Trends and Vectors of Development of Information Educational Resources in the Context of Military Aggression

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Under conditions of large-scale military aggression, Ukrainians had to mobilize and clearly respond to radical changes in all spheres of life. The education system updates and diversifies educational resources, disciplinary knowledge, and demonstrates readiness for all possible types of education: off-line (in regions without warfare), online (in red zones and in case of massive rocket attacks), hybrid education, individualized education (for refugees), etc. Education in war involves the use of a variety of information resources and technologies, in addition, involves research operations, selection, use, resulting in a powerful educational system response experience. In fact, in the past three years, humanity became a witness of significant changes in the information landscape available to education. Thus, it can be noted that all these reasons developed the proliferation of online learning and social platforms, the increasing complexity of information storage and sharing methods. Namely, it is the education that offers the deployment of private or free educational resources, or the generalization of content sharing platforms, community websites, or the personal blogs of teachers.

Keywords: military aggression, education, Ukraine

INTRODUCTION

Given the criticality of the situation under the conditions of Russian armed aggression, the work with information educational resources in the teaching profession is always duplicated with information practices. Taking this into account, the article pursues the purpose of the study, realizing a cross-sectional

description of resources, online offerings of institutional resources, different types of support for the implementation of educational training programs. The study meets the objectives and defines the tasks: to reveal the essence of educational information resources, to determine the Ukrainian teachers' perception of these resources and understanding of their effective use. In addition, to clarify the place of educational resources and their specificity as such in professional information practices and teachers' perceptions. In this paper, one proposes to define theoretical concepts on which it is based, in particular the articulation between information practices and information culture. First, the terms "information resources," "information practices," and "information representations" used in this paper must be defined. These elements will clarify the research question outlined in the introduction (Bader, Oleksiienko & Mereniuk, 2022). The term "resource" has many meanings and is often disqualified because of its imprecision. In general, resources include all elements that can specifically enrich a teacher's work or even affect their professional practice and reflection (Chen, Chang & Chang, 2017). There are three categories by which the nature of resources can be defined: material resources, human resources, and cultural resources (Heck, Kullmann, Hiebl, Schröder, Otto & Sander, 2020). "Material" resources include print resources (school textbooks, articles from professional journals, authentic texts studied in languages, etc.) as well as digital resources (institutional or disciplinary sites, online platforms, etc.) as well as everyday objects that can be used for educational purposes. "Human" resources consist of teachers' professional knowledge gained through experience or training, exchanges among colleagues or other participants in education. "Cultural" resources refer to elements of the educational form itself (schedules, subject teaching, vocabulary, etc.).

Theoretical Framework or Literature Review

From these considerations, one uses the term "information resources" in the meaning given to it by Abubakar as "a tangible or digital entity that is updated by teacher practice" with a specific instructional purpose and mobilization of "three central elements related to people: values, personal interests, and everything that concerns the educational process" (Abubakar, 2020). The object of this study is the educational resources brought to the Internet during the response to armed aggression by the enemy. These resources primarily consist of text, but also include static and moving images. Educational resources used by teachers to implement the established school curriculum in their classrooms include the curriculum itself, as well as accompanying documents, define its content and orientation, and provide examples of specific work (Sherman, Samchynska & Kobets, 2022). These resources' purpose is to support one of the teacher's missions, which is to interpret the instructional program (Laufer, Leiser, Deacon, Perrin de Brichambaut, Fecher, Kobsda & Hesse, 2021) in order to adapt it to a specific learning situation.

It should be mentioned that "the resource" in the service of pedagogical practice is multifaceted. Qualified as such according to its needs by the teacher, it combines content related to everyday life and material specifically dedicated to professional practice (Bondar, Bachynska, Novalska, Kasian, Kuchnarov & Pylypiv, 2020). This study refers within this heterogeneous informational landscape that educational resource practices.

METHODOLOGY

In the work were implied general scientific methods of research. The following methods were used to achieve the goals of the work: theoretical review of the scientific literature, pedagogical observation, generalization. Among them following logical methods were essential: analysis, synthesis, induction, deduction. The work was also based on a systematic method of research, grounded on which the phenomenon of information educational resources development in the context of military aggression of digital time is investigated as a complex system formed of several interrelated elements. Basing on concretization it was possible to study the problem educational resources of under conditions of large-scale military aggression.

