

PERSPECTIVES OF DEVELOPING DIGITAL EDUCATION IN MILITARY INSTITUTIONS

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Abstract. *Digital education and education transformation perspectives have particularly become the topics of interest and research during Covid-19 pandemic in all law enforcement institutions. Experience gained by overcoming weaknesses in e-learning and best practices identified need to be summarised and shared in order to strengthen existing border guards e-learning systems as well as timely prepare infrastructure and trainers for unexpected challenges and future education trends. The article outlines research results on the analysis of the current trends in digital learning in context of e-learning in the State Border Guard as a part of military education system in Latvia. Article includes research of main problems, risks and concerns regarding digital education in general as well as potential opportunities and recommendations for further development of e-learning for the Border Guard and the military. Existing problematic areas have been identified by historic research method, particularly from Covid-19 pandemic distance learning experience. Future perspectives in developing border guard's digital education capacity and potential have been defined based on analysis of scientific literature, empirical observations based on experience lecturing within military education environment.*

Keywords: *digital capacity, digital competence, digital education, military education.*

Introduction

Military education has always been considered as a strict, hierarchical, discipline-based system, where education processes, training approaches have evolved based on historical values and spiritual heritage of brotherhood, hence more difficult to be transformed. Nevertheless, despite traditional values and education approaches, also military education is gradually transforming. Transformation can be triggered by different factors, for example as experienced during Covid-19 pandemic due to movement and socializing restrictions military education also had to look for knowledge transfer solutions using digital education environment. Digitalisation of education is an ongoing process which will also have more impact on military education. Our future security and safety is primarily based on highly educated, competent and professional law enforcement and military personnel.

The goal of this research is to analyse and identify the key factors which facilitate or restrain the development of digital learning solutions in military education system, provide suggestions on how to use digital learning solutions as

well put forward proposals on how to enhance digital competence of educators involved in military education. To reach the goal of this research author analyses scientific literature concerning education and technologies, summarizes the success factors and drawbacks concerning digital education possibilities within military education systems, based on scientific research findings and questionnaire results develop suggestions for improving the military education systems is provided. The research includes investigation of scientific literature, analysis and synthesis of main trends of digital education as well as development of recommendations to increase the efficiency of e-learning in military institutions based on research conclusions.

Topicality of digital education development within the military

The rapid development of educational technologies, urgent need to be ready for new emergencies and challenges (as recently experienced Covid 19, currently war in Ukraine) keep us under constant watch for a transformation and rapid reaction capabilities when in need and under all circumstances. The Covid-19 pandemic highlighted the existing problems and challenges in providing and sustaining effective learning process under sudden transformation process. The processes of traditional education transformation directly affect both - the management of the education institution in the organisational and managerial level as well as the personnel – to be flexible and ready for fast change of traditional training environment. We can undoubtedly agree that the vast information exchange, development of artificial intelligence in information transfer, simulators, data processing systems have created military education more dynamic as compared to previous decades. Under constantly changing conditions, in order to ensure an efficient learning process, educators must not only be able to adapt quickly and effectively to the current educational challenges, but also to predict and timely prepare for future educational development trends - such as their own digital competence development.

The topicality of improving military education in the context of Latvia is defined in several security education policy planning and development documents, such as the National Defense Concept (Saeima, 2020; Valsts robežsardzes koledža, 2021), the action plan for the development of vocational education of institutions of the Ministry of the interior system with special service ranks for 2018-2021. The further research on digital education development is content analysed from other available scientific literature sources.

Research shows that over the last decade, especially in 2020-2021, the Covid-19 pandemic has led to the emergence of digital education opportunities and a rapid increase in research, highlighting gaps and barriers to the effective implementation of the digital learning environment. Digitization, virtual reality, online studios have become the norm, preparing for a future, super-intelligent

(5.0) society (Sa, Santos, Serpa, & Ferreira, 2020). Covid-19 emergency studies indicate that higher levels of teachers' digital capacity allow for faster and better organization of distance learning (European Commission, 2020). According to the research by Ministry of Education project "Life with COVID-19" (RSU, 2020) it is detected that the challenges posed by the crisis have contributed to the availability of digital resources and the development of competencies of professionals involved in education through combined and highly distance learning at all levels of the education systems.

