DIGITAL TRANSFORMATION OF COMPLEX EDUCATIONAL SCENARIOS (COMPARATIVE STUDY OF FINAL QUALIFICATION ASSESSMENT FOR FOREIGN LANGUAGES PROGRAMS)

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ABSTRACT

The global quarantine measures and restrictions have posed a challenge to the structure and procedure of university summative assessment process. Foreign Languages Acquisition and Linguistic Education assessment are interdisciplinary processes, informed by the nature of linguistic content and types of communicative and professional activities within a framework of set and variable scenarios. The study is based on identification of various interdisciplinary competency principles, derivative of 21st century skills. This inquiry objective is to investigate the dynamic progress and results of digital transformation of final qualification assessment for students of European and Oriental Languages programs, employed in the years 2020 and 2021 through the pandemic emergency digitization measures. The study focus is on the comparison of the cases and best practices of Borys Grinchenko Kyiv University (Ukraine) Digital Final Qualification Assessment to derive contrastive results for different stages of digitization (2020 and 2021) in Foreign Languages major programs. Comparative results of the efficiency of ICT tools and practices applications across different educational activities of Final Qualification Assessment and interoperable digital literacy levels requirement are evaluated.

KEYWORDS

Digital Transformation, Educational Scenario, Digital Skills, ICT Tools, Final Qualification Assessment, European Languages, Oriental Languages.

1. INTRODUCTION

The global pandemic of COVID-19 emerged as a kind of a black swan scenario for interdisciplinary domains of social and economic life, including education. The black swan theory is a concept that describes an event that comes as a surprise, has a major effect on society, and is often inappropriately rationalized after the fact with the benefit of hindsight (Taleb, 2010). The COVID-19 pandemic amplified digitalization measures in higher education sphere, informed by the need to take quick comprehensive action in order to achieve the overarching result to transform educational scenarios into holistic digital, remote and hybrid frameworks.

The consequent functional tasks to meet this challenge are estimated as: to activate comprehensive complex skillsets, otherwise latent or underutilized in the educational process; to enhance ICT competence and digital literacy of all participants of the educational process, relocated to computer realm; to derive recommendations for increasing productivity of ICT tools implementation by all stakeholders in normative digital framework educational scenarios.

The global quarantine and subsequent emergency digital education measures have posed an array of challenges to the structure and workflow of university summative assessment process. Final Qualification assessment for Foreign Languages university-level programs in particular is chosen for analysis as an integrated cognitive and applied educational scenario, that involves interoperability of different communicative stages and activities (oral and written tests and exams, final project public presentation, internal and external review, discussion, appeal).

This study mission is to investigate the principles and results of comprehensive digital transformation of final qualification assessment for different groups of stakeholders of European (French, Italian, Spanish, English, German) and Oriental (Mandarin Chinese, Japanese) Languages programs, employed in the years

2020-2021 through several phases of lockdown measures. The study focus is on the critical review of the applied case and best practices of Borys Grinchenko Kyiv University (BGKU), Ukraine Digital Final Qualification Assessment to derive comparative results for different stages of emergency digitization measures (initial -2020, hybrid -2020-2021, sustainable -2021) for Foreign Languages major programs.

The study scope permits to disclose the following tracks of findings: Introduction of a comprehensive model of digital transformation of complex educational scenarios; Comparative analysis of Final Qualification Assessment efficiency in digital format for different groups of participants (students, faculty, assessment board members, referees) according to such dimensions: Dimension A: frequency, synergy and interoperability of educational communicative activities for Final Qualification Assessment in Foreign languages; Dimension B: Soft skills and corresponding foreign language acquisition skills, activated in the Final Qualification Assessment scenario, enhanced by the use of ICT; Dimension C: digital literacy status quo and estimated requirements for different groups of Final Qualification Assessment participants in Foreign Languages programs (students, faculty, assessment board members, referees); Dimension D: efficiency evaluation of ICT tools, used for all procedures Final Qualification Assessment in Foreign Languages programs, by different groups of participants (students, faculty, assessment board members, referees);

Practical recommendations to overcome generic and specific, challenges for actual and underdeveloped skills (hard, technical and soft), that different groups of participants of the educational process encountered through Final Qualification Assessment in programs of European and Oriental Languages.

