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THE USE OF DIGITAL TECHNOLOGIES IN CAREER GUIDANCE ACTIVITIES

Ostroha M. M.

INTRODUCTION

The civilizational challenges facing Ukrainian society today are due to several objective factors, including the digitalization of all spheres of society and the economic decline in production. The latter is due not only to the lack of jobs but also to the fact that modern young people choose their professional path, as a rule, based on Internet trends without taking into account individual inclinations and abilities, their own intellectual and financial capabilities, as well as the needs of the regional and national labor market. The most critical stage of professional self-determination of adolescents, grades 5-9, when abilities, interests, inclinations, and readiness for a conscious choice of profession are formed, falls out of the career guidance activities of teachers. High school students make professional choices without conscious argumentation and based on social networks and intrusive virtual advertising, often under the influence of professional agitation rather than conscious professional orientation. That actualizes, on the one hand, the need to intensify teachers' career guidance activities in general secondary schools' conditions and, on the other hand, the involvement of digital resources for implementing such activities. Therefore, the problem of training future bachelors of secondary education who can effectively use digital technologies in career guidance activities is timely and needs to be solved.

1. Analysis of current research

Today, Ukrainian society is significantly influenced by information technology, which has become an integral part of everyday life and has led to fundamentally new ways of learning, communication, and professional activity. The concept of "information technology" (IT) is multifaceted, which

is confirmed by the approaches[1, 2, 3, 4] to its interpretation, which is shown in Figure 1.

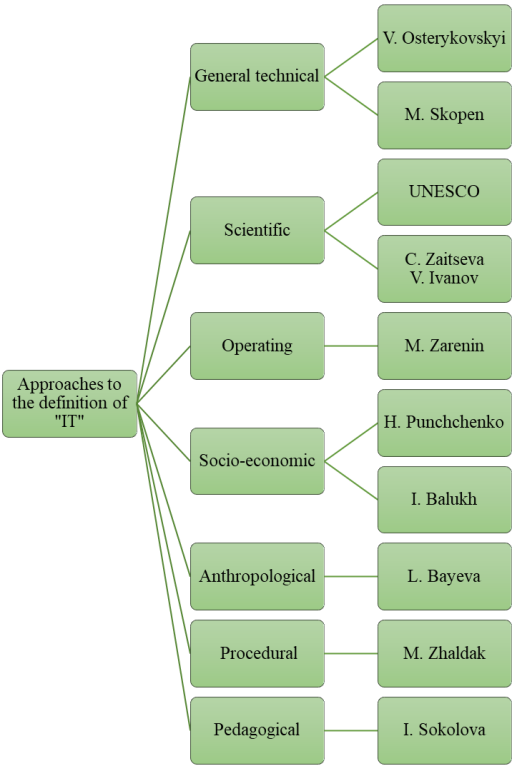


Fig. 1. Approaches to the interpretation of IT

[1] Ашанін В. С. Аналіз практичного досвіду формування інформаційної культури студентів Харківської державної академії фізичної культури. *Науковометодичні основи використання інформаційних технологій в галузі фізичної культури та спорту*, 2017. Вип. 1. С. 7–11.

[2] Биков В. Ю. *Дистанційний навчальний процес*: Навч. посібн. / За ред. В. Бикова та В. Кухаренка. К. : Міленіум, 2005. 292 с.

[3] Єрусалимець К., Іваськів Б., Олійник І. Використання сучасних інформаційних технологій у підготовці фахівців із фізичної культури. *Професійна підготовка фахівців фізичної культури та спорту*. 2008. Т. 1 С. 173–175.

[4] Ракута В.М. *Використання ІКТ при вивченні математики*: навч. посібн. Чернігів: ЧОІППО, 2008. Ч. 1. Практикум. 46 с.

S. Dyatlov[5] characterizes seven stages of the development of society according to the type of information technology (Fig. 2).

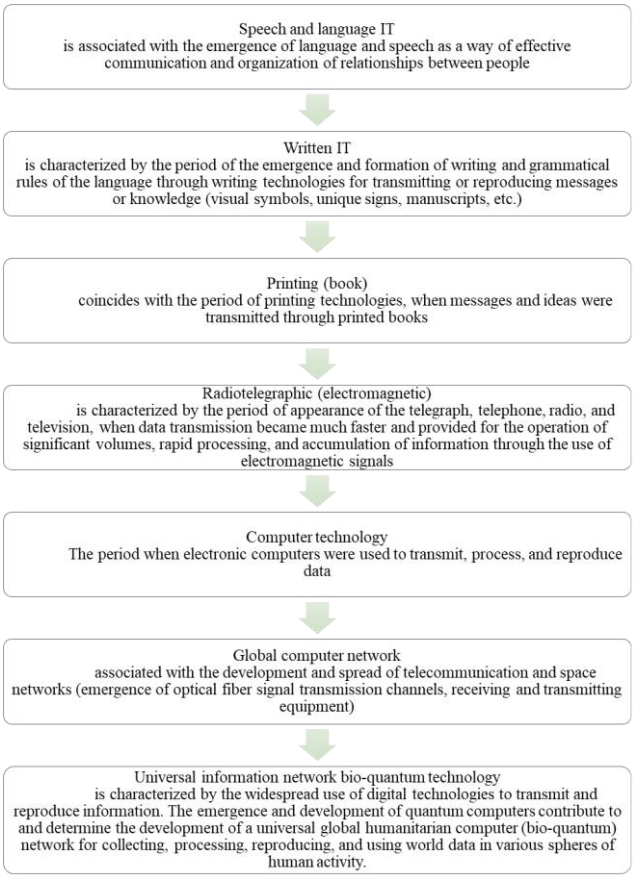


Fig. 2. Stages of development of society by type of IT

The last stage is due to the advent of digital technologies (DT). Digital technology is based on the discrete representation of signals, including e-mail, the Internet, mobile phones, MP3 players, computers, robotics, measuring instruments, radio and telecommunication devices, and many others.

[5] Дятлов С. А. Субстанційно-інформаційна парадигма розвитку суспільства. *Соціально-економічні проблеми інформаційного суспільства* / за ред. д.е.н., проф. Л.Г. Мельника. Суми: ВТД «Університетська книга». 2005. 430с.