The need to update all education systems is highlighted in the Digital Education Action Plan where the importance is put in of all levels and sectors of education to address digital skills gaps and updating educators' digital competences as well as recognizing and supporting the need to develop digital competences for individual participation in society in the context of European innovation and competitiveness (European Commission, 2020).

Also, military education systems should bear in mind that their target audience is our younger generation, which has already grown up within digital learning solutions. When transforming or revisiting military education environment it important to pay attention to civil education paradigm shift. Linda Daniela (2019) encourages us to prepare students for the future in which they will have to face different technologies, make the learning process more interesting, improve learning motivation and facilitate self-study for teachers, various technological innovations need to be introduced (Daniela, 2019). The potential success of students in the development of digital competencies depends on the attitude of teachers towards the changing amount of technology in order to achieve a deep understanding of their transformative nature and corresponding changes in curricula (Zogla et al., 2019).

The need for a paradigm shift in education, to adopt digital innovations in the learning process, ways of acquiring new knowledge in the context of digital learning solutions is expressed in several international research findings (Bessenyei et al., 2008; Clarke, 2008; Churchill, 2017; Hämäläinen, Nissinen et al., 2021).

Research on the Covid-19 pandemic shows that education systems are not fully exploiting the potential of digital technologies to improve teaching and learning, nor are opportunities for developing the digital competences of teachers and learners (Costa, Castaño-Muñoz, & Kamylylis, 2021). The topicality of the transformation of the educational environment is emphasised in the Digital Transformation Guidelines for 2021-2027, where the focus is put on the need for education systems to provide modern digital skills and professional skills with the opportunity to participate in the learning process (VARAM, 2020). Mykhailenko et al. (2021) emphasize the acquisition and transformation of digital skills from the acquisition of digital technologies to the use of digital tools in the pedagogical environment. Emphasis is placed on the link between pedagogy and technology

in achieving educational goals, focusing on the skilful, conscientious and effective use of digital technologies, promoting more personalized, flexible, student-centered and collaborative learning in the digital environment

The researches indicate the education systems of militarized educational institutions are gradually and purposefully developing, the inevitable increase in technology in the context of e-learning is expected to compile and adapt based on success stories (Wisher, Sabol, & Moses, 2002). The potential of e-learning, transformation of learning in theory and practice, theory and practice of student-centered process, manifestations of leadership in the military pedagogy change have been widely explored and underlined by several researchers (Vardi, 2010; Williamson & Murray, 2019). Several researchers also conclude on the need to address the risks related to e-learning, impose conservatism theory, caution, challenges to introducing innovations (Buckingham, 2007; Budhai & Skipwith, 2017; Garrison, 2017, etc.);

Education development tendencies and priorities of both Latvian and foreign militarized institutions define the key areas - strengthening of digital education capacity, paying special and timely attention to the development of future digital education potential - artificial intelligence, simulations and virtual reality, collaborative research. By analysing the literature related to the research topic, compared to other fields of education, it can be concluded that the among of research in militarized educational institutions in terms of digital education development is rather limited, which also highlights the need to increase the involvement of military academic staff in digital education research development. Insufficient research capacity can lead to the lack of a systemic approach to the organization and supervision of the e-learning further development process, the improvement and educators' digital competence as well as slowing down of modern digital education integration and sustainable development in specific military environment.

Researches indicate the basic requirements for successful integration of e-learning - definition of vision and strategic planning, the need to create an environment for change, successful integration of e-learning process is possible on planning integration and assessment quality criteria: teaching system, technical system, subject matter, technical services, quality of course leaders and users, basic support system (Engelbrecht, 2003; Vanderlinde, 2012). Based on the analysis of theoretical research, it can be concluded that strengthening the capacity of digital education and e-learning is one of the priorities for the development of education policy, which is also relevant to militarized education institutions.