The relevant studies on various aspects of digital education, conducted across the pre-COVID-19 framework have spanned such key avenues of inquiry as 1) assessment of satisfaction with distance learning experience (Bolliger, 2009; Bekele, 2010); 2) evaluation of learning outcomes (Ni, 2013; Costareie, 2011); 3) overall attitudes to distance learning (Salyers, 2014); 4) challenges of online education (Markova et al, 2017). University-level assessment studies paradigm, for its part, adheres to such major tracks of inquiry: 1) summative assessment formats and efficiency (Kimbell, 2007); 2) measurable outcomes of summative assessment (Kuh, 2014); 3) computer-assisted assessment and the e-Scape initiative (Einig, 2013; Atkinson, 2000).

These issues require a comprehensive revisit in terms of the toll the global pandemic took on individual learning experiences, activated skillsets and subsequent shift in efficiency estimations of linguistic education in universities of the world due to the abrupt transition to exclusively digital distant or hybrid learning formats.

This inquiry estimates the knowledge gap in the cross-section of disclosing digital learning in the timespan of the COVID-19 as a comprehensive social and cognitive activity model, a holistic transformation of traditional practices and scenarios to achieve learning outcomes. As such, digital learning is determined to be a complex object system, dominated by concepts of electronic interaction and communication, acquiring the following features: ubiquity (inclusiveness); integrativity; isomorphism; normativity; communicative substantiality; information capacity; interactivity. Final Qualification assessment for Foreign Languages major programs in particular is chosen for analysis as a comprehensive practical and cognitive educational scenario, that, when digitized, involves the synergy of different of communicative types and activities (oral and written exams, final project viva, internal and external review). Qualification assessment for Foreign Languages major programs thus is a strict regimen that involves different stages, requiring interoperability of interdisciplinary soft and applied digital skills.

Foreign Languages Acquisition on university level major programs in general is a rigorous process (Miller et al, 2020) that involves different stages and a regimen of activities and competences across interconnected interdisciplinary domains. The presented study is a parcel of comprehensive institutional inquiry into aspects of innovative educational communication in the digital realm (Makhachashvili, Semenist 2021a; Makhachashvili, Semenist 2021b; Makhachashvili et al 2021) into the toll digitalization and amplified use of ICT tools put on different aspects of Oriental as well as European languages acquisition efficiency, assessment management, programmed results, communicative and digital competency formation in COVID-19 lockdown paradigm.

The outlined pre-existing studies paradigm informed the following research questions, this paper sets out to disclose: 1) What are the multi-faced aspects of Final Qualification Assessment educational scenario transformation into digital format, assisted by Information and Communication Technologies and tools? 2) What are the measurable soft skills that inform the efficiency of Final Qualification Assessment for Foreign languages programs transformation into digital format? 3) What are the measurable digital skills that inform the efficiency of Final Qualification Assessment for Foreign languages programs transformation into digital

format? 4) What are the efficiency parameters of ICT tools, consistently used for Final Qualification Assessment for Foreign languages programs in the digital format?

Informed by the scope of research questions, this study objective is to review the dynamics of the complex educational scenario of Final Qualification Assessment framework transformation via digital technologies and tools through the initial (2020) and sustainable (2021) digitization measures of the Covid-19 pandemic for students of European and Oriental Languages major programs.

The survey and analysis of different ICT tools is used to estimate the efficiency and functionality of the translation of real-life qualification assessment practices into digital format. The choice of the target objective is informed by the need to elaborate comprehensive models of digital transformation of the foreign languages acquisition.

The investigation also seeks to identify the dynamics in various formats of soft skills and digital skills application, utilized through qualification assessment process by primary stakeholders (students) in Ukraine. The choice of the considered case of university Final Qualification Assessment for Foreign Languages major programs is informed by the need to estimate the dynamic parameters of digital literacy development and application in multi-cultural context.

2. FINAL QUALIFICATION ASSESSMENT: COMPARATIVE STUDY OF DIGITAL TRANSFORMATION AT BGKU, UKRAINE

2.1 Methodology and Design

The study employs the combination of mixed methods (Almaki 2016) – a proportional arrangement of quantitative and qualitative inquiry to assess in-depth aspects efficiency estimation of digital Final Qualification for Foreign Languages programs. The comprehensive study design methodology included the following consecutive steps: 1) Qualitative soft and digital skills framework profiling to identify indicators of that inform the efficiency of Final Qualification assessment activities, performed via ICT tools; 2) Qualitative Finale Qualification Assessment framework profiling (Makhachashvili et al 2021; Nelson et al 2014) and structuring of framework transformation of this educational scenario into digital format; 3) Quantitative assessment of the efficiency and expediency of The Final Qualification Assessment for European and Oriental languages programs, conducted in digital and hybrid format, performed based on the online survey method.