Today, the terms "information technology," "computer technology," "Internet technologies," "cloud/fog technologies," and digital technologies are often used. They can be identified if we mean using technical devices to implement such technologies (PC, smartphone, tablet, etc.). However, they are different from the point of view of the data processing method[6].

Information Technology is a technology that involves the use of a combination of various means and methods of processing and transmitting primary data about an object (process or phenomenon) to obtain secondary data about it [7]. Such technology does not necessarily involve the use of technology.

Computer Technology is an information technology that uses computer tools to process and transmit primary data about an object (process or phenomenon) to obtain secondary data. In other words, in computer technology, it is fundamental to use computer technology to implement the technology itself [8].

Internet Technologies – these are computer technologies that involve working with the Internet [9].

We consider the concept of "digital technologies" to be an integral part of "information technologies" since information technologies are characterized by the operation of information, not only in digital form. Information technologies include the methods of collecting, storing, processing, transmitting, and presenting data, and only then the means (hardware or software), thanks to which this can be carried out.

Scientists analyzed the problem of professional orientation of young people was on methodological (A. Voitko, V. Zinchenko, S. Maksymenko, M. Yantsur, etc.), philosophical (H. Moskalyk and others), psychological (E. Klimov, O. Pylypchuk, etc.), competence (V. Zinchenko, V. Kharlamenko, M. Yantsur, etc.) and social (N. Otroshchenko and others) levels.

Many works are devoted to the problem of professional self-determination of young people: B. Burnyashova (professional self-determination of high school students focused on higher education), S. Vershinina (pedagogical foundations of the formation of schoolchildren's readiness to decide on

[6] Semenikhina O. V., Drushliak M. G., Khvorostina Y. V. Use Of Geogebra Cloud Service In Future Math Teachers' Teaching. *Information Technologies and Learning Tools*, 2019. Vol. 73(5). Pp. 48-66. https://doi.org/10.33407/itlt.v73i5.2500.

[7] Андрощук О.В., Кондратенко Ю.В., Головченко О.В., Ворона Т.О., Петрушен М.В. *Інформаційні технології та їх вплив на розвиток суспільства*. URL: http://irbis-nbuv.gov.ua/cgi- bin/irbis_nbuv/cgiirbis_64.exe?C21COM=2&I21DBN=UJRN&P21DBN=UJRN& IMAGE_FILE_DOWNLOAD=1&Image_file_name=PDF/Znpcvsd_2014_1_7.pdf

[8] Литвиненко Я.В., Яциковська У.Б. *Конспект лекцій «Інформаційні технології».* URL: http://elartu.tntu.edu.ua/bitstream/123456789/17888/1/IT_vse_lec.pdf.

[9] Крупський Я.В., Михалевич В.М. *Тлумачний словник з інформаційно-педагогічних технологій*. URL: http://posibnyky.vntu.edu.ua/pdf/000758.pdf

professional choice), E. Tatochenko (specifics of the organization of career guidance work in high school), M. Tymenko (pedagogical guidance of professional self-determination), A. Voitko (professional activation of youth based on professional tests) and others.

Various aspects of the formation of teachers' readiness for career guidance activities are described in the works of D. Zavitrenko (readiness for professional orientation of primary school students), N. Ponomareva (readiness for career guidance work in secondary schools), I. Chorna (psychological readiness of a future teacher for career guidance work at school), G. Shlikhta (readiness for career guidance work with high school students in the modern information space), V. Osadchy (pedagogical means of professional counseling of young people using the Internet), and others.

The use of digital technologies in the work of teachers was considered in the works of O. Semenikhina and M. Drushliak (teachers' readiness to use computer visualization tools), O. Semenoh (media education skills and their formation in the process of professional training), V. Vember (features of the use of EOP), N. Dehtyareva (use of cloud services in the educational process), O. Melnyk (requirements for the design of game educational resources) and others.

According to the analysis of these and other scientific studies, it has been found that the problems of training teachers for career guidance activities and the problems of using information (information and communication) technologies in the professional activity of a teacher have been systematically solved. Still, the study of the integrative problem of using digital technologies in the career guidance activities of a teacher has not become systematic. Despite the active spread of digital technologies, resources, and means in the educational process, research on the problems of training future bachelors of secondary education to use them in career guidance activities is practically absent today.

The study aims to substantiate the feasibility of using digital technologies in teachers' career guidance activities and definite the pedagogical conclusions of teachers preparing to use the DT in teachers' career guidance activities.

2. Results

2.1. The use of digital technologies in teachers' career guidance activities

Effective use of digital technologies in education requires not only the appropriate organization of the learning process, information, and training resources but also the ability of teachers to work within the framework of a new educational paradigm associated with the need for constant mastery of digital technologies and tools, as well as their use for working with young people. However, the analysis of school practice shows that the availability of computer equipment at school and access to the Internet do not solve the problem of their practical use in the educational process, including in the

career guidance activities of the educational institution in general and teachers in particular.

Most teachers do not have the skills to use digital technologies to organize, accompany, and professionally oriented counseling within their career guidance activities and use traditional forms, methods, and means of face-to-face meetings with representatives of professions, excursions to universities on Open Day, face-to-face communication at thematic extracurricular events, etc. Even though the use of Internet resources is widespread today, the involvement of such resources in teachers' career guidance activities needs to be increased.

Content analysis of Internet sources has shown that today, there are a large number of resources that can be used to support career guidance activities (Figure 3).

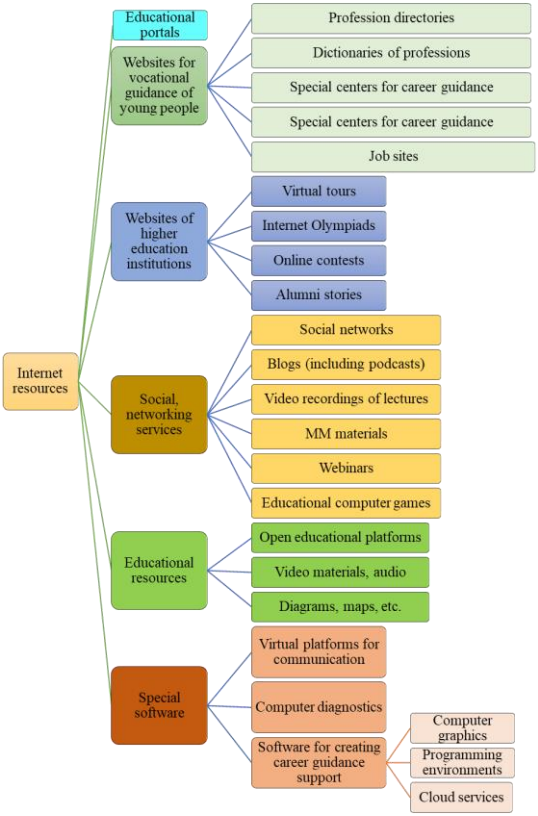


Fig. 3. Internet resources for career guidance activities

Let's dwell on each of them in more detail.

