DEVELOPMENT OF DIGITAL EDUCATION CAPACITY IN THE STATE BORDER GUARD OF LATVIA

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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. Article includes research of main problems, risks and concerns regarding digital education in general as well as well as potential opportunities and recommendations for further development of e-learning for border guards. Existing problematic areas have been identified by historic research method, particularly Covid-19 experience. Future perspectives in developing border guard's digital education capacity and potential have been defined based on scientific researches analysis.*

Keywords: *digital capacity, digital competence development, digital transformation, e-learning.*

Introduction

In order to facilitate border guards training the State Border Guard College (hereinafter – SBGC) has been actively using e-learning system since 2008. Several researches and international projects have been implemented to strengthen the functionality of e-learning at SBGGC. Covid-19 particularly hihlighted the need to further enhance teachers' digital competence in order to raise the effeiciency and accessibility of digital learning solutions to border guards. The inevitable increase of educational technologies and digital learning possibilities continuously sustain the topicality for further researches to meet future education challenges and tackle existing ones. As one of the key challenges to be addressed is to identify further development needs at SBGC, to determine effective steps for development and use of emerging educational technologies. The author of this research analyses and outlines the peculiarities of developing e-learning system in the context of global digital education development trends in the context of specific border guard training environment. The research includes overview of research

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analysis influencing e-learning system development, strategic education development documents aiming to enhance the potential of using digital technologies and developing interactive and meaningful training environment and content. The author puts forward suggestions on how to further develop e-learning system of the SBGC which might be applicable to military education contexts.

Current digital education development tendencies and research findings

In order to solve existing gaps and issues in education as well as prepare for possible challenges law enforcement institutions, just like all education institutions have to have a strategic approach and vision of target areas to be improved which can be found in Digital Education Action Plan (2021-2027). This plan states that the pandemic has accelerated integration of online and hybrid learning and this shift has uncovered new and innovative ways for students and educators to organise their teaching and learning and interaction activities. According to this Plan the call for a strong and coordinated effort at the EU level to support education and training systems to address the challenges identified and exasperated by the COVID-19 pandemic has been started to put forward a long-term vision for the way ahead for European digital education, namely, developing two key areas:

1. Fostering the development of a high-performing digital education ecosystem, which includes development of infrastructure, connectivity and digital equipment; effective digital capacity planning and development, including up-to-date organisational capabilities; digitally competent and confident teachers and education and training staff; high-quality learning content, user-friendly tools and secure platforms which respect e-privacy rules and ethical standards;
2. Enhancing digital skills and competences for the digital transformation, which requires basic digital skills and competences from an early age; digital literacy, including tackling disinformation; computing education; good knowledge and understanding of data-intensive technologies, such as artificial intelligence (AI); advanced digital skills, which produce more digital specialists as well as ensuring that girls and young women are equally represented in digital studies and careers.

Several researchers agree that digital technology in the modern world is not only a tool, but also a living environment that opens up new

opportunities such as learning at any convenient time as well as continuing education (Bilyalova et al., 2020). Results of scientific researches (Balyer & Öz, 2018) conclude that in the digital transformation process, managers must first create a vision to generate and managed accordingly for an effective learning environment which should be supported by appropriate content and technological infrastructure. It is recommended that educational administrators and program specialists are ready for this transformation and have the qualities to manage this transformation. Digital transformation in education is inevitable and it is essential to develop strategic plans for the implementation of educational policies on technology, vision must be established and managed by leaders with this vision. Researchers emphasize that there should be given feedback and made an evaluation about how digital transformation process works, managers, teachers, and students should get training in the direction of digital transformation vision and in-service training activities provided by experts and academicians.

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 et al., 2012; Jeladze & Pata, 2017).

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. Covid-19 pandemic showed us 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 considered.

The researchers also emphasize the lack of interactivity in the developed teaching materials (Daniela et al., 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 (Ottestad et al., 2014; Atanu & Bag, 2020).

Lecturers are encouraged to use the principles of SMART pedagogy to develop a technology-enriched learning environment, anticipating, predicting and analyzing the usefulness of using technology (Daniela, 2019), involving students in the creation and sharing of digital content (Barajas & Frossard, 2018).

The development of lecturers' digital competence highlights the need to create communities of practice, where ideas are developed and experiences are gathered and a common understanding is formed to create and implement quality e-learning courses (Starkey, 2012; UNESCO, 2008; Benedek et al., 2012; Gutierrez, 2014).

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, OECD, etc.) indicates 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.