Final Qualification assessment for Foreign Languages major programs in particular is chosen for analysis as a comprehensive practical and cognitive educational scenario, that involves interoperability of different of communicative stages and activities (oral and written exams, final project viva, internal and external review). The survey method and analysis of different ICT tools is used to assess the parameters of efficiency of transforming real life qualification assessment practices into digital and hybrid format.

The benchmarking survey was conducted through the academic semesters of 2020 and 2022, spanning the Covid-19 quarantine measures applied to HEI in Ukraine.

This inquiry *methodological groundwork* is founded on identification of ICT competency principles, derivative of various paradigms of soft skills (Dos Reis, 2015; Morze et al, 2016): 21st century skills framework (Davies 2011; Abbot 2013), Competences 2020 (European Commission 2020a) framework and the newly devised Global Skills framework (World Econimic Forum 2020 has been devised.

The projected digital literacy requirements for educational purposes in Liberal arts are consequently elaborated across UNESCO ICT Competency Framework (UNESCO 2018), European e-competence framework guideline (European Commission 202b), and Digital Competence 2020 framework (European Commission 2020a).

A complex skill is generally understood as a skill requiring to process lots of information and make lots of decisions simultaneously (Wulf et al, 2002). That way, a comprehensive correspondence between 21st century skills framework, Skills of the Future framework, and Global Skills 2025 framework has been devised and upgraded. In this study it is suggested to revise and augment the model of integration between the corresponding skillsets across various frameworks could be referred to the following key interdisciplinary domains of human activity: COMMUNICATION; COGNITIVE ACTIVITY; PERSONAL INTERACTION; SOCIAL ACTIVITY; HEURISTICS; DIGITAL INTERACTION:

The core cross-sectorial domain (Slater 2013; Callaos 2020) that is referential for primary skills (social skills, emotional intellect, collaboration, communication, ICT-literacy), necessary for educational goals achievement, is COMMUNICATION.

The fundamental interdisciplinarity that COVID-19 digital procedural transformations imposed on the educational process in the area of Foreign languages acquisition, is verified by a unified interoperable framework of correspondence between the components of communication (Shannon 1948) and communicative competence (Dell 1972), comprising of a diverse skillset, and various aspects of digital (ICT) competence in Arts and Humanities (specifically, in foreign languages education) (European Commission 2020a, European Commission 2020b, UNESCO 2018), utilized in the educational process, elaborated for the purposes of this study.

Subsequently, the study estimates, that the educational activities, correlated with these types of soft skills, serve as **indicators for activation of such groups of digital competency elements** as: 1) ICT practitioner skills, e-business skills, ICT user skills (European e-competence framework guideline); 2) Understanding ICT in education, ICT for Curriculum development and assessment, ICT for Organization and administration, ICT for Teacher professional learning (UNESCO ICT Competence Framework); 3) information and data literacy; communication and collaboration through digital technologies; digital content creation; safety; problem solving through digital technologies (Digital Competence 2020).

2.2 Final Qualification Assessment for Foreign Languages Programs as a Complex Scenario of Interdisciplinary Activities

Qualification assessment for Foreign Languages major programs is a mandatory procedure, involves different stages of foreign language acquisition skills assessment (oral and written exams, final project viva, internal and external review).

The generic form of summative state qualification of students is defined by the state standards of education and is reflected in the curricula in the countries across the world. Usually state qualification has two forms, combined or separate: 1) Qualification/final exam; 2) Defense (viva) of qualification (bachelor's or master's) paper. State standards of education in countries of Europe typically provide for the existence and observance of rules and requirements for the procedure of Final Qualification Assessment. Moreover, the defense of the qualification work contains propaedeutic procedures designed to obtain the basis for admission of students to the defense.

The qualification assessment regimen was adapted to digital format as a framework (a rigorous legal procedure that results in the degree confirmation of a student), the string of consecutive cross-sectorial activities according to the legal procedure described in the profile above, the "ritual" scenario (and experience for the student that is emotionally uplifting and somber in nature, connects with the traditions of the university culture of Europe).

As such, the framework transformation of Final Qualification Assessment enticed the elaboration of adequate and equivalent digital formats and digital communicative settings, substituting each type of activity in the procedure regiment on each level of the Final Qualification Assessment framework: PRE-ASSESSMENT REGIMEN; ASSESSMENT PROPER REGIMEN; POST-ASSESSMENT REGIMEN (Makhachahsvili et al. 2021).