Educational portals

Online resources of this type provide comprehensive information about education in general. Such resources may contain catalogs of higher education institutions, information about specialties, educational resources, information about the education systems of other countries, information about grants, exhibitions, and possibly conferences. Figures (Fig. 4–5) show the pages of some of them.

Fig. 4. Educational portal (op.ua)[10]

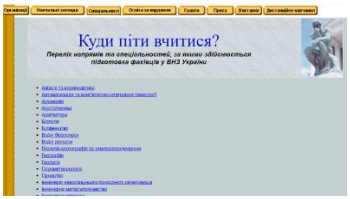


Fig. 5. Educational organizations of Ukraine (www.ednu.kiev.ua)[11]

Youth Career Guidance Sites

This type of resources includes:

Job directories (e.g., https://hrliga.com/index.php?module=norm_base&op=view&id=433), where you can see all registered professions in Ukraine, their code in hierarchical order, a list of positions that can be held by a specialist in this profession, as well as additional information about training requirements or certain restrictions;

dictionaries of professions, where through an alphabetical index and hyperlinks, you can learn about the general characteristics of the profession, requirements for the individual characteristics of a specialist, medical contraindications, requirements for professional training, job responsibilities, qualification requirements;

specialized centers for vocational guidance of young people (for example, the counseling network "My Profession", https://myprofession.com.ua/consultacii.php), where it is possible to take career guidance tests according to the following methods: research of professional interests and values, study of IQ and intellectual professionally significant qualities, research of socio-psychological and professionally substantial factors. Based on the results of the test, a report is provided with conclusions and additional psychological

[10] *Освітній портал*. URL: https://op.ua/news/proforientacia.

[11] *Освітянські організації України.* URL: www.ednu.kiev.ua/index_u.htm.

information, as well as a list of professions that are inherent in this type of personality;

employment centers (for example, the website https://www.dcz.gov.ua/storinka/profesiyna-oriyentaciya of the State Employment Service), where you can find out about vacancies, in-demand professions, get tested (career guidance and career development platform, http://profi.dcz.gov.ua/), get advice on your professional development, and all services are provided free of charge;

– *job sites* (for example, a job search site in Ukraine, https://jobs.ua/), where you can interactively see all "hot" vacancies, search for vacancies by region, and register and provide your resume for employment.

– Digital technologies today help solve several problems in institutions (structures) focused on career guidance activities. Automating career guidance processes is a relatively economical and promising way to achieve results, including reducing management costs, highlighting the needs of the labor market, saving resources on training/retraining of specialists, disseminating information about various projects and programs, and accelerating employment.

Websites of higher education institutions

Today, each university is interested in as many applicants as possible, so the official website provides not only information about the specialties that it can teach but also focuses on the material base of the institution (for example, virtual excursions) or offers informal events that cover the university not in an official, but rather in a socially attractive light. These include various Internet Olympiads, online competitions, and meetings with successful graduates, which have become vivid examples of providing quality educational services.

An example of a virtual tour can be found on the National University of Kyiv-Mohyla Academy website (https://content.ukma.edu.ua/virtual_tour/main/start.html).

The official website of the Faculty of Physics and Mathematics of Sumy State Pedagogical University named after A.S. Makarenko contains information about the All-Ukrainian Olympiad in Mathematics Physics according to the results of which applicants of this university will have the opportunity to receive additional points when entering the first year.

Another resource related, in particular, to career guidance for IT specialties of this university is the regional competition "Color Life" (https://fizmat.sspu.edu.ua/component/content/article/8-news/32-konkurs-z-komp-yuternoji-grafiki-dlya-shkolyariv-sumskoji-oblasti?Itemid=101), which has been held since 2015 and is interesting for students. For more on

this, see [12], here is only the geographical distribution of participants and winners in 2019 (Fig. 6–9).

Fig. 6. Distribution of works in the nomination "Best 2D raster graphics"

Fig. 7. Distribution of works in the nomination "Best 2D Vector Graphics"

Fig. 8. Distribution of works in the nomination "Best GIF Animation"

Fig. 9. Distribution of works in the nomination "Best Flash Animation"

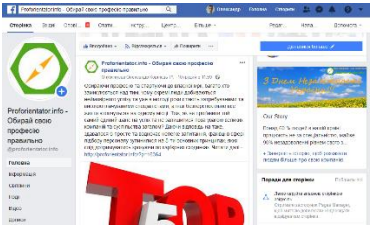
Social networking services

This type of Internet resources related to career guidance includes *social networks and* services. The most common social services today are:

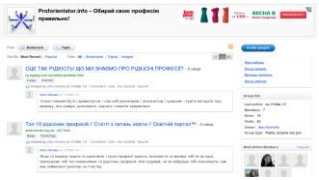
[12] Yurchenko A.O., Udovychenko O.M., Rozumenko A.M., Chkana Y.O., Ostroha M.M. Regional Computer Graphics Competition as a Tool of Influence on the Profession Choice: Experience of Sumy Region of Ukraine. *42nd International Convention on Computers in Education* (MIPRO) (May 20-24, 2019). Opatija, Croatia, 2019. P. 909-914.

http://twitter.com – Twitter (microblogs); http://www.facebook.com/ – Facebook; http://www.linkedin.com/ – Linkedin; https://www.instagram.com/ – Instagram; https://telegram.org/ – Telegram; https://plus.google.com – Google+ and others.

As a rule, at the initiative of the HEI, accounts are created in them, which distribute/inform about the activities of the department or subdivision of the university about the specialty in which specialists are trained. At the same time, social media accounts publish information about events that could interest applicants. Examples of accounts from the Proforientator resource are shown in Fig. 10 (a–c).



a)



b)

c)

Fig. 10. Examples of Proforientator.info resource (FB, Diigo.com, Twitter)

A slightly different type of information is offered on the account of the Department of Informatics of Sumy State Pedagogical University named after A. S. Makarenko on Facebook (Fig. 11) and Instagram (Fig. 12). It is more focused on the fields of "Education" (Secondary Education (Computer Science)) and "Information Technology".