According to Digital Education Action Plan (2021-2027) effective digital capacity planning and development is vital for education and training systems. This requires the development and ongoing review and updating of digital strategies addressing technology gaps in infrastructure, devices and developing relevant organisational capabilities in education, including the capacity to deliver hybrid modes of learning and teaching (remote and on-site). Institutionalised support is essential for such planning and development, as are interdisciplinary teams including management, technologists and instructional designers, with the needs and experience of education and training staff at the centre.

Very high-capacity internet connectivity is critical for education. Demand for connectivity is increasing due to bandwidth-heavy applications such as video streaming, video conferencing, cloud computing, and other emerging applications (such as virtual and augmented reality). Bringing fast and reliable internet to educational institutions and learners plays an important role in ensuring effective and engaging learning experiences.

The need to enhance digital competence of lecturers

In order to meet the challenges of the digital age and better prepare for possible future educational challenges, the digital competence of lecturers has been updated in both research and EU education development planning strategies, especially after the Covid-19 pandemic, and its development is essential to all education institutions globally. 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 (Redecker, 2017; EU Council Recommendations on Key Competences for Lifelong Learning, 2018).

The topicality of digital competences in the education sector is confirmed by the European Teachers developed framework in 2017 (DigCompEdu, 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 (2018) - 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 (UNESCO, 2008; Council of Europe Conclusions on Digital Education, 2020; Latvian National Development Plan 2021–2027; Digital Transformation Guidelines 2021–2027, 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.

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. Taking into account 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. Taking into account that many

lecturers do not have pedagogical education, professional development courses should pay special attention to the aspects of effective integration of basic principles of pedagogy and digital technologies. Improving the digital competence of lecturers, as also observed during the Covid-19 pandemic, is necessary not only to ensure the continuity of education during sudden emergencies, but also to prepare in time for future educational challenges.

Militarized educational institutions must create an environment with motivating conditions that allow lecturers to simultaneously perform their daily pedagogical tasks effectively, as well as to independently improve their professionalism and conduct research in the implementation of new digital educational solutions. In order to develop the e-learning process in a militarized educational institution, it is necessary to develop a system for strengthening digital capacity and improving the digital competence of lecturers, as a result of which the militarized educational institution is able to ensure and develop effective implementation of the e-learning process.

Taking into account the specifics of the militarized educational institution's environment, current practice, legal framework, as well as common trends (European Teachers' Digital Competence Framework, 2017, Digital Transformation Guidelines for 2021-2027), the author proposes to evaluate the digital competence of militarized educational institutions the following criteria and indicators.

Table 1

Criteria and indicators for evaluation of lecturers digital competence within the system of Ministry of the Interior
(compiled by the author)

Definition	Digital competence is the convincing, critical and responsible use of digital technologies in professional activities, which includes the ability to use information and data, the ability to communicate and collaborate effectively with colleagues and students in the e-environment, the ability to create and meaningfully use interactive digital content security and copyright issues, as well as a focused, development- and cooperation-oriented approach to the use of digital tools and resources in pedagogical work and the development of digital competences.
Outcome	**Criteria and performance indicators**
Excellent - exceeds requirements	Knowledge of the basic principles, needs and trends in the development and use of digital tools and resources in pedagogical work: Excellent knowledge and ability to define the basic principles and needs of the development and use of digital tools and resources in the lecturer's study course, excellent knowledge of educational technology development trends.

	Skills to effectively integrate digital tools and resources in the study process, creating and maintaining an interactive, self-directed and online collaboration environment: constantly use digital tools and resources in the learning process and service needs. Highly interactive digital tools and resources are constantly being developed. The availability of teaching aids in the e-environment is constantly ensured and regularly updated. Able to organize an interactive online collaboration environment. Constantly involves learners in knowledge creation and online collaboration activities with the help of digital tools, using feedback tools. Attitudes towards the development and use of digital tools and resources in professional activities and the development of digital competences: clearly defines the impact of the use of digital technologies in the learning process and future developments. Encourages and supports colleagues in the development of digital learning tools, promotes and encourages innovation, and conveys successful change or innovation experiences. Continuously improves digital competence by organizing and participating in international activities, projects and conferences, constantly researches and publishes research results in scientific articles.
Very good - partly exceeds requirements	Knowledge of the basic principles, needs and trends in the development and use of digital tools and resources in pedagogical work: Very well knows and is able to define the basic principles and needs of the development and use of digital tools and resources in the lecturer's study course. Very familiar with the development trends of educational technologies Skills to effectively integrate digital tools and resources in the study process, creating and maintaining an interactive, self-directed and online collaboration environment: very often use digital tools and resources in the learning process and service needs, actively develop high-interactive digital tools and resources. Ensures the availability of teaching aids in the e-environment on a very regular basis and updates them regularly. Can organize an interactive online collaboration environment very well. Involves learners very well in knowledge creation and online collaboration activities with the help of digital tools, using feedback tools. Attitudes towards the development and use of digital tools and resources in professional activities and the development of digital competences: shows a very good attitude towards the use of digital technologies and the development of digital competences. Actively participates and cooperates with colleagues in the development of digital teaching aids, transfer of experience. Very often digital competence is developed by participating in international activities, projects and conferences, very often researching and publishing research results in scientific articles.
Good - requirements are met	Knowledge of the basic principles, needs and trends in the development and use of digital tools and resources in pedagogical work: is well acquainted with and is able to define the basic principles and needs of the development and use of digital tools and resources in the