At a time when the Russians have destroyed thousands of schools, in the face of shelling and aerial threats, physical presence in the classroom and interaction has become impossible for much of Ukrainians. Consequently, classes are conducted out of the classroom, according to individual methods, mobilizing all

possible equipment and the personal experience of educators since the Covid-19 pandemic in the context of the modern development of the educational process.

RESULTS AND DISCUSSION

Information Practices. Information Culture

In this work, one takes into account the contribution of the documentary approach to didactics associated with the study of teachers' documentary work in a digital context (Tsekhmister, Konovalova, & Tsekhmister, 2021). However, there are observations directly in line with reflections working in the information and communication sciences on the conceptualization of information "practice" combined with an understanding of information use understood as various empirical manifestations of this practice (Viloria, Varela, Lezama, Llinas, Flores, Palma & Marín-González, 2020). The informational practices can be formalized as: "the way where a set of devices, sources, tools, and cognitive skills are effectively mobilized in different situations of information production, research, and processing. In these terms it is possible to include the notion of "practices" the people's behaviors, representations, and information attitudes (individually or collectively) associated with these situations" (VanScoy, 2019).

This definition is widespread in scientific works on the issue of informatization in schools and universities, which confirms the central role of the educator (Fuad, Musa & Hashim, 2020). Thus, the notion of educational resources associated with information culture as conceptualized by Hylen (2021), is not limited to a set of skills or behaviors but considers the moral and social dimension. Over the decades, research on information activity and information use have modified their own concepts in accordance with technological developments and the geopolitical situation (Howard, Schrum, Voogt & Sligte, 2021). It is this vision of the question that mobilizes this study. Such a practice construction in the case of education must be constantly transformed and developed in the perspective of the realization of professional and individual as well as collective tasks. Informational practices interconnect suitable behavior as well as mental and social representations (Trach, Tolmach, Chaikovska & Gumeniuk, 2020). In psychology, representation is an organized set of opinions, attitudes, beliefs, and information concerning an object or situation. It is determined both by the subject itself (its history, experience), by the social and ideological system in which he is included, and by the nature of the connections maintained by the subject with this social system (Kotyk, Romanyuk, Bogush, Rudenko & Nepomniashcha, 2021). In this work, one emphasizes the value and importance of educational resources in the context of their inclusion in reality. Teachers' information practices are directly related to their perceptions and professional values. Everyday experiences with information enable pedagogical practices. Thus, the overlap between perceptions and practices turns out to be fundamental in creating a teacher's information culture.

The Individual-Temporal Dimension of Resource Creation

So, revealing the topic of educational resources in an online learning environment, it is necessary to describe them in terms of teachers professional and informational practices. Many specific resources can be positioned in the perspective of the work focused on the information practices of teachers and, in particular, the elements governing the choice of resources. At the intersection of communication and didactic issues, the theoretical work mainly focuses on information and communication aspects as well as educational sciences (Järvis, Tambovceva & Virovere, 2021). This study deals with research processes, sources identification, and information processing, but it is inseparable from the processes of professional identification of the educator and the educational process. It is in this sense, in addition to describing the use, the study contributes to the definition of the contours of the culture of teaching with the use of educational resources. The information resources use collectively articulates a set of knowledge regarding information ownership and attitudes toward information at the core of teachers' professional identity. While teachers' information practices are a subject of research in their own right, the question of the place of educational resources in these practices is a very specific problem because of their top-down nature (Devadze, Gechbaia & Gvarishvili, 2022).