Fig. 11. Screenshot of the Facebook account of the Department of Informatics of Sumy State Pedagogical University named after A. S. Makarenko

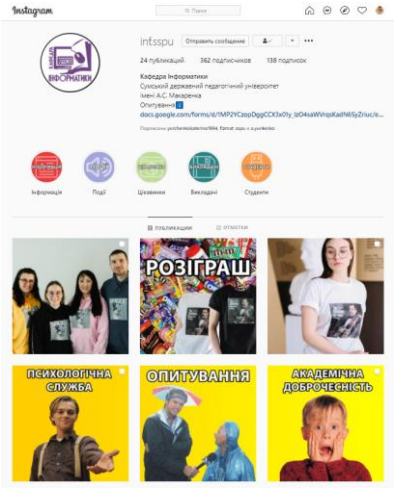


Fig. 12. Screenshot of the Instagram account of the Department of Informatics of Sumy State Pedagogical University named after A. S. Makarenko

Blogs – are sites where information is constantly updated, open to discussion, and have a platform for polemics. For example, resource Osvitanova [13] offers a reflection text on "How to Choose a Profession: 20 Resources for Career Guidance", which can help choose a future

[13] Як обрати професію: 20 ресурсів для профорієнтації. *Освіта Нова.* URL: https://osvitanova.com.ua/posts/1291-yak-obraty-profesiiu-20-resursiv-dliaproforiientatsii.

profession. It also provides tests, questionnaires, and communication opportunities.

Podcasts (e.g., Osvitoria[14] or Mel[15]) are thematic audio blogs that are dedicated to a particular story. Thanks to podcasts, it becomes possible to hear real stories from people interested in themselves or who have achieved significant results in a specific area. In the context of career guidance, these are stories about how a person chooses a profession and achieves success.

Videocasts (*e.g., "Success Story"* [16]) is also a thematic blog, but in video format, which introduces viewers to a particular story in video format.

Video recordings of lectures (e.g., the lecture "Organization of Career Guidance Activities" [17]) as a video of lecturers' speeches in front of an audience or audio accompaniment of a presentation, which can be seen on the monitor screen, allow you to diversify career guidance material.

It is worth noting that on the most prominent video hosting YouTube, you can also find a large number of career guidance materials in the video format (for example, for the search query "career guidance" (https://cutt.ly/QzzA8S9), the resource finds a large number of resources in the relevant direction.

MM career guidance materials (e.g., multimedia presentations) also make it possible to support the teacher's career guidance activities by searching for the keywords "career guidance," "career guidance work," and "career guidance activities," the search engine finds more than 1.8 million resources, including videos, presentations, etc.

Webinars (for example, the webinar "How to choose a profession or what is career guidance" [18]) how events held online and resembled a seminar, conference, or discussion of a particular problem or issue that worries the participants, in particular, allow you to get acquainted with the peculiarities of choosing a profession.

Educational computer games (e.g., "Guess the Profession" [19]) are often developed not by large companies but by teachers. They are designed to interest students in the problem of choosing a profession and, at the same time, to build

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[14] Подкасти для учнів про світ технологій «Мамо, я в IT». *Освіторія*. URL: https://osvitoria.media/tag/yak-obraty-profesiyu/.

[15] Кар'єра та майбутнє. *Подкаст "Мел.Teens"*. URL: https://mel.fm/podrostki/2947358-karyera-i-budushcheye-podskast-melteens.

[16] *Історія успіху*. URL: https://rideo.tv/video/157969/.

[17] *Організація профорієнтаційної роботи на етапі розвитку школи*. Відеолекції. URL: https://www.youtube.com/watch?v=bNfS-huCqwE.

[18] *Безкоштовний вебінар "Як обрати професію та що таке профорієнтація"*. URL: https://stageup.com.ua/uk/bezkoshtovnij-vebinar-yakobrati-profesiyu-ta-shho-take-proforiyentatsiya/.

[19] Кирилюк Т. М. *Інтерактивна гра для учнів «СВІТ ПРОФЕСІЙ»*, 2017. URL: https://cutt.ly/Zzk9kxC

their knowledge about modern occupations that are in demand in the labor market and require particular physical, mental, or other types of training, etc.

Educational Resources

Open Educational Platforms (for example, the course "How to enter the best Western schools and universities" on the open educational platform Prometheus [20]) are virtual platforms where miniature courses developed by scientists, researchers, and teachers are offered, which are related to the topics of future education and professional development, can be helpful to students-graduates of secondary schools.

Video and audio materials (for example, the Ministry of Education and Science website offers a video about the benefits of vocational education [21]) are spreading rapidly today because of young people's interest in visual materials.

A characteristic feature of the use of digital technologies in the process of career guidance is the variety of forms of information presentation: texts, tables, graphs, and diagrams, as well as their combination, which creates susceptible psychological conditions for the inclusion of subconscious reactions of young people. Schemes maps make it possible to use static models to present the features of choosing a profession with visualization of the sequence of steps. (Fig. 13).

Fig. 13. Career guidance formula

[20] *Як вступити до найкращих західних шкіл та університетів.* URL: https://courses.prometheus.org.ua/courses/coursev1:Prometheus+ADMISSION101+2018_T2/about.

[21] *У МОН створили відео про переваги професвіти*. URL: https://osvita.ua/vnz/73861/.

Specialized software

Specialized software that supports the teacher's career guidance activities include the following.

*Virtual platforms for communication (*for example, Zoom (https://zoom.us/), Skype (https://www.skype.com/), Viber (https://www.viber.com/), Google Meet (https://meet.google.com/), etc.) provide an opportunity for teachers to organize a career guidance space in which it is possible to discuss the problems of choosing a profession, provide additional didactic materials, including career guidance, communication via chat, file sharing, recording meetings, etc.