	lecturer's study course. Is well acquainted with the development trends of educational technologies. Skills to effectively integrate digital tools and resources into the study process, creating and maintaining an interactive, self-directed and online collaboration environment: Frequent use of digital tools and resources in the learning process and service needs, actively developing high-interactivity digital tools and resources. The teaching aids are regularly available in the e-environment and are regularly updated. Can organize an interactive online collaboration environment. Involves learners well in knowledge creation and online collaboration activities with the help of digital tools, uses feedback tools. Attitudes towards the development and use of digital tools and resources in professional activities and the development of digital competences: there is a good attitude towards the use of digital technologies and the development of digital competences. He is happy to get involved and cooperate with colleagues in the development of digital teaching aids, transfer of experience. Often develops digital competence by participating in international activities, projects and conferences, often researches and publishes research results in scientific articles
Needs to be improved - partly meets requirements	Knowledge of the basic principles and needs of the development and use of digital tools and resources, trends in pedagogical work: students are familiar with the basic principles and needs of the development and use of digital tools and resources in the lecturer's course. Poor knowledge of educational technology development trends. Skills to effectively integrate digital tools and resources into the learning process, creating and maintaining an interactive, self-directed and online collaboration environment: very rarely use digital tools and resources in the learning process and service, rarely develop high-interactivity digital tools and resources. Occasionally ensures the availability of teaching aids in the e-environment and updates them on an occasional basis. Can't organize an interactive online collaboration environment well. Poorly engages learners in knowledge creation and online collaboration activities through digital tools, uses feedback tools. Attitudes towards the development and use of digital tools and resources in professional activities and the development of digital competences: there is a negative or skeptical attitude towards the use of digital technologies and the development of digital competences. Rarely gets involved and cooperates with colleagues in the development of digital learning tools, transfer of experience. Rarely develops digital competence by participating in international activities, projects and conferences, rarely researches and publishes research results in scientific articles.

Unsatisfactory	Knowledge of the basic principles, needs and trends in the development and use of digital tools and resources in pedagogical work: does not know and is unable to define the basic principles and needs of the development and use of digital tools and resources in the lecturer's study course. Not aware of the development trends of educational technologies. Skills to effectively integrate digital tools and resources in the study process, creating and maintaining an interactive, self-directed and online collaboration environment: do not use digital tools and resources in the learning process and service needs, rarely develop high-interactive digital tools and resources. Does not ensure the availability of teaching aids in the e-environment. Unable to organize interactive online collaboration environment. Does not involve learners in knowledge creation and online collaboration activities through digital tools. Does not use feedback tools. Attitudes towards the development and use of digital tools and resources in professional activities and the development of digital competences: there is a negative and negative attitude towards the use of digital technologies and the development of digital competences. Very rarely or reluctantly collaborates with colleagues in the development of digital learning tools, exchange of experience. Very rarely develops digital competence, very rarely or does not participate in international activities, projects and conferences, very rarely researches and publishes research results in scientific articles.

The 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 and suggestions

Based on research results it can be concluded that it is necessary to strengthen scientific research and technological capacity for the development of digital education technologies by analyzing the historical context of the implementation of the e-learning process, as well as future development trends of digital education. In order to further develop the e-learning process, it is necessary to promote the improvement of digital competence, focus on the integration of modern pedagogical processes.