According to the study observations, based on the case study of BGKU through the timespan of 2020-2021, the conversion of Final Qualification Assessment for Foreign Languages programs as a complex framework educational scenario into the digital format is subject to the educational goals taxonomy 2.0 (Churches, 2008) structuring in terms of activities, employed on each stage of the procedure and ICT tool utilized.

Assembled schemes of the Final Qualification Assessment procedure transformation into digital technology assisted format comprise a comprehensive framework, informed by the application of ICT tools and digital communication practices, corresponding to different tiers of educational goals and different interdisciplinary domains.

2.3 Evaluation of Final Qualification Assessment Digital Transformation: Comparative Survey Results

Informed by the Final Qualification Assessment activity profile, an iterative survey was conducted among the stakeholders of the Final Qualification Assessment at Borys Grinchenko Kyiv University, (Kyiv, Ukraine) Foreign languages programs, in order to assess the efficiency of dynamics and sustainability of results of qualification assessment transfer into digital format via various ICT tools. The survey was conducted several times in 2020 and 2021 respectively, over the span of Covid-19 digitization measures, after the wrap up of all academic year Qualification Assessment procedures.

The survey comprised of 12 questions total (variable and invariable multiple choice and Likert scale score), divided into such evaluation dimensions: 1) Questions on overall experiences of Final Qualification Assessment participants in all procedures, conducted via ICT tools; 2) Questions on digital literacy skills, required of Final Qualification Assessment stakeholders; 3) Questions on soft skills, required of Final Qualification Assessment stakeholders; 4) Questions, aimed to conduct Efficiency Ranking (Dos Reis 2015; Morze, Makhachashvili et al 2016) of crucial ICT tools for Final Qualification Assessment.

The following participants of the digital Final Qualification Assessment were respondents of the survey overall: Students of senior year of bachelor's program; Assessment board members; Faculty members (who took part in digital qualification assessment preparation and conduct); Bachelor project referees and supervisors.

For the purposes of this paper we singled out student respondents, as primary subject of Final Qualification Assessment. Sizable samples of 45 students (senior year Bachelor's and Master's programs graduates) of Foreign European and Oriental languages programs at Borys Grinchenko Kyiv University, Ukraine took part in the survey in 2020 and 34 students participated in 2021. Respondents of all groups spanned the foreign language Bachelor's programs in proportional distribution measures: Spanish major program- 33%; Japanese major program- 15%; Mandarin Chinese major program - 21%; French major program - 16%; Italian major program- 15%. In the year 2020 (initial digitization measures) the overall digital qualification assessment experience on the Likert scale of 1 to 5 was defined by respondents from BGKU as predominantly mostly agreeable (4) by 50% of respondents, most agreeable (5) by 29% of respondents. In the year 2021 (ongoing digitization measures) were assessed as equally mostly agreeable (4) by 38,2% and most agreeable (5) by 38,2% of respondents. The standard deviation in FQA digital transformation through the sustainable digitization measures has diminished to 0.

The Likert scale ranking 1-5 of the ICT tools employed through digital qualification assessment process yields following tools getting the highest scoring (5) among all ICT tools identified and used by respondents in 2020: email services; google suite tools; video conferencing services; Microsoft Office tool-kit and various social media platforms. In the year 2021 respondents gave the following set ICT tools the highest scoring (5): e-mail services; Videoconferencing services; google suite tools; LMS Moodle; Microsoft Office tool-kit; screen sharing services (whiteboards); social media platforms (Table 1).

ICT tools ranking 5	2020 BGKU (Ukraine)	Score	2021 BGKU (Ukraine)	Score
E-mail services	+	40%	+	65%
Google Suite	+	38%	+	53%
Videoconferencing services	+	43%	+	62%
Screen sharing services	+	21%	+	44,1%
Microsoft Office tool- kit	+	47%	+	50%
Social media platforms	+	46%	+	44,2%
LMS Moodle	-	-	+	50%

Table 1. Comparative scoring of highest ranking ICT tools for Final Qualification Assessment in 2020-2021

Through the progress of digitization measures it is an observable increase in the progressively positive assessment of more complex, communication/collaboration-based digital tools in the Final Qualification Assessment Scenario (LMS Moodle – a 50% increase in positive evaluation; e-mail services – 25% increase; Whateboard tools – a 23% increase; Google Suite – a 15% increase).