Computer-aided career guidance diagnostics

Since automating calculations according to specific algorithms today is not a problem, the prevalence of resources with computer career guidance diagnostics should be considered natural. For example, the Proforientator (http://proforientator.info/?page_id=100) website offers many computer tests that allow everyone to determine their professional personality type (J. Holland test, http://proforientator.info/?page_id=6016), motives for one's own choice of profession (http://proforientator.info/?page_id=6014), motives for choosing the field of labor activity (http://proforientator.info/?page_id=6249), to build one's map of interests ("Map of Interests", http://proforientator.info/?page_id=6006), etc. On the same resource, you can take tests to determine certain professions' abilities, the priorities of professional choice, etc.

We consider software tools for developing career guidance support as a means that enables the creation of any accompanying materials (figures, tables, graphs, diagrams, SMART objects, MM materials, etc.). These include software tools for creating computer graphics and programming environments, as well as Cloud services (e.g., to organize author surveys of a Google form (http://www.docs.google.com) or LimeSurvey (https://www.limesurvey.org) or to build network knowledge maps (FreeMind; MindMeister; bubbl.us; Cacoo; Popplet; Mindomo et al.). Also, such programs include the author's developments, such as the complex computer system "Fundamentals of Choosing a Profession" [22]. Still, given the spread of online career guidance tests, computer programs of this type without constant updating and advertising support will not be in demand.

The considered classification is conditional since there may be intersections in the types of resources and their belonging to a specific group. However, the analysis of these resources shows that they can be viewed from

[22] *Комплексна комп'ютерна система "Основи вибору професії"* (22 програмовані методики) / автори-розробники: М.С.Янцур, Р.І.Підвальний, О.М.Сарницький та ін. Рівне: РДПІ, 1996. 68 с.

a different angle, which makes it possible for this type of resource to be classified as other types, which will be briefly described below.

Electronic (digital) resources by types of career guidance work are divided into: diagnostic, agitation, advisory, information-oriented, accompanying, organizational (Fig. 14).

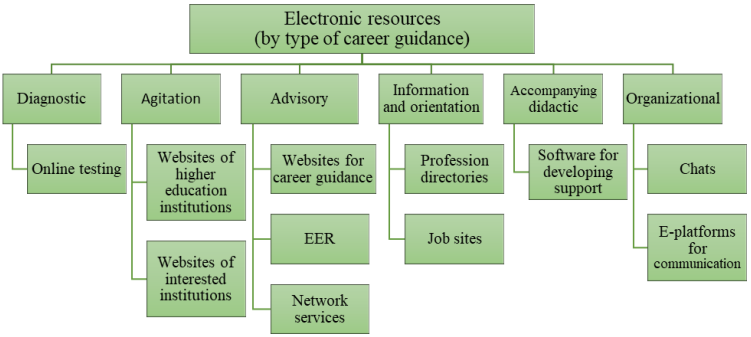

Fig. 14. Classification of EP by types of career guidance work

Electronic (digital) resources according to the types of career guidance activities are divided into: software for meetings, software for immersion, consulting, excursions, project (Fig. 15).

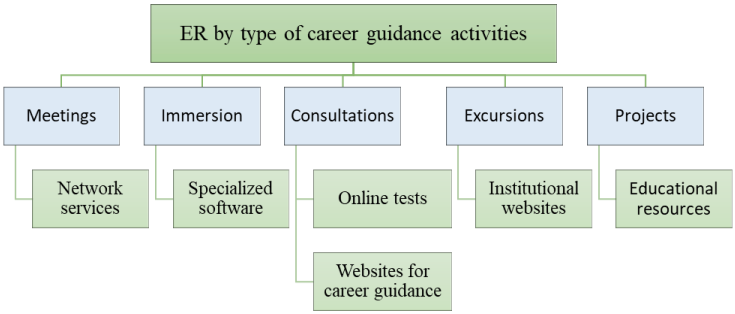

Fig. 15. Classification of EP by types of career guidance activities

Our classification is conditional and claims to only partially cover the types of electronic (digital) resources in career guidance. However, a few

remarks should be made regarding implementing career guidance activities for teachers based on digital technologies.

When organizing project activities in career guidance work, it is necessary to consider the diversity of electronic (digital) resources and popularize their diversity among students. That can be done by proposing projects related to professional choice: "Why is the teaching profession eternal?", "How many professions does the IT industry have today?" "Where do you get the profession of a design manager?" "Top 20 most popular professions in the region", etc.

We see the promotion of open educational resources among students, as well as Internet Olympiads and competitions, promising in the career guidance activities of teachers. When choosing a profession, you need to be guided by your preferences and the profession's requirements for a person. It is expedient to acquaint students with the features of the profession provided through digital resources, including open educational platforms, Internet Olympiads, etc. That will ensure individualization in the choice of profession and consider the student's interests.

In career guidance activities, it is essential to work with parents, which can also be transferred to the format of digital communication. Since, according to scientific and pedagogical research, parents' influence on children's professional choices has been confirmed, disseminating information among parents will be no less critical.

It is also necessary to take into account career guidance activities from representatives of specific industries, such as representatives of the IT industry (NetCracker training center, PortaOne training center, etc.), who, having the latest information on the labor market, can orient in the choice of specialization, promising areas of industry development, the specifics of professional adaptation, employment features, career prospects. In this case, it becomes possible for applicants to get acquainted with the "production" from the inside, immerse themselves in the profession, and compare their expectations with reality.

2.2. The pedagogical conclusions of teachers preparing to use the DT in teachers' career guidance activities

Pedagogical conditions are "stable circumstances that determine the state and development of active pedagogical systems"[23]. According to the analysis of the category "pedagogical conditions," A. Lytvyn argues that "pedagogical conditions are a complex of specially designed general factors of influence on

[23] Пилипчук О. Ф., Тименко М.П., Янцур М. С. *Основи вибору професії*: посібник для психологів-профконсультантів служби зайнятості, вчителів, слухачів та студентів педагогічних навчальних закладів. Рівне: РОЦПОН, РДПІ, ІП АПН України, 1994. 220 с.

the external and internal circumstances of the educational process and personal parameters of its participants, which ensure the integrity of education and upbringing in the information and educational environment of the educational institution by the requirements of society"[24]. According to A. Kuzminskyi, pedagogical conditions are "stable circumstances that determine the state and development of active pedagogical systems"[25]. A similar opinion is shared by A. Semenov[26], who defines pedagogical conditions as circumstances that determine the integrity of the productive pedagogical process of professional training. A different opinion is held by V. Zinchenko[27], who perceive pedagogical conditions as an essential component of the pedagogical system and are characterized by certain aspects of this system to ensure its effective functioning and development.