Research and education policy planning documents show that by effectively integrating traditional teaching methods with modern digital education solutions, it is possible to ensure wider access to education, balancing financial savings without losing the quality of the learning process and achievements. The Covid-

19 pandemic proved that e-learning solutions are able to ensure the continuity of the study process in emergency situations, therefore the possibilities of implementing e-learning outside emergency situations should be analysed.

The research results also emphasizes the lack of interactivity in the developed teaching materials (Daniela, 2019), the topicality of the lecturers' development of digital competence and practical experience in the use of technology (Daniela, 2019; Čižmešija et al., 2018), development of didactic digital competence (Atanu & Bag, 2020).

Successful integration of digital resources in pedagogical activities depends on the development of lecturers' criteria of digital competence - knowledge, skills and attitudes. Research on the development of education (UNESCO, 2011) indicate that the lecturer has a duty and a direct influence in structuring an effective learning environment, must be able to anticipate and meaningfully combine new technologies with the usual pedagogical work environment. The conclusions of the research emphasize the need to create an effective online collaborative environment by developing socially active interactions through collaborative learning. The role of lecturers' changes from knowledge providers to facilitators of shared knowledge and team building.

An essential precondition for the integration of e-learning is the influence of management in the development of collective understanding, collective commitment and collective responsibility (Bērziņa et al., 2006), gradual and organic integration of digital education in the institution's culture with management and informal leader support, participation and motivation system, evaluating existing technologies, investing in future technologies, research, professional development, communication and collaboration (UNESCO, 2011; Ilomäki & Lakkala, 2018; Rožcenkova, 2008; Porritt et al., 2017).

The summarized research findings show that a prerequisite for educational change is an appropriate synergy between the leadership of teachers and educational institutions and digital competence. The introduction of change in a military culture is difficult, where the introduction of new innovations or traditions is highly resisted and counteracted, mainly due to the heritability of traditional learning processes and methods, knowledge, skills and attitudes towards innovation. Moving forward requires emphasizing and communicating the need for change, which includes creating the right climate for change, building a change management team, developing a vision and strategy for change, demonstrating short and long-term achievements, and consolidating established change.

When developing the e-learning environment of a militarized educational institution, it is necessary to ensure high-quality interaction between the lecturer and students, not only promoting learning achievements, but also the formation of lecturers' experience of online collaboration opportunities (Salmon, 2000; Budhai & Skipwith, 2017). The conditions for the development of a successful e-

learning course should integrate the development of lecturer-student cooperation in interaction with interactive learning content, tests, mutual cooperation, development of self-directed learning experience. Lecturers need to be aware of the peculiarities of modern communication, how students interact in social networks and communities (Bozkurt, 2019). As experienced worldwide and in Latvia international cooperation projects are becoming relevant for the exchange and adaptation of good practice examples for the further development of e-learning (European Commission, 2013). Collaboration centres for the effective use of existing and new technologies and for collaboration with other defence forces and academia are important to enhance digital capacity (Wisher, Sabol, & Moses, 2002). Research confirms that local and international cooperation provides lecturers with an opportunity to learn from each other, allows comparing and contrasting different approaches to education policy, analysing examples of good practice from other countries, but each technological development must take place in the context of environmental culture. An institution that wants to develop a technology-based learning process needs to adapt it to the culture of the institution as well as to the development trends of other higher education institutions.

The relevance of the development of digital competences is also confirmed by its inclusion in the European Qualifications Framework, thus defining the basic criterion of people's professional activity - proven ability to use knowledge and skills to use digital technologies effectively (EU Council Recommendations on Key Competences for Lifelong Learning, 2018). The topicality of digital competences in the education sector is confirmed by the European Competence Framework for Teachers developed in 2017 (European Commission, 2017), which synthesizes lecturers' professional and pedagogical competencies with learners' competencies, thus helping lecturers to identify, assess and independently promote digital competencies. To promote a common understanding, militarized educational institutions are bound by the main directions of the Digital Education Action Plan (European Commission, 2020) - to encourage lecturers to research, manage and effectively use the potential of digital technologies in education, constantly monitoring rapid technological progress and regularly increasing digital competence.