The data on implementation of ICT tools for Final Qualification assessment in Foreign languages testifies to the **activation of such predominant groups of digital competency elements**: 1) ICT practitioner skills; 2) communication and collaboration through digital technologies; 3) digital content creation; 4) problem solving through digital tools.

Activation of digital competency elements allowed to identify the following most prominent activities across all ICT tools used throughout the digital qualification assessment process by respondents in the 2020-2021 timespan: Communication (synchronous); Communication (asynchronous); Collaboration; Information/file sharing; Summative assessment; Formative assessment; Peer review; Presentation; Speech quality assessment; Brainstorming. The activities are related to the key interdisciplinary domains of human activity (Communication, Cognitive Activity, Personal Interaction, Social Activity, Heuristics) and required the activation of interoperable interdisciplinary skills across all ICT tools used throughout the digital qualification assessment process.

Across all ICT tools, used consistently throughout the digital qualification assessment process in 2020 and 2021, the respondents of all groups identified the following most prominent education activities: Communication – 99%; Collaboration; Information/file sharing – 97%; Presentation – 94%; Summative assessment – 89%; Speech quality assessment – 46%; Peer review – 34%; Brainstorming – 24%; Formative assessment – 20%.

Information sharing and presentation are scored sustainably as dominant for such types of tools as Google services (mean score of 46% of respondents across 2020 and 2021 benchmarking), email (31% of respondents), Microsoft Office Toolkit (24,3% of respondents). These parameters correspond to such elements of digital competence as ICT practitioner skills and digital content creation.

Synchronous and asynchronous communication and collaboration is distributed as prominent among video conference services (mean score of 53,2% of respondents), email services (35% of respondents), and learning management systems (20% of respondents). These parameters indicate activation of such elements of digital competence as communication and collaboration through digital technologies and information and data literacy.

The tools that feature summative and formative assessment as a prominent activity are Videoconferencing services (mean score of 27% of respondents), LMS Moodle (22,3% of respondents), Google suite (19% of respondents). These parameters indicate activation of elements of digital competence, customized for in-training teachers of Foreign languages, such as understanding ICT in education and ICT for curriculum development and assessment.

The following technical and user requirements, most prominent for ICT/digital tools employed throughout the digital qualification assessment process were identified through the educational scenario profiling: Bandwidth; Specialized software; Specialized hardware (webcam, mic, PC type etc.); Intuitive interface; Advanced digital literacy; Intermediate digital literacy; Elementary digital literacy; Customized training before use. Through the year 2020 the students of Foreign languages programs prioritized the following technical and user requirements: intuitive interface (30,3%), elementary digital literacy (29,3%), specialized software (17,3%).

Through the sustainable digitization measure the following technical requirements for Final Qualification Assessment tools were prioritized: intermediate digital literacy (79,4%), intuitive interface (53%), advanced digital literacy (44,1%), specialized hardware (35,3%). These parameters testify to the consistent activation of such elements of digital competence as information and data literacy on the sustainable level of education scenarios digitization (2021) – Figure 1.

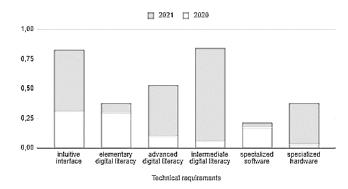


Figure 1. Compared technical and user requirements for ICT tools in digital qualification assessment process

Intuitive interface is a technical requirement to that features consistently through all digitization stages in education across the board of ICT digital tools that have been analyzed (mean score 42% of respondents). It is considered a leading technical requirement for such ICT tools as email (21%), LMS (20%), Google services (19%), video conferencing services (20%) and social media platforms (21%). There is a dramatic observable shift from the initial perceived requirements of elementary digital literacy to intermediate digital literacy (by 50,1%) and advanced digital literacy (by 35%) In and of itself this parameter is indicative of an apparent digital literacy gap and an ongoing need for specialized digital training in educational sphere, that the sustainable COVID-19 digitization measures verify as the ICT tools for educational scenarios transformation get consistently more complex.

According to skills of the 21st century frameworks, various levels of digital literacy have been identified in the survey. Digital literacy is understood primarily as the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills [3; 9]. Advanced digital literacy as the requirement for qualification assessment ICT tools efficiency is in average attributed to such instruments as learning management systems (18%), Microsoft Office toolkit (11%) and Automated testing systems (10,5%). Intermediate digital literacy is required for such instruments that are used for final qualification assessment as google suite, screen sharing interface, online randomizer, automated testing system, learning management system are evaluated (15-20% of respondents), which is indicative of an inherent challenge in this range of ICT tools application. Elementary digital literacy level is assessed as dominant for such tools as email (21%), Microsoft Office Toolkit (20%), social media platforms (19%), video conferencing (7%).