The significant presence of digital technologies in information practices points to the important role of search engines, the low attendance of online resource banks, and rather casual and opportunistic research behavior. However, the paper medium is still very important in the accumulation of collected resources (Kutu & Olajide, 2020). European authors (Hamzah, Ahmad, Zakaria, Ariffin & Rubani, 2021) see educational resources as strong personal dimension of mobilized resources and collections that teachers create and organize as their needs arise. The importance of paper document storage practices is pointed out by (Downton, 2017). The author notes that print is comparable to the fact that the dynamics of assimilation of selected information are individual and long-term. One solidarizes, as the practice of paper document preservation, recycle, resource modification, personal reorganization of architecture, is inseparable from the preservation of environmental resources. However, in war conditions, with the Russian military destroying schools and burning existing literature, it is the informational educational resources that have survived and shown their value.

Informational resources (free online education platform "Coursera," state digital platforms for online learning, developed at the initiative of the Office of the President of Ukraine, UNICEF, UUU, system "Learning without borders," remote platforms Zoom, Microsoft Teams, Google Meet, Canvas Network online platform forms free courses for Ukrainians, the program "Prometheus," Ukrainian online learning system, media learning, various repositories such as Moodle, online libraries with open access, etc.) serve to practice learning and include a strong operational dimension. Namely the digital educational programs and their development, as well as the level of motivation, caused the mobilization of all actors in the education system of Ukraine. With each bombardment, with each act of aggression, the resources of the Ukrainian nation are mobilized, and intermediate mechanisms as Ukrainian partners allow access to them.

Social Specificity of Institutional Resources

Undoubtedly, the informational educational resources described above turn out to be quite marked by teamwork. For example, the moodle repository. Here one emphasizes specifically the collectivity of the practice of filling the resource and includes a strong social dimension associated also with the individual experience of the teacher, as well as with other subjects and the institution (Bakhmat, Kolosiva Demchenko Ivashchenko & Strelchuk, 2022). Thus, highlight the personal dimension of working with the content of information resources (if it is not already developed online platform), as well as the importance of recommendations from colleagues on the content of resources that have been tested and developed according to the teaching program.

In the context of this study, the choice of information source seems very important, based on the perceived reliability of the resources and, more specifically, the possibility of their verification or approval by a higher committee. It is a matter of assessing, even operationally, the degree of adequacy between institutional prohibitions and individual professional practices. It is the institutional nature of the resource that has been a lifesaver for many of Ukraine's RLAs amid total annihilation. Even after moving to another region, the institution retained all of its scientific achievements and methodological materials, and documentation. Of course, changing location or joining another institution implies modification of the resource by adapting it to the existing educational context and professional practice. Thus, it is a question of self-preparation, motivation to work, and the preservation of one's own educational institution.

Consequently, especially with regards to institutional resources, especially in times of war, it is necessary to note a careful policy of protection, restrictions on the use of unknown services, which will ultimately allow the preservation of the resource. According to (Aghion, Cherif & Hasanov, 2021), faculty members' use of institutional resources is closely related to the profile of these faculty members in terms of discipline perception, the profession, and the marginal interpretation of the curriculum that they negotiate. According to the synthesis (Griban, Griban & Korotun, 2019), the effective use of resources offered by institutional portals must thus achieve a fine balance between visibility and invisibility, that is, accessibility and inaccessibility.

Trends and Vectors of Development of Information Educational Resources

The war has not been a challenge to Ukraine's education system. Standardization in education took place before the military attack, and the field of information and communication technology continues to progress, with the main trends of this progress being:

- the growth of mobility in all its forms is both a factor in the development of distance learning and a new dimension to be taken into account in architecture and functional specifications.
- online learning technologies have become a key element in the fight against the enemy, against alienation, and in reducing the social gap, allowing to support students who have difficulties (active hostilities, immigration, air alert).
- various information repositories are easy to use for the learner and have become an auxiliary tool in the approach to ensuring the provision of education services in response to the context of increased danger.
- The development of educational information resources could be reduced to five main conditions (Table 1):

TABLE 1
CONDITIONS FOR THE DEVELOPMENT OF EDUCATIONAL INFORMATION RESOURCES

Accessibility	Open access to research, identification, distribution, and hosting of online learning content and components.
Interoperability	Permission to use content and components developed by one organization on a particular platform by other organizations on other platforms.
Multiple use of the device	The ability to use content and components for different purposes, in different products, in different contexts, and through different access modes.
Durability	Allows content and components to cope with technological change without the need for modernization or redevelopment.
Adaptability	Allows content and its components to be adapted.

