



# Developing a Framework for Evaluating the Skills and Morals of Digital Humanities Scholars

Faezeh Mesrinejad<sup>1\*</sup>, Fatima Fahim Nia<sup>2</sup>

1. Ph.D. Student in Knowledge and Information Science, Kish International Campus, University of Tehran, Kish, Iran.
2. Department of Knowledge and Information Science, Faculty of Management, University of Tehran, Tehran, Iran.

**Corresponding Author:** Faezeh Mesrinejad. Ph.D. student in Knowledge and Information Science, Kish International Campus, University of Tehran, Kish, Iran. E-mail: [fmesinejad@gmail.com](mailto:fmesinejad@gmail.com)

Received 31 Dec 2022

Accepted 30 Jan 2023

Online Published 01 Nov 2023

## Abstract

**Introduction:** Humanities studies aspects related to human civilizational, social and cultural characteristics. The present study was conducted with the aim of developing a framework for evaluating the skills of digital humanities scholars.

**Material & Methods:** This research is an exploratory research that has a qualitative nature. The research community included published and accessible books, theses and articles related to digital skills competencies. Therefore, in order to identify themes and draw a network of digital humanities skills themes based on the theme analysis method, 17 Persian sources published (2013-2021) and 37 English sources published between (2012 to 2022) It was achieved that all of them were related to the skill competencies of digital scholars, which included valid scientific research articles and theses of master's and doctoral degrees, online and registered in official scientific research websites and references. Data analysis was done by thematic analysis method.

**Results:** In the final analysis of the theme network, 8 organizing themes and 77 final basic themes were extracted for the comprehensive theme of digital humanities skill competencies.

**Conclusion:** Based on the results, it was determined that the following factors play a role in the skills and morals of humanities scholars; Features and characteristics, technical and technological skills, digital study and learning skills, social-communication skills, ethical-legal skills, knowledge skills, executive skills and digital mindset skills.

**Keywords:** Skill and moral competence, Humanities scholars, Digital

**How to Cite:** Mesrinejad F, Fahim Nia F. Developing a framework for evaluating the skills and morals of digital humanities scholars, Int J Ethics Soc. 2023;5(3):14-26. doi: [10.22034/ijethics.5.3.14](https://doi.org/10.22034/ijethics.5.3.14)

## INTRODUCTION

The 21st century, with globalization and the rapid growth of the knowledge-based economy, is a period in which unprecedented changes have occurred in the political, social and economic fields at a great speed. This century, along with many technological advances, is a challenge for people's lives. Among unusual concerns and issues, lifelong learning, although not a modern phenomenon, is a key to survival in the 21<sup>st</sup> century, and the digital university has developed rapidly in response to this essential need [1]. In this changing environment full of new technologies,

universities have faced new issues that have demanded the university to respond to this new environment. One of the problematic challenges of universities is the educational revolution ahead of it, which has led to the decline of the traditional university system and the emergence of a digital revolution in the provision of higher education [2]. Therefore, today, technology is becoming a means of teaching and learning without being present in educational environments. This technology enables educational methods to improve the quality of teaching and learning and academic performance of students [3].