The comparative distribution of various levels of digital literacy requirements for ICT tools used for Final Qualification Assessment procedures by respondents through the years 2020 and 2021 is presented as follows (Table 2):

Table 2. Distribution of various levels of digital literacy requirements for ICT tools used for Final Qualification
Assessment procedures (2020-2021)

Digital			
literacy level	ICT tools for Final Qualification Assessment	2020	2021
Advanced digital literacy	Learning management systems, Microsoft Office toolkit, automated testing systems, google suite	13,1% of respondents	50% of respondents
Intermediate digital literacy	Microsoft Office Toolkit, screen sharing interface, online randomizer, social media platforms stem,	13% of respondents	83% of respondents
Elementary digital literacy	learning management system email, video conferencing, speech to text interfaces, social media platforms	22% of respondents	22% of respondents

Across various ICT tools for the digital qualification assessment process the *following complex skills and competences most widely implemented and practiced, drawn from various relevant 21st century skills frameworks* have been identified: Communication; Collaboration; Team work; Digital literacy; Emotional intellect; Interdisciplinary skills; Critical thinking; Leadership; Flexibility and Adaptability; Decision making; Learning and Innovation skills.

Different priorities in complex soft skills are identified to fulfill the digital qualification assessment of the Foreign Languages program of through the years 2020 to 2021 (Figure 2). *Through the year 2020* the following soft skills are identified as overwhelmingly important for fulfilling Final Qualification Assessment in the digital format: Communication (65% of respondents), Collaboration (19% of respondents), Team Work (78%), Flexibility/Adaptability (10,5%), Digital literacy (5,2%). *Through the year 2021* the following soft skills are prioritized for Final qualification scenario adaptation into digital format: Digital literacy (85,3% of respondents), Communication (79,4% of respondents), Collaboration (44,11%), Interdisciplinary skills (41,2%).

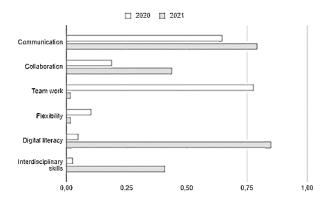


Figure 2. Comparison of skills in digital qualification assessment process for Foreign languages programs (2020-2021)

The dynamic distribution of core soft skills, necessary to apply ICT tools for Qualification assessment is as follows. Communication, collaboration rank by respondents as a type of skills most widely applied for the use of such instruments as email, Google services, video conferencing services and social Media platforms. Subsequently, the application of soft skills across these ICT tools for Qualification assessment entices activation of such elements of digital competence as communication and collaboration through digital technologies; digital content creation. Interdisciplinary skills rank most prominent for the use of Google Suite, Learning management systems and Videoconferencing services. Application of the soft skill across ICT tools for Qualification assessment entices activation of such elements of digital competence as ICT practitioner skills, ICT user skills, problem solving through digital technologies. Digital literacy features as a priority relevant in the use of such ICT tools as a learning management systems, automated Testing System (offline, online and cloud based), Android apps and Microsoft Office tools. Application of these soft skills across relevant ICT tools for Qualification assessment entices activation of such elements of digital competence as ICT practitioner skills, ICT user skills, information and data literacy.

3. CONCLUSION

The study results attest to the argument that all procedures and scenarios of the Final Qualification Assessment activities for foreign languages have been successfully transferred to digital remote format with the use of various sets of ICT tools in the framework of the COVID-19 pandemic adjustments.

The inquiry findings indicate the highest interoperability between such elements of digital competence as communication and collaboration through digital technologies; digital content creation; ICT practitioner skills and information and data literacy across all educational activities that comprise digital Final Qualification Assessment for Foreign languages programs. Subsequently, highest scoring educational activities, implemented by the ICT tools used for Final Qualification Assessment of Foreign Languages, necessitate the activations of such soft skills as: communication, collaboration, interdisciplinary skills, digital literacy.

The survey results conducted among students as participants of Final Qualification Assessment for European and Oriental foreign languages in BGKU across various stages of emergency digitization have yielded contribution as to representative data on the customized efficiency of various ICT tools implementation for rigorous assessment procedure scenario.

