regular users of the service, 7% have just begun to implement it in the educational process;
- The online service of multimedia didactic exercises LearningApps is used by a large number of teachers. We see that 10% have set this service up in their practice after quarantine, but 40% use it constantly, and therefore they working at self-development and self-improvement;
- the Ukrainian public project of mass open online courses Prometheus is relatively new for teachers, but a third part of respondents are constantly engaged in informal education there, only 3% have just started using it;
- EdEra online education studio has 30% of regular users among teachers, after the beginning of quarantine their number increased to 38%;
- the young educational IT-project Vseosvita has 48% of pedagogical workers who are constantly developing themselves, attending their courses and webinars, an increase of 9% is a significant indicator of interest in this project;
- Naurok online resource is used by more than 57% of teachers, 8% of teachers respond that quarantine has become a driving force, the impetus for them to start mastering this platform.

The opinion that educators need deeper knowledge of ICT was confirmed by the result of using the virtual learning environment Moodle. With the introduction of quarantine in Ukraine, teacher training courses, where teachers are active students, are held on the Moodle platform, and therefore we conclude that teachers simply are not aware of the name of the resource they study at.

We want to draw attention to another shortcoming marked blue, which indicates the resources that respondents do not use at all, namely: Mentimetr, Moodle, Kahoot. More than half of the respondents stated that these resources are not used by them in their professional work and self-educational activities. The results of using some platforms only before quarantine were predicted. There have always been and still are engineers or people who know how to operate digital technologies in secondary schools, and teachers did not have to study and use it personally in their educational activities. Therefore, the indicator "using before quarantine" is in each proposed resource and correlates from 8% to 35%. But time makes its adjustments, and in education they can definitely be traced.

Conclusions. Knowledge has an expiration date. Every day teachers must remember this and constantly move forward to find new knowledge, skills, abilities. We live in a time when digital technologies have flooded our space and with a powerful force motivate us to master ICT. We consider it appropriate to recommend teachers to formulate their specific goals aimed at self-development, acceptance of weaknesses and further development of ones own way of finding resources to set up and acquire new knowledge and skills.

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ІНФОРМАЦІЙНО-КОМУНІКАЦІЙНІ ТЕХНОЛОГІЇ ЯК ІНСТРУМЕНТ САМОРОЗВИТКУ ВЧИТЕЛЯ

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Анотація. Стаття присвячена проблемі саморозвитку педагогічного працівника закладу загальної середньої освіти. Зроблено огляд моделі саморозвитку педагога в розрізі інформальної освіти, використовуючи інформаційно-комунікативні технології. Проведений аналіз різних досліджень показав, що ІКТ для освітньої діяльності мають вагомий вплив і є рушійним важелем у наданні якісного освітнього контенту. Володіння основними

принципами, уміннями та навичками з використанням цифрових інструментів є пріоритетним завданням наразі для всіх закладів загальної середньої освіти. Компетентності з ІКТ наразі є основою для саморозвитку та самоорганізації вчителя в процесі сталого розвитку особистості фахівця. Бути сучасним і володіти практичними навичками застосування ІКТ для вчителя – це радше необхідність, ніж просте бажання до вдосконалення. Підхід до навчання використання засобів ІКТ вчителів різного циклу можна реалізувати, враховуючи такі твердження: нові підходи до навчання, підвищена гнучкість; орієнтація на користувача, більша автономія для учнів; підтримка та використання нових технологій; посилення мережесв'язків між установами та партнерство між зацікавленими сторонами в галузі освіти (стейкхолдерами); покращені можливості доступу дозволяють тим, хто має менше ресурсів, скористатися досягненнями у знаннях. Окреслено складові саморозвитку вчителя: внутрішні й зовнішні. Перша група стосується роботи над собою, прийняття і прояв себе у світі. Друга – це виважена глибинна робота з ним, що є власне особистість. До зовнішніх складових саморозвитку вчителя належать такі характеристики: середовище, відносини, пріоритети, діяльність. Окрім зовнішніх аспектів, що потребують розвитку, педагогу потрібно не нехувати і внутрішніми, які є рушієм у цьому процесі: самопізнання, осмислення, планування, реалізація. Зроблено аналіз результатів опитування, щодо використання й користування вчителями загальноосвітніх шкіл Інтернет-платформ і ресурсів до та після впровадження карантинних обмежень.

Ключові слова: саморозвиток; ІКТ; неформальна освіта; вчитель; освіта дорослих