The virtual university is a clear example of the ability of information and communication technology in providing flexible and wide-ranging education, which is currently expanding in many countries of the world [4]. One of the important goals of higher education in the use of information and communication technology in universities is to enable scholars to engage and intervene more in the teaching-learning process and to use high-level intellectual processes in such an environment where thinking is considered a value. It is possible, societies achieve development that have human resources with thoughts, ideas and value creation, with skills and expertise in specific and higher-level areas, flexible in front of changes, capable of independent and continuous learning. Aware of cultural, social, environmental characteristics and issues and moral and spiritual values, having a participatory and active civic spirit and finally, capable of critical thinking, problem solving and communication skills, maximum productivity [5]. In fact, in order to play an effective role at different levels of society, scholars must have advanced skills that are appropriate to the changes and developments of the information age in order to have the necessary skills to properly face the surrounding phenomena and make the best and most appropriate decisions [6]. Certainly, in today's global era, these scholars need a new digital-based learning space that is provided by a new type of higher education system, i.e., digital university [7]. This virtual education, which is carried out on the Internet, is considered an important tool in higher education in the digital era and creates a learning environment based on the learner and flexibility in learning methods [8]. The advantages of digital education are increasing access to education, reducing educational costs, producing timely educational content, integrating topics, flexible access and ease of working with it, reducing time, and improving student performance [9]. In fact, today's technology is a tool used to remove geographical barriers and facilitates learning for everyone at anytime and anywhere in the world without being in front of educational locations [10]. Also, digital education plays an important and strategic role in addressing the modernization and development of national education systems, access to high-quality education for all, creating a connection between education and the labor market, access to lifelong learning for different classes of people, with

Considering their interests and needs, supporting equal opportunities for independent learning, reducing economic and geographic inequality, and ensuring access to the best educational materials for low-income residents and remote areas [11]. One of the most important academic fields in the era of digital mentality is the field of humanities, which deals with the mental, intellectual, psychological, and spiritual aspects of humans [12]. In fact, human sciences play a decisive role in the individual and social destiny of humans and affect all its affairs; It pays attention to issues such as society, culture, language, human behavior and actions, and people's minds and thoughts. Educational, cultural, economic and political issues, which determine the main direction of a society, are drawn and determined by these sciences [13]. Parallel to the development and expansion of the field of humanities, advances were made in information and communication technologies, and this evolution changed the methods of teaching and learning in the field of humanities and a new field called digital humanities was created. The term digital humanities, like many terms in scientific researches, has gained its name through long-term developments of revolutionary and social vision [12]. Digital humanities are a broad field of research and scientific activities that includes not only the use of digital methods by art and humanities researchers and the collaboration of digital humanities experts with computing and scientific disciplines, but also the method Those through which art and humanities present their distinctive attitudes are also included, and these distinctive attitudes are in the field of cultural issues provided by the development of digital technologies [14]. Work in this field is necessarily collaborative and includes competencies, qualifications, different skills and specialized fields [15]. In fact, in the era of digital transformation, changing the role of academics requires a new set of competencies to be defined and presented for them in order to be responsive to the latest trends that have been formed following transformative technologies, and the university In order to join the journey towards digital transformation, they are required to change the teaching and learning methods by going through traditional processes in order to take advantage of digital opportunities by shaping the new role of scholars as virtual scholars. turn it into reality and

coordinate this flow in the best possible way [16]. Competence is a multipurpose term that is used in different fields and it can be said that competence is a series of knowledge, abilities, skills, experiences and behaviors that lead to the effective performance of one's activities [17]. Competence is a field of action that enables a person to use its components related to his education and profession for effective use in dealing with action [18]. Competencies can be motivations, behaviors, skills, aspects of social role or knowledge that a person uses [19]. Researchers [20] define the competence of the learner in the electronic platform as a set of related knowledge, skills and abilities that contribute to efficient performance and academic success. Therefore, competence is defined as a concept related to people and refers to a set of behavioral dimensions that create a person's excellent performance at work [17]. Digital skills are also necessary baggage for scholars to step into the information age, so that scholars with digital skills can recognize information and are able to access information. evaluate information effectively, use information creatively and are independent learners who show themselves to be active in academic and social responsibilities [21]. According to what was said; Educational systems in a society and, accordingly, universities, if they want to play an effective role in advancing the society's goals, they must be able to adapt themselves more quickly to international and global developments, because the educational society is also in terms of experience. Historical orientation and in terms of the special conditions surrounding the current century, is the center of gravity of these changes and developments, and since universities are the last and most important link in the relationship between the individual and the society, knowledge can , he internalized the skills and attitudes necessary to have digital competencies in the scholars with their help, which along with the adoption of new forms of education and training such as lifelong learning, digital learning, Informal learning and professional training are done. In general, in the age of information, the society's need for scholars who can continuously update their information and learn new skills is felt more than ever, and updating the fields of study and making changes in the program It is essential that their curricular and academic programs are in accordance with the diverse and