The comprehensive transference process of the Final Qualification Assessment procedure for European and Oriental languages programs in Ukraine from face-to-face into all-digital and hybrid format can be accompanied by the following recommendations across various socio-cultural contexts: the need for customized digital literacy training for participants of the Final Qualification Assessment process for all stages of the procedure; overcoming digital divide in accessibility of computer and Web technologies, necessary for all stages of Final Qualification Assessment; customized training to diversify the activation of soft skills through application of digital competence in comprehensive educational contexts.

Various levels of digital literacy demands have been identified corresponding to different digitization stages of 2020 and 2021. Across the board, implementation of Final Qualification Assessment via various

ICT tools requires of participants of educational process upper intermediate digital literacy. There's a significant observed discrepancy in digital literacy and ICT competence requirements between Final Qualification Assessment stakeholders of European and Oriental languages programs in 2020 and 2021 (elementary to intermediate digital literacy in 2020, advanced to intermediate digital literacy in 2021 required for efficient use of crucial ICT tools). This progression is informed by the implementation of increasingly more complex digital tools for educational scenarios adaptation.

The survey results will be furthered and elaborated in assessment of ICT tools efficiency and digital skills adaptability for separate groups of Final Qualification Assessment (students of foreign languages programs in countries of Europe and Asia, Assessment board members, staff members, reviewers) according to roles and tasks performed, as well as according to age and entry digital literacy level.

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REFERENCES

- Abbott, S. 2013. The Glossary of Education Reform. Retrieved from Edglossary: http://edglossary.org/hidden-curriculum
 Al-Jardani, Khalid Salim. 2020. E-Learning in Higher Education: Challenges and Opportunities. International Journal of Innovation, Creativity and Change, 14 (11), pp. 58-64.
- Almalki, S. 2016. Integrating Quantitative and Qualitative Data in Mixed Methods Research Challenges and Benefits. *Journal of Education and Learning*, 5(3), pp. 288-296.
- American Library Association. 2020. *Digital Literacy*. Retrieved from: https://literacy.ala.org/digital-literacy (accessed July 2020).
- Bekele T. A. 2010. Motivation and satisfaction in internet-supported learning environments: A review. *Educational Technology & Society*, 13(2), pp. 116–127.
- Bolliger D. U., & O. Wasilik. 2009. Factors influencing faculty satisfaction with online teaching and learning in higher education. *Distance Education*, 30(1), pp. 103–116.
- Callaos, N., & Marlowe, T. 2020. Inter-Disciplinary Communication Rigor. Rigor and Inter-Disciplinary Communication: Intellectual Perspectives from Different Disciplinary and Inter-Disciplinary Fields. TIDC, LLC. pp. 4-29.
- Costareie S. 2011. Assuaring quality based on the assessment of learning outcomes. 5th International Technology, Education and Development. Conference (INTED), Mar. 07-09, Valencia, Spain, pp. 3235–3236.
- Davies, A., & Fidler, D. 2011. Future Work Skills 2020. Retrieved from Institute for the Future for University of Phoenix Research Institute: https://www.iftf.org/uploads/media/SR-1382A_UPRI_future_work_skills_sm.pdf
- Dell H. Hymes. 1972. Communicative competence. In *Sociolinguistics: selected readings*. Harmondsworth: Penguin, 269-293.
- Dillman, D. A., Smyth, J. D., Christian, Leah Melani, 2014. Internet, Phone, Mail and Mixed-Mode Surveys: The Tailored Design Method, 4th edition. John Wiley: Hoboken, NJ.
- DosReis, A. 2015. To Be a (Blended) Teacher in the 21st Century Some Reflections. *International Journal of Research in E-learning*, *I*(1), pp. 11-24.
- DQ Global Standards. 2019. World's first global standard for digital literacy, skills and readiness launched by the Coalition for Digital Intelligence. Retrieved from DQ Global Standards Report: https://www.dqinstitute.org
- European Commission. (2020). European E-Competence Framework Guideline. Retrieved from European Commission: https://www.ecompetences.eu/
- European Commission. 2020. *Digital Competence 2020*. Retrieved from European Commission: https://ec.europa.eu/jrc/en/digcomp/digital-competence-framework