Researches indicate further development of digital tehnologies in education, hence it is important to find efficient integration paths in military

environment. The attitude of the lecturers towards the improvement of digital competence and the use of the e-learning environment is formed in the environment of the militarized educational institution (management, leaders, team), based on the general attitude of the institution and the strategic vision for the use of the e-learning environment. The effective integration and use of the e-learning environment in a militarized educational institution is also determined by the teacher's pedagogical education, hence the effective implementation of the e-learning process in a militarized education environment is not possible without periodic monitoring, control and evaluation of the results of lecturers' pedagogical activities, as well as the improvement of systemic digital competence. A militarized educational environment needs to develop the integration of a student-centered approach and increase the share of online collaboration in the e-learning process. It is necessary to improve the skills of lecturers to create an effective digital collaboration environment, as well as to develop self-directed learning opportunities in the development of interactive learning content.

Based on the nalysis of the theoretical literature and the results of empirical research, the author offers recommendations for the development of the e-learning process in the SBGC:

1. In order to ensure effective integration of educational technologies in the learning process and their further development for Latvian militarized educational institutions, it is necessary to improve cooperation in the field of digital education development. To strengthen it, it would be useful for militarized educational institutions to develop a common strategy for the development of digital education.
2. For the development of digital education, it is necessary to develop a unified, military-binding didactic framework for digital education (methodological instructions, guidelines, examples of good practice in the planning, implementation and evaluation of e-learning). The didactic framework should include precise and well-defined terms related to the pedagogy of the field and their explanations, descriptions and examples of the types and methods of e-learning organization, duties and responsibilities of the staff involved.
3. In order to develop the e-learning process, militarized educational institutions need to create and maintain a common community of good practice in the implementation of digital education, within which regular digital competence development and experience exchange activities are organized. The main goal of the community

is to provide opportunities for lecturers to innovate and transfer new experiences.

4. In order to develop the capacity of digital education, disseminate examples of good practice and provide mutual assistance and support in a militarized educational environment, it is necessary to create a methodological support unit (department or position) for e-learning, development and updating of materials (instructions, examples and samples of the development of interactive teaching aids), solution of various problematic issues of implementation of digital education innovations, strengthening, implementation and coordination of digital capacity of international cooperation projects.
5. To promote the improvement of lecturers' digital competence, to support mutual experience exchange activities, emphasizing the need to improve pedagogical skills for the full use of digital education opportunities. New lecturers must ensure the improvement of pedagogical qualification both in the acquisition of basic pedagogical principles and in the integration of pedagogy and ICT, emphasizing pedagogical theory, such as behaviorism, constructivism, constructionism, connectivism, etc. examples of pedagogy and ICT integration theory and good practice.
6. To organize regular digital competence development seminars for representatives of militarized educational institutions management, study process administration and supervision structural units (department management, study coordination departments, ICT department management), also envisaging acquisition of theoretically practical qualification improvement courses (seminars), emphasizing pedagogical and digital competence integration opportunities, examples of good practice and strategic issues of e-learning management and implementation.
7. Considering the specifics of subjects, study courses and in-service training courses, within the working group to create lists or categories of eligible and partially eligible subjects, study courses and in-service training courses for e-learning, which due to objective circumstances include a certain part of the acquisition of theoretical knowledge without practical activities) can be partially implemented in the form of e-learning. For partial transformation in the e-learning environment, general education subjects and study courses, such as foreign languages, ethics, political science, history, didactics, communication psychology, geography, basics of economics and logistics, are primarily to be considered.

8. Transforming or partially implementing subjects, study courses, in-service training programs in the form of e-studies, considering objective conditions, developing high-interactivity digital teaching aids and organizing the online learning process, requires workload balancing to provide creative and research opportunities, redistributing workload. For example, while the e-learning course is being developed for a lecturer who is involved in the development of interactive digital learning tools, the study workload is reduced.
9. Considering the development opportunities and tendencies of digital education, it is necessary to envisage the placement and transformation of all theoretical subjects of study subjects and study course materials, for which there is no restricted access, for use remotely in Moodle or other digital environment. In this regard, considering the regular workload of lecturers, it is necessary to provide (compensate) time for the development of digital teaching aids. In order to transfer a common approach and good practice, it is recommended to organize seminars for the development (transformation) of digital teaching aids, project weeks, providing an opportunity to collaborate with other lecturers and students.
10. In order to accurately assess the knowledge skills and attitudes of lecturers, using digital tools and resources in professional activities, to determine the results-oriented tasks of lecturers, professional development opportunities, learning and development needs, the existing evaluation system for lecturers in militarized educational institutions, to introduce and evaluate the digital competence of lecturers according to certain criteria and indicators as well as motivate lecturers to develop effective, interactive and sustainable digital tools.

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