REVIEW

of the official reviewer for dissertation work

Kanyika Martin Elihaki on the topic «Students' Perception of Digital Library Services: On the Case of Al-Farabi KazNU» presented for the degree of Doctor of Philosophy (PhD) in the specialty «8D03206 - Library Information Systems».

№	Criteria	Eligibility (one of the options must be checked)	Justification of the position of the official reviewer
1.	The topic of the thesis (as of the date of its approval) corresponds to the directions of development of science and/or state programs	1.1 Compliance with priority areas of science development or government programs: 1) The thesis was completed within the framework of a project or target program financed from the state budget (indicate the name and number of the project or program) 2) The thesis was completed within the framework of another state program (indicate the name of the program) 3) The dissertation corresponds to the priority direction of the development of science, approved by the Higher Scientific and Technical Commission under the Government of the Republic of Kazakhstan (indicate the direction)	The topics of the three articles represent independent, comprehensive studies within the theme of library service digitization. Given the relevance and novelty of the research, along with the validity of the conclusions that hold both theoretical and practical significance, the articles can be considered to fully meet the requirements outlined by the Higher Scientific and Technical Commission under the Government of the Republic of Kazakhstan.
2.	Importance for science	The work makes/does not make a significant contribution to science, and its importance is well disclosed/not disclosed	The three studies were conducted comprehensively, resulting in both scientific and practical outcomes. Each analysis enabled the author to provide actionable recommendations for addressing identified challenges and enhancing service delivery through the use of digital

			technologies.
3.	The principle of independence	Self-reliance level: 1) High; 2) Medium; 3) Low; 4) No independence	The topics of all three articles are unique and were thoroughly explored in accordance with established principles of scientific writing, with the author's direct and active involvement throughout the research process.
4.	The principle of inner unity	4.1 Justification of the relevance of the thesis: 1) Justified; 2) Partially justified; 3) Not justified.	All three articles are logically coherent scientific works with strong internal consistency. Each article presents clearly defined goals and objectives, which are systematically addressed through appropriate theoretical and methodological approaches. The main findings are well-structured and presented as key points for defense. The results, findings, and conclusions are closely interconnected, with each conclusion building logically on the previous one, following a clear progression from general to specific. The scientific outcomes demonstrate internal unity, consistency, and sound scientific reasoning throughout.
		4.2 The content of the thesis reflects the topic of the thesis: 1) Reflects;	The topics in all three articles reflect

		2) Partially reflects; 3) Does not reflect	the content of the dissertation.
		4.3. The purpose and objectives correspond to the topic of the thesis: 1) correspond; 2) partially correspond; 3) do not correspond	Each article has the main objective and specific objectives that are in principle correspond to the main topic of the dissertation.
		4.4 All sections and provisions of the thesis are logically interconnected: 1) completely interconnected; 2) the interconnection is partial; 3) there is no interconnection	All three articles are written in a scientific manner, with a clear and logical flow between sections. This structure enhances the overall readability and coherence of the work.
		4.5 The new solutions (principles, methods) proposed by the author are reasoned and evaluated in comparison with the known solutions: 1) there is a critical analysis; 2) partial analysis; 3) the analysis does not represent one's own opinions, but quotes from other authors	All three articles are based on critical analysis of relevant theories and a wide range of sources.
5.	Scientific novelty principle	5.1 Are the scientific results and provisions new? 1) completely new; 2) partially new (25-75% are new); 3) not new (less than 25% are new)	All the three articles are the first to be conducted particularly on these topics in Kazakhstan context, which determine the high degree of their scientific novelty.
		5.2 Are the dissertation findings new? 1) completely new; 2) partially new (25-75% are new); 3) not new (less than 25% are new)	Since these studies are the first to be conducted in Kazakhstan, it means that even the findings, conclusions and recommendations are completely new.

		5.3 Technical, technological, economic or management decisions are new and reasonable: 1) completely new; 2) partially new (25-75% are new); 3) not new (less than 25% are new)	Both technical, technological and managerial decisions recommended in each study are completely new and applicable.
6.	The validity of the main findings	All main conclusions are/are not based on scientifically significant evidence or well-grounded (for qualitative research and areas of training in the arts and humanities)	The author's main conclusions in all the three articles are based on scientifically significant evidence.
7.	The main provisions for the defense	It is necessary to answer the following questions for each provision separately: 7.1 Is the provision proven? 1) proven; 2) rather proven; 3) rather not proven; 4) not proven 7.2 Is it trivial? 1) yes; 2) no 7.3 Is it new? 1) yes; 2) no 7.4 Application level: 1) narrow; 2) medium; 3) wide 7.5 Is it proven in the article? 1) yes;	The three articles meet the scientific standards expected for this type of research. Their novelty lies in analyzing students' digital skills, their perceptions of digital technologies, and the potential of blockchain to address limitations in current academic library systems. Conducted for the first time in Kazakhstan, these studies provide fresh insights and open new opportunities for adopting best practices. They highlight the benefits and challenges of digital technologies, including blockchain and artificial intelligence, particularly in enhancing service security and efficiency. The research also addresses key risks and suggests practical solutions. The practical value lies in the