The analysis of approaches to the interpretation of the category "pedagogical conditions" shows that conditions reveal the relationship between the subjects of the system, the relationship to processes and phenomena, and pedagogical conditions are a component of the educational process and, in their unity, ensure its successful and effective functioning.

The choice of pedagogical conditions depends on the structure of the educational process and the purpose for which it is oriented, the qualities of the future specialist, the formation of which is a priority, the forms, methods, and means that should ensure the effectiveness of conditions for achieving the goal or resolving contradictions that a particular model is oriented to overcome (Fig. 16).

Pedagogical conditions for the formation of readiness for career guidance activities are reflected in works [28,29,30]:

– introduction of special courses, in particular, "Vocational guidance at school";

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[24] Литвин А. В. *Методологічні засади поняття «педагогічні умови»: на допомогу здобувачам наукового ступеня*. Львів: СПОЛОМ, 2014. 76 с.

[25] Кузьмінський А. І. *Педагогіка вищої школи*. Київ : Знання, 2005. 486 с.

[26] *Словник-довідник з професійної педагогіки* / ред. А. В. Семенова. Одеса : Пальміра, 2006. 364 с.

[27] Зінченко В.П., Янцур М.С. Система професійної орієнтації молоді в умовах ринку. *Людина і праця. Інформаційний бюлетень Міністерства праці України*. 1995. № 1. С. 39-42.

[28] Зінченко В.П., Янцур М.С. Система професійної орієнтації молоді в умовах ринку. *Людина і праця. Інформаційний бюлетень Міністерства праці України*. 1995. № 1. С. 39-42.

[29] Климов Г. І., Седляр І.О., Янцур М. С. *Професійна орієнтація і методика профорієнтаційної роботи*: практикум. К.: МПУ ДЦЗ, МОУ РДПІ, 1995. 180 с.

[30] Отрощенко Н.Л. Профорієнтація учнів загальноосвітньої школи як соціальнопедагогічна проблема. *Науковий портал Донбасу : електрон. журн. Луган. нац. пед. ун-ту імені Тараса Шевченка*. 2007. № 1. URL: http://alma-mater.lnpu.edu.ua/elect_v/N1/r2/07onlysp.pdf

– organization of independent work of students on the problems of vocational guidance at school;

– intensification of practical activities within the framework of students' pedagogical practice, which focuses on the formation of students' pedagogical skills and abilities in career guidance activities with students;

– Stimulating students' self-development through the development of occupational profiles of various professions within courses, individual research projects, or qualification works;

– organization of students' research work in problem groups on the issues of students' professional orientation.

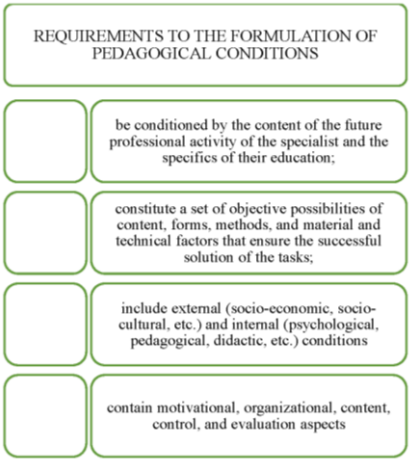

Fig. 16. Requirements for pedagogical conditions

Since the identified research problem is new, we cannot unequivocally state the effectiveness of the already developed pedagogical conditions for successfully forming future bachelors of secondary education's readiness to use DT in career guidance activities. Therefore, we initiated an expert evaluation of what had already been identified by scientists and those that, in our opinion and the opinion of fellow teachers, could contribute to such formation.

Based on the generalization of pedagogical experience based on the results of conversations with teachers, psychologists, and methodologists, we have identified the most effective conditions that, in general, have the most significant impact on the effectiveness of training future bachelors of secondary education to use the CT in career guidance activities.

The expert evaluation method was based on Kendall's rank correlation, which was used to confirm the theoretical assumptions and limit the range of such conditions. The experts were teachers of the Departments of Pedagogy and Informatics of Sumy State Pedagogical University, named after A. S. Makarenko, and the Department of Informatics and Cybernetics of Melitopol Bohdan Khmelnytsky State Pedagogical University (10 people in total). They ranked the list of pedagogical conditions and noted those most influential for forming future bachelors of secondary education's readiness to use digital technologies in career guidance activities (Table 1).

Table 1

Expert estimates

	E1	**E2**	**E3**	**E4**	**E5**	**E6**	**E7**	**E8**	**E9**	**E10**
У1	5	9	12	7	7	13	9	12	7	7
У2	1	1	1	2	3	1	1	2	1	2
У3	10	13	7	6	10	11	13	7	6	10
У4	6	5	8	11	12	10	5	8	11	12
У5	12	11	5	9	8	6	11	5	8	9
У6	2	2	3	1	1	2	2	3	3	3
У7	3	4	2	3	4	4	3	4	4	4
У8	7	6	9	10	11	5	6	9	9	8
У9	8	7	13	12	6	9	7	13	13	13
У10	4	3	4	4	2	3	4	1	2	1
У11	9	10	11	8	9	12	10	11	10	11
У12	13	12	10	13	13	7	12	10	12	6
У13	11	8	6	5	5	8	8	6	5	5

The sums of the columns of the matrix are equal to each other, so the matrix should be considered correctly compiled.

Let's analyze the significance of the factors (Table 2).

Table 2

Conditions ranked by importance

Conditions	**Sum of ranks**
У$_2$	15
У$_6$	22
У$_{10}$	28
У$_7$	35
У$_{13}$	67
У$_8$	80
У$_5$	84
У$_1$	88
У$_4$	88
У$_3$	93
У$_9$	101
У$_{11}$	101
У$_{12}$	108

According to the expert agreement, we have a rank concordance coefficient

*W=12*S/n^2/(v^3-n), ðe S=13166, n=13, m=10*

W=0,723

The value of W means that there is a high level of agreement between expert opinions. According to the Pearson's agreement criterion

$X^2 = 12*S/n/(m-1)/W=86,81$

The number of degrees of freedom K=13-1=12 at the 0.05 significance level. The critical value of the criterion of 21.03 is less than the calculated empirical value, which indicates that the estimate of W is not random.