evolving needs of learners in different dimensions. But despite the knowledge that the acquisition of skills required by digital scholars form the core of the success of scholars and universities in digital courses and the knowledge of the importance and impact of the skills of digital scholars in life, education and Their career future, no coherent study in this field was found in Iran. In this way, identifying and explaining the competencies related to the skills of scholars makes universities and the educational system achieve a common understanding of this concept, and based on the model of the skills of digital humanities scholars, they can create a competency profile. Draw the new roles of scholars in the digital environment according to their goals. Therefore, this research aims to develop a framework for evaluating the moral and skill competencies of digital humanities scholars, so that the results of this research can help the academic community and educational and curriculum planners in the field of general and higher education, so that by knowing From the current situation, they can eliminate the shortcomings in digital fields and apply it in the heart of university curricula in order to achieve all the skills needed by scholars to become a digital citizen in a digital society. The future activity of the university should be in short-term courses, workshops and extra-curricular, and also pay attention to digital skills from the lower levels, so that it can be expected that these skills will be internalized in the scholars. and appear in society.

## MATERIAL AND METHODS

This research is an exploratory research that has a qualitative nature. Data analysis was done by thematic analysis method.

The current research community is made up of databases, international journals, and all experimental researches and researches conducted in this field, which were sampled using the criteria-based purposeful sampling method. Therefore, in order to identify research studies related to the skills of digital humanities scholars, the researcher first conducted a systematic review of theoretical foundations. For this purpose, a framework was established for the selection of studies, based on which the researcher developed

a keyword search pattern based on precise, clear and predetermined criteria. The criteria for including studies in the current research were:

-Researches that have been published in the field of digital competencies and skills.

-Researches that have been published in the period of 2012 to 2022.

-Researches that have reported sufficient data and information related to the purpose of the current research.

Also, the criteria for excluding studies from the current research were:

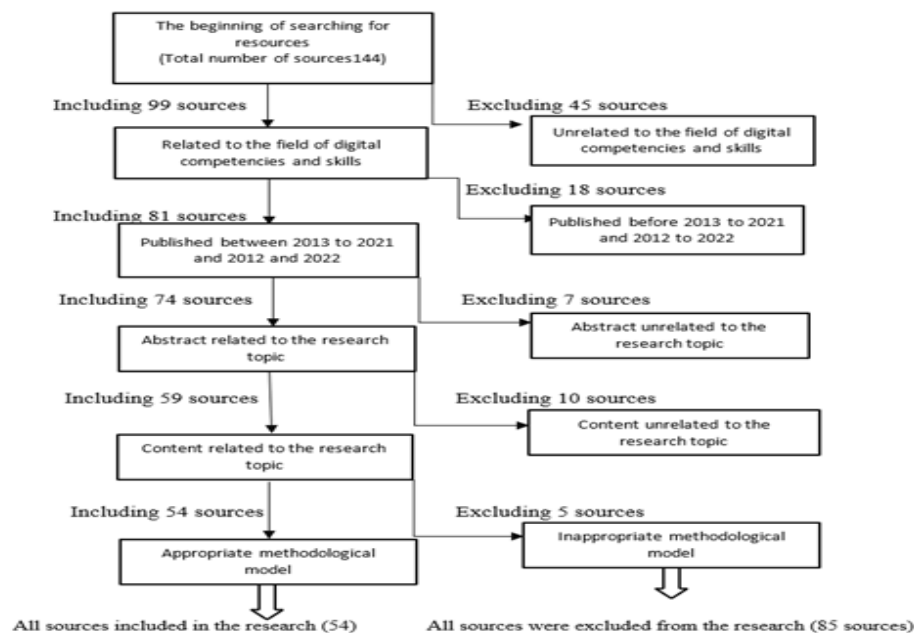
-Researches that did not report enough information about the objectives of the present study.