		2) no	recommendations provided—such as regular training and increased library funding—to help users effectively adopt new technologies. These measures aim to improve service delivery, data security, information access, and knowledge sharing in academic libraries.
8.	The principle of reliability of sources and information provided	8.1 Choice of methodology - is justified or the methodology is described in sufficient detail 1) yes; 2) no	The three articles are grounded in a strong foundation of both domestic and international scientific works, which enhances the reliability of their findings.
		8.2 The results of the thesis were obtained using modern methods of scientific research and methods of processing and interpreting data using computer technologies: 1) yes; 2) no	All the three articles demonstrate various research methods and approaches.
		8.3 Theoretical conclusions, models, identified relationships and patterns have been proven and confirmed by experimental research (for areas of training in pedagogical sciences, the results have been proven on the basis of a pedagogical experiment): 1) yes; 2) no	Each article provides a theoretical framework/model to support the findings and conlusion of the studies.
		8.4 Important statements are confirmed / partially confirmed / not confirmed by references to current and reliable scientific literature	Important claims were fully supported by a number of scientific literature.
		8.5 Used literature sources are sufficient/not sufficient for a literature review	Each article draws on a wide range of scientific literature, providing more than sufficient support for the

			research.
9	Practical value principle	9.1 The thesis has theoretical value: 1) yes; 2) no	Theoretically, since these studies are new in the context of Kazakhstan, their findings are expected to raise awareness among library users about the adoption of new digital technologies in academic libraries. They also aim to inform library staff about users' levels of digital literacy and their perceptions of library digitization. Furthermore, although few similar studies exist globally, the results are expected to contribute meaningfully to the existing body of knowledge.
		9.2 The thesis is of practical importance and there is a high probability of applying the results obtained in practice: 1) yes; 2) no	Practically, the findings of these studies are expected to help policymakers and academic institution managers understand users' digital skills and the challenges related to digital technologies. Guided by the studies' recommendations, they will be better positioned to implement solutions that enhance the efficiency and effectiveness of library services.
		9.3 Are the practice suggestions new? 1) completely new; 2) partially new (25-75% are new); 3) not new (less than 25% are new)	The results of these studies can be integrated into the educational processes of higher education institutions, particularly benefiting

			students, library staff, policymakers, lecturers, and those in "Library and Information Science" and "Information Studies" programs. Although the research focused on Al-Farabi Kazakh National University, the findings are applicable to academic institutions across Kazakhstan and beyond.
10.	The quality of writing and design	Academic writing quality: 1) high; 2) average; 3) below average; 4) low.	All the three articles were written in a good and convincing academic style, observing the scientific principles and approaches.
11.	Comments on a thesis		
12.	Scientific level of the doctoral student's articles on the topic of research (in case of defense of the dissertation in the form of a series of articles, the official reviewers comment on the scientific level of each article of the doctoral student on the topic of research)	All three articles are well-executed and closely aligned with the overall theme of the dissertation, each demonstrating a clear element of novelty. The first article examines students' digital technology skills, focusing on five core competencies essential for effective engagement with digital libraries. The second article explores library users' perceptions of digitized library services, revealing that the majority hold positive views toward such innovations. The third article investigates the application of blockchain technology in academic libraries, highlighting its potential to address many of the limitations associated with existing library technologies. Overall, the three articles are conducted in accordance with scientific research standards, featuring comprehensive literature reviews, clearly defined methodologies, concise presentation of results and discussions, and well-informed conclusions and recommendations. The topics of these articles were thoughtfully derived from the broader content of the dissertation.	
13.	Decision of the official reviewer (pursuant to paragraph 28 of the present Model	The three articles of Kanyika Martin Elihaki deserves to award the author the academic degree of Doctor of Philosophy (Ph.D.).	

	Regulations)	

Solution: to award the degree of Doctor of Philosophy (PhD) or Doctor of Specialization;

Official Reviewer:

Head of Rector's Office
Karaganda Buketov University, Ph.D.

(place of work, academic degree)

(signature)

Baigozhina Gulnar Muratovna

(Full name)

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