The matrix of transformed ranks is presented in Table 3.

Table 3

Matrix of transformed ranks

	E1	**E2**	**E3**	**E4**	**E5**	**E6**	**E7**	**E8**	**E9**	**E10**	∑	**Weight λ**
У1	8	4	1	6	6	0	4	1	6	6	42	0.05385
У2	**12**	**12**	**12**	**11**	**10**	**12**	**12**	**11**	**12**	**11**	**115**	**0.1474**
У3	3	0	6	7	3	2	0	6	7	3	37	0.04744
У4	7	8	5	2	1	3	8	5	2	1	42	0.05385
У5	1	2	8	4	5	7	2	8	5	4	46	0.05897
У6	**11**	**11**	**10**	**12**	**12**	**11**	**11**	**10**	**10**	**10**	**108**	**0.1385**
У7	**10**	**9**	**11**	**10**	**9**	**9**	**10**	**9**	**9**	**9**	**95**	**0.1218**
У8	6	7	4	3	2	8	7	4	4	5	50	0.0641
У9	5	6	0	1	7	4	6	0	0	0	29	0.03718
У10	**9**	**10**	**9**	**9**	**11**	**10**	**9**	**12**	**11**	**12**	**102**	**0.1308**
У11	4	3	2	5	4	1	3	2	3	2	29	0.03718
У12	0	1	3	0	0	6	1	3	1	7	22	0.02821
У13	2	5	7	8	8	5	5	7	8	8	63	0.08077
Together											780	1

Thus, according to the results of the expert evaluation, four conditions gained the most weight:

У2: using blended learning to develop professional e-communication skills;

У6: increasing motivation to master cloud services and SMM technologies;

У7: creating a digital educational environment;

У10: expanding psychological and pedagogical training content to include career guidance diagnostics.

Given that condition У7 is currently being implemented in all HEIs, as distance learning was introduced due to the pandemic and all teachers were

forced to choose their digital platforms to organize the teaching of their disciplines and had to develop appropriate electronic educational resources, we did not take into account the fourth condition.

Let us dwell more on the first three, which scored the highest ratings.

Pedagogical condition 1. Strengthening the motivation to master cloud services and SMM technologies.

This pedagogical condition is related to the importance of mastering cloud technologies and services and SMM technologies by future bachelors of secondary education. Cloud technologies provide a way to process data through online services and perform essential functions through centralized data centers. Cloud technologies only temporarily store/use certain content on the user's technical means. Examples of cloud services include the well-known YouTube, Office365, etc.

If we talk about educational cloud services, we should mention a number of those that are focused on schools (fig. 17).

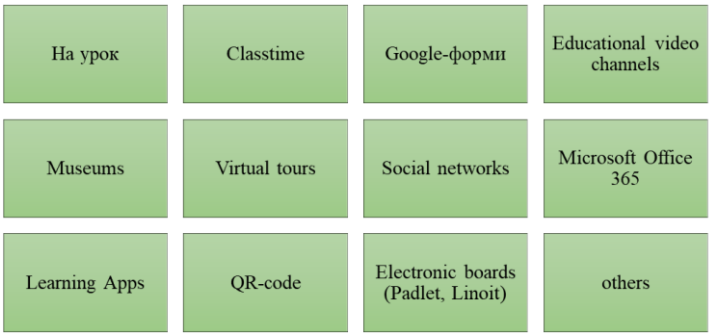

Fig. 17. Cloud services for schools

In other words, today, a relatively large variety of cloud services are intended to be used in general secondary education. Still, only a small number of them are mastered by future bachelors of secondary education in professional training. Thus, our survey of bachelor's graduates majoring in 014 Secondary Education first-year master's students (154 people) showed that only 54% of students are aware of cloud services Na Urok, Classtime, 26% know how to use QR codes, 31% know about the possibility of using the Kahoot service, and while 100% know about the possibility of using the Moodle platform, only 57%, 21% and 12% reported using Zoom, Skype, Google Meet, respectively.

At the same time, all respondents reported having accounts on Instagram (100%), Facebook (100%), Telegram (100%), and Viber (100%), and 79% of

respondents have email. At the same time, the activity is noted for exchanging personal messages (100%) but not for disseminating general (non-personal) information (34%). Only 25% of respondents can design survey forms, 27% can create thematic posters, announcements, and posts, and only 34% can organize computer-based testing to assess students' knowledge. At the same time, the distribution of answers regarding knowledge of career guidance resources and ways to use them in career guidance activities could be more satisfactory.

Based on the analysis of the responses, we state that despite the 100% involvement of future teachers in social networks, the ability to involve the resources and services themselves in education, including career guidance activities, needs to be improved. Such a situation is unacceptable for the results of training bachelors of secondary education and even more so for the formation of their readiness to use digital technologies in career guidance activities. Therefore, we see it as essential to motivate them to master cloud services, which makes it possible to personally influence students' career guidance choices, encourage self-determination in professions, simplify the organization of surveys and processing of results, quantitative analysis, and forecasting of conclusions.

Many users communicate within the network, which is primarily interactive (almost instantaneous exchange of opinions and resources), and favor using cloud services and social networks. However, simply mastering cloud services may not be enough to effectively disseminate career guidance information on social media, so future bachelors of education should develop the ability to "correctly" disseminate career guidance material through social media channels, i.e., to develop the ability to use SMM technologies.

For teachers to carry out practical career guidance activities on social media, they need to think about and develop an SMM strategy:

– 1. Identify ideas for career guidance activities in social media.

– 2. Analyze the target audience, develop a portrait of the student, and study their preferences and desires (it is worth considering fashion trends in social media, fashion, etc.). That will help you develop relevant content and offers.

– 3. Select vital social networks. Not all social platforms are suitable for career guidance. It would help if you used those that are popular among the target audience (today, for students of general secondary education, TikTok, Instagram; for parents, Facebook).

4. Determine the language of communication. Interaction with students will determine how they will perceive the page.

5. Develop a content plan for SMM. Create several types of content, namely advertising, entertainment, and information – balance publications according to the target audience's interests.

6. Set performance indicators to measure the success of the result.

Thus, subject to the above SMM strategy, effective career guidance activities of teachers become possible. Therefore, it is critical to comply with the first pedagogical condition of increasing the motivation of future bachelor of secondary education to master cloud services and SMM technologies.