Source: authors' own development

Online learning is a very specific field. It is not only about types of users, computer devices, and access to resources, but is above all a complex process of knowledge development. Given the rapid evolution of remote learning tools, it is necessary to stabilize appropriate resources. The understanding of the preserving educational resources complexity involves first the thought what an educational resource is. Then it is important to designate the actors involved in the implementation of educational resources - in particular, teams of teachers or technical specialists (González, Surikova & Pigozne, 2020). It is also necessary to take into account the diversity of projects implemented: from "big projects" leading to a finished product, voluminous and of very high quality, with long production times and large budgets; to "smaller projects," less structured but large numbers of which led to a diversified production with frequent updates (Cherng & Davis, 2019).

The use of information resources for learning led to significant changes in educational practices. The evolution of resources is reflected in (Neborsky, Boguslavsky, Ladyzhets & Naumova, 2020), where the authors describe the most common digital educational resources: first static websites and then dynamic sites, which are enough to manage the influx of products designed to serve as resources for education. Today, it is very often impossible to find a particular resource identified when visiting a particular site in advance or to come across a fake, viral page (Sanetra & Małodobry, 2022). Faced with this problem, search engines specialize and diversify, but this technical evolution provides only a part of the solution. In this perspective, scholars appeal to the fact that the emergence of the French standard for the description of educational resources (LOMFR) provides a solution to such problems. These standards allow resource authors to describe resources and facilitate their identification and then share them online, particularly in digital work environments (Petrenko, Kravets, Bazeliuk, Maiboroda, & Muzyka, 2020). Several examples,

such as PrimTICE, are already showing compelling results, and indexing practices are also being generalized to secondary and higher education (Reed & Jahre, 2019). Ukrainian confrontation not only on the battlefield but also in the information war waged by the aggressor has brought the education system to the issue of media literacy. Students must be able to resist the mechanisms of information warfare, must know what information is reliable, recognize fake news. For Ukraine now the correct perception of the information people receive through the media and social networks forms public resistance is of vital importance (Zinchenko, Kaidanovska, Boyko, Potikha & Chaika, 2022). Accordingly, today's students should take a course related media production learning. Media now integrates a variety of resources into higher education more than anything else, so media education allows for a media culture of consumers. A minimal mastery of these technologies becomes a prerequisite for socio-economic integration. Access to health care, education, information, leisure, and work now requires the ability to use these tools. But this cannot be enough. Citizens must also be able to look critically at information, understand its sources, and evaluate its quality and reliability.

One considers that the issue of media education is highly relevant in the context of the rapid development of society and technology (Malimon, Malimon, Tykhonenko, Honcharuk & Guts, 2022). The process of studying the current educational diversification will highlight the positive and negative consequences of the rapid technology evolution.

CONCLUSION

This research paper aimed to describe trends and vectors of information educational resources development added to the general description of teachers' information practices. The results of the work concern the study of information practices and culture of consumption, the individual-time dimension of resource creation, the social specificity of information resources, and the importance of media education in this crisis period for Ukraine. The scale of the destruction of educational institutions has not limited the possibility of learning. The analyzed resources expand the scope of education and mobilize it. The results go in the direction of scientific developments of world scientists, formulated even before the large-scale invasion of Ukraine. Scientists come to define the use of information educational resources by educators, and this type of resource occupies a very special place in the educational landscape. The study also emphasizes the implicit dimension of educator information practice. It is a central theme of the teaching profession; the teacher's information practice engages his or her autonomy and imposes itself as one of the places of realization of his or her pedagogical freedom. Thus, the work on the educational resource and its specificity as such is not questioned about the place of these information practices in the culture and professional identity of teachers.

In the work, one points out the imperceptibility of individual situations in the management of complex information-pedagogical tasks of correction or comparison of personal experience and collective orders. It is about replacing information culture, individual and collective information practices, culture, and professional training of teachers. As the real experience of Ukraine shows, the functioning of education against the backdrop of confrontation with the aggressor has demonstrated that information educational resources can maintain a virtual existence above, even if it is physically destroyed.

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