Research shows that the theoretical and practical need to improve the digital competence of lecturers has gained new significance due to the Covid-19 pandemic in the spring of 2020, along with the challenges of implementing the distance learning process in all education sectors. Research conclusions (Council of Europe Conclusions on Digital Education (European Commission, 2020), Latvian National Development Plan 2021–2027 (Cross-Sectorial Coordination Center, 2020); Digital Transformation Guidelines 2021-2027 (VARAM, 2020) etc.) emphasize the risk of low digital competence of lecturers, the acute need for the development of digital competence is defined, as well as the improvement of

digital competence is set as one of the priorities for the development and challenges of future education.

The main barriers and impacts for the development of digital competences and the full realization of digital learning opportunities have been defined - workload, lack of time, fragmented professional development, inadequate preparation of the educational institution for change, lack of understanding and awareness of the need to develop digital competences.

Based on the theoretical findings, it can be concluded that the improvement of lecturers' digital competence is the responsibility of both the educational institution and the lecturers, which stems from both the institution's strategic vision and the lecturer's personal and collective attitude towards the development of digital competence. Considering the specifics of militarized educational institutions, it is necessary to ensure, motivate and control the professional development of lecturers and its integration into pedagogical activities. Considering the risk that not all lecturers militarized educational institutions do not have higher pedagogical education it is essential that during professional development courses special attention is paid to the aspects of effective integration of basic principles of pedagogy and modern digital technologies.

Based on the descriptions of digital competence of teachers, the specifics of the militarized educational institution's environment, current practice, legal framework, as well as common trends (European Teachers' Digital Competence Framework (European Commission, 2017), Digital Transformation Guidelines for 2021-2027 (VARAM, 2020)), the author proposes in the future to evaluate the digital competence of militarized educational institutions the following criteria and indicators:

- knowledge of the basic principles and needs of the development and use of digital tools and resources, trends in pedagogical work;
- skills to effectively integrate digital tools and resources into the study process, creating and maintaining an interactive, self-directed and online collaboration environment;
- attitudes towards the development and use of digital tools and resources in professional activities and the development of digital competences.

In order to accurately assess the knowledge, skills and attitudes of lecturers, using digital tools and resources in professional activities, to determine the tasks of lecturers aimed at achieving results, professional development opportunities, training and development needs, the author offers to include digital competence among other competences to be evaluated for all educators of military training institutions. Amendments to Regulation No. 845 of 20 December "Procedures for the Activities and Evaluation of the Results of the Officials of the Institutions of the Ministry of the Interior and Prison Administration with Special Ranks" (Ministru kabinets, 2016) should be considered. The amendments with criteria and indicators for assessing the digital competence of lecturers developed as a

result of the research not only help to identify the necessary development activities, but together with other components of the digital competence development model promote the development of a creative digital environment, motivate lecturers to research, approbate and share experience with other colleagues.

Conclusions of empirical research results

By summarizing and analysing the research analysis the following suggestions are put forward to improve digital education for the military.

Focus should be put on lecturers' digital competence development, especially those who do not have higher pedagogical education, have difficulties in understanding the concepts related to the pedagogical process and digital education, which significantly affect the implementation of a unified approach to planning and organizing the e-learning process.

The development of the digital education is influenced by the strategic vision, attitude and approach of the management and the academic staff of military educational institutions. The lack understanding, predicting and flexibility of adopting modern education trends as well as communication within the institution regarding education development strategy does not promote the formation of a common understanding and vision of the opportunities of digital education opportunities and the topicality of digital competence development to further develop efficient knowledge transfer processes.

There is a need to implement a systematic policy of monitoring the quality of the implementation of the digital education development process and updating digital teaching aids. More attention is paid to the interactivity of digital learning tools and their use for self-directed learning as well as looking for the ways to include artificial intelligence within military learning environment.

The research carried out is limited to specific military education environment and context in which, due to restricted access information, full-scale integration of e-learning is limited. Further research should be elaborated on artificial intelligence application within the military environment.

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