Pedagogical condition 2. Expanding the content of psychological and pedagogical training with issues of career guidance diagnostics.

The analysis of the content of psychological and pedagogical disciplines in terms of familiarization and mastery of various diagnostic methods by students, future bachelors of secondary education, showed its fragmentation.

The analysis of the curricula of pedagogical disciplines (general pedagogy or pedagogy and history of pedagogy) confirmed that up to 8 credits are allocated for its study, and the discipline's content is focused on such knowledge and skills. The topic of professional orientation of a personality and career guidance of a teacher is studied in passing. In particular, the scope of issues related to mastering the methods, forms, and means of organizing and conducting career guidance activities could be more significant. More attention is focused on the study of individual characteristics of students for educational influence on their individuality and the formation of teamwork skills. The development of students' interests in their professional interests should comply with the principles of humanization, integration, individualization, and differentiation. The ability to use them should be laid down in the study of pedagogical disciplines.

A similar analysis of psychology-related disciplines (psychology general psychology and practical psychology) revealed that these disciplines are studied in the 1st year and have a volume of up to 6 credits. In these courses, students mainly study general psychology and indirectly deal with psychodiagnostic methods. Still, they are related to determining the type of temperament, leaders in the group, and individual personal qualities. At the same time, students get acquainted with psychodiagnostics and methods of determining the professions that will be most suitable for a person in passing during practical classes and, to a greater extent, on their own.

As of today, many resources offer this kind of diagnostic methodology. When searching for "online vocational diagnostics" online, the Google search engine provides more than 40 thousand links, with the second most relevant being the official website of the State Employment Service of Ukraine (http://profi.dcz.gov.ua/). A content analysis of the resources shows that there are a large number of tests that are already online and available for use through

digital tools. However, without special psychological and pedagogical training, it is difficult for a teacher to navigate them to choose the most appropriate one from an extensive list to provide students with recommendations for their use. Therefore, the need to master at least typical psychodiagnostic methods to determine the personality type in choosing a future profession is becoming increasingly relevant.

Thus, mastering psychodiagnostic techniques is essential for the career guidance of future bachelors of education, and therefore, the study of psychological disciplines should include their mastery. That leads to expanding future teachers' psychological and pedagogical training content.

Pedagogical condition 3. Using blended learning to develop professional e-communication skills

The terminological analysis of the essence of the concept of "communication" allows us to interpret this category as a complex process of establishing and establishing mutual understanding between partners through communication (verbal and non-verbal means). The method of communication necessarily involves the presence of feedback, which allows us to identify how successful the process of transmitting and receiving information was and which is carried out through communication that significantly expands the inherent communication capabilities of a person. The vast majority of research is devoted to the communication culture of teachers, who today are forced to communicate to a greater extent through digital means. That makes it essential to develop their e-communication skills.

The professional activity of a teacher combines networked society, educational activities, digital technologies, media, and networked communication – on forums, chats, and blogs. The virtual environment for teachers is becoming a tool for professional communication. Therefore, future teachers should feel confident using the cloud-oriented environment, have accounts that allow them to access several services for both individual professional and collective use, freely navigate search engines and social networks, maintain chats, write their blogs, etc.

Teachers should also be trained to use digital technologies to communicate with students who need to read longer texts. The personal means of online communication of young people, such as blogs, e-mail, personal pages, chats, etc., are characterized by short publications of a personal and professional nature. On the other hand, youth communication today is reduced mainly to using images, symbols, and pictures that demonstrate their attitude to events (the so-called Emoji language), which is also crucial for teenagers to understand. That is why it is essential to develop e-communication skills in teachers during their professional training. It is natural to do this through digital technologies to organize educational activities that actively use digital

communication. However, using only traditional learning formats will not contribute to this formation; therefore, a mixed format is advisable.

These positive characteristics suggest that blended learning can become the integrative basis that will ensure the successful training of future teachers. Therefore, developing e-communication skills as the skills of using digital technologies to establish professional relationships, communicate, and exert professional influence is possible and can, according to leading experts in the field of vocational education, be effective in blended learning.

CONCLUSIONS

So, based on the analysis of digital technologies and Internet resources related to the professional orientation of young people, we state the following.

1. Digital technologies affect the form, level, and quality of career guidance activities.

2. Thanks to digital technologies, students' awareness of professions increases.

3. Digital technologies facilitate students' conscious professional choices based on students' awareness and understanding of their professional preferences and inclinations.

4. Thanks to digital technologies, it becomes possible for students to perform a series of different tests to get an idea of their potential capabilities and advantages in a particular profession.

5. Digital technologies can be used for diagnostic purposes. Through observations, tests, and interviews, determine the dynamics of the development of individual qualities, including functional literacy, technological skills, and intellectual and volitional preparedness.

6. Digital technologies enable free access to information sources of career guidance, which forms an idea of the profession as the most critical social manifestation of the individual, about the requirements that the profession sets for a person, contributes to the activation of young people about their future and provides an opportunity to identify their inclinations and abilities, helps to set value guidelines.

7. We have substantiated the choice of three pedagogical conditions that, in the opinion of experts, can have the most significant impact on the readiness of future bachelors of secondary education to use digital technologies in career guidance activities: Increasing motivation to master cloud services and SMM technologies; Expanding the content of psychological and pedagogical training to include career guidance diagnostics; Using blended learning to develop professional e-communication skills.

SUMMARY

High school students make professional choices without conscious argumentation and based on social networks and intrusive virtual advertising, often under the influence of professional agitation rather than conscious professional orientation. That actualizes, on the one hand, the need to intensify teachers' career guidance activities in general secondary schools' conditions and, on the other hand, the involvement of digital resources for implementing such activities. The article describes the Internet resources for career guidance activities. The author gives the electronic resources classification by types of career guidance work and the electronic resources classification by types of career guidance activities. The important conclusion is digital technologies can be used for diagnostic purposes. Through observations, tests, and interviews, determine the dynamics of the development of individual qualities, including functional literacy, technological skills, and intellectual and volitional preparedness.

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Information about the authors:
Ostroga Maria Mykhailivna,
PhD (Professional education. Digital technology),
Lecturer at the Department of Computer Sciences
Sumy State Pedagogical University named after A. S. Makarenko
87, Romenska str., Sumy, 40002, Ukraine