- Kuh G.D., N. Jankowski, S.O. Ikenberry. 2014. Knowing What Students Know and Can Do: The Current State of Learning Outcomes Assessment in U.S. Colleges and Universities. Urbana: University of Illinois and Indiana University.
- Miller A. H., B. W. Imrie & K. Cox. 1998. Assessment in Higher Education: A Handbook for Assessing Performance. Abingdon, Routledge.
- Nassim Taleb. 2010. The Black Swan: The Impact Of The Highly Improbable (2nd ed.). London: Penguin. ISBN 978-0-14103459-1.
- Nataliia Morze, Rusudan Makhachashvili, Eugenia Smyrnova-Trybulska. 2016. Communication in education: ICT tools assessment. *Proceedings from DIVAI*, Sturovo: University of Nitra, pp. 351-354.
- Nataliia Morze, Rusudan Makhachashvili, Eugenia Smyrnova-Trybulska. 2016. Research in Education: Survey Study. *Information and Communication Technologies in Education*, 3, pp. 114-123.
- Ni A. Y. 2013. Comparing The Effectiveness Of Classroom And Online Learning: Teaching Research Method. *Journal of Public Affairs Education*, 19(2), pp. 199–215.
- Richard Kimbell. 2007. E-assessment in project e-scape. Design and Technology Education: an International Journal, 12(2).
- Robert Nelson, Phillip Dawson. 2014. A contribution to the history of assessment: how a conversation simulator redeems Socratic method. Assessment & Evaluation in Higher Education, 39 (2), pp. 195–204.
- Rusudan Makhachashvili, Ivan Semenist, Anna Bakhtina. 2021. ICT tools for final qualification assessment survey study for european and oriental languages programs 8th International Conference on Educational Technologies 2021, ICEduTech 2021 and 17th International Conference on Mobile Learning 2021, ML 2021, 107-115.
- Rusudan Makhachashvili, Ivan Semenist. 2021. Digital Competencies and Soft Skills for Final Qualification Assessment: Case Study of Students of Foreign Languages Programs in India. 7th International Conference on Frontiers of Educational Technologies, ICFET 2021, pp. 21-30.
- Rusudan Makhachashvili, Ivan Semenist. 2021. Interdisciplinary Skills Development Through Final Qualification Assessment: Survey Study for European and Oriental Languages Programs. *Proceedings of the 12th International Multi-Conference on Complexity, Informatics and Cybernetics*, 1, pp. 144-152.
- Rusudan Makhachashvili, Ivan Semenist, Yuliya Shtaltovna, Anna Bakhtina. 2021. Soft Skills and ICT Tools for Final Qualification Assessment in Universities of Ukraine and India in COVID-19 Framework. *Psychology and Education*, 58 (2). pp. 849-861.
- Salyers V., L. Carter, A. Carter, S. Myers, & P. Barrett. 2014. The Search for Meaningful E-Learning at Canadian Universities: A Multi-Institutional Research Study. The International Review of Research in Open and Distributed Learning, 15(6), pp. 313–347.
- Sandra Einig. 2013. Supporting Students' Learning: The Use of Formative Online Assessments. *Accounting Education*, 22 (5), pp. 425–444.
- Shannon, C. E. 1948. A Mathematical Theory of Communication. Bell System Technical Journal, 27 (3), pp. 379-423.
- Supriyatno T., Kurniawan F. 2020. A New Pedagogy and Online Learning System on Pandemic COVID 19 Era at Islamic Higher Education. 6th International Conference on Education and Technology (ICET), pp. 7-10.
- Tatiana Markova, Irina Glazkova and Elena Zaborova Quality. 2017. Issues of Online Distance Learning. *Social and Behavioral Sciences*, 237, pp. 685–691.
- Terry Atkinson, Graham Davies, 2000. Computer Aided Assessment (CAA) and language learning. March 2021 from: https://web.archive.org/web/20111026051400/http://www.ict4lt.org/en/en_mod4-1.htm(accessed)
- Troussas C., Krouska A. and Sgouropoulou C. 2021. A Novel Teaching Strategy Through Adaptive Learning Activities for Computer Programming. *Transactions on Education*, 64 (2), pp. 103-109.
- UNESCO. 2018. ICT Competency Framework for Teachers. Retrieved from UNESCO: https://unesdoc.unesco.org/ark:/48223/pf0000265721
- World Economic Forum. 2020. *The Future of Jobs Report*. Retrieved from World Economic Forum: http://www3.weforum.org/docs/WEF_Future_of_Jobs_2020.pdf
- World's first global standard for digital literacy, skills and readiness launched by the Coalition for Digital Intelligence. 2019. The DQ Global Standards Report. Retrieved from: https://www.dqinstitute.org/
- Wulf, G., & Shea, G. 2002. Principles derived from the study of simple skills do not generalize to complex skill learning". *Psychonomic Bulletin & Review*, 9, pp. 185–211.