-Researches that were conducted with the same titles and goals.

-Researches that lacked a suitable methodological model.

After formulating the strategy of searching for sources and based on the inclusion and exclusion criteria of the studies, the databases of Google Scholar, Science Direct, Wiley, SID, Noormags, Mag Iran were selected in order to search for

articles related to the subject. Then the considered databases using the keywords characteristics of digital students, characteristics of digital students, skills of digital students, competencies of digital students, characteristics of virtual students, characteristics of virtual students, skills of virtual students, competencies of virtual students and Digital humanities were searched and all sources were collected based on their relationship with the research subject and unrelated studies were excluded from the review cycle. Finally, 144 sources were found and then they were carefully reviewed in several steps to identify articles that fit the research question. Therefore, the articles that were not related to the current research question were left out during this stage so that the most relevant ones could be identified to extract the answer to the research question. The review process included checking the title of the articles, their abstract and their content, and at each stage, the compatibility with the inclusion and exclusion criteria was checked. In this study, the stages of the review process were based on Figure 1:



**Figure 1.** Steps and results of selecting research sources

Therefore, in the current research, in order to identify the themes and draw the theme network of the skills of digital humanities scholars based on the theme analysis method, for the research area, 17 Persian sources were published (2013-2021) and 37 English sources were published between (2012 to 2022) were obtained, all of which are related to the skill competencies of digital scholars, which include valid scientific research articles and master's and doctoral theses, online and registered in websites and references.

They are official scientific research websites. Also, Armstrong et al. (2005) believe that the number of experts is sufficient to evaluate the credibility of the network of topics compiled from three to twenty experts, so in this research, in order to review the validity of the framework of the topic network of skill competencies of digital humanities scholars, seven experts will be selected as samples. The following two tables show selected Persian and English sources used in the field of research related to the qualitative part:

**Table 1:** Selected Persian sources in the field of research

Author	Title of Book/Article/Thesis (Persian)	Publication Date	Place and Publication of the Book/ Journal Name/ University Name
1. Bohtoyi et al.	Identification of indicators, components, and dimensions of virtual education to improve the quality of learning of students at Islamic Azad University of Tehran province	2021	A scientific-research quarterly of Islamic lifestyle focusing on health
2. Narenji Thani et al.	Identifying and checking the competencies required by learners in the electronic platform	2021	Scientific research bimonthly- a new approach to educational management
3. BaniAsadi and KeyhaniNasab et al.	Investigating the relationship between information literacy (with an emphasis on digital literacy) and students' academic level	2021	Behavioral studies in management
4. Joodzadeh et al.	Examining digital citizenship competencies of students at Shahid Chamran University of Ahvaz	2020	Master's Thesis of Educational Sciences, Shahid Chamran University, Ahvaz
5. Saeidpanah et al.	Designing a model of basic and technological competencies of managers in the field of information technology	2020	Journal of development and transformation management
6. Soleimani Nezhad et al.	The effect of digital literacy on the consumption of digital content among graduate students of Shahid Bahonar University, Kerman	2020	Information processing and management research paper
7. Babashahi et al.	Designing the competency model of digital marketing managers with the theme analysis method	2020	Scientific quarterly of modern marketing research
8. Rahmati Karahroodi et al.	A qualitative meta-analysis of international research in the field of conceptualizing the role of digital leaders	2020	Information processing and management research paper
9. Seyed Taheroddini et al.	Factors affecting the development of information and communication technology competencies of faculty members: A qualitative study	2019	Information processing and management research paper
10. Pourkarimi&Ram ezanpour	The model of professional development of electronic education faculty members in the country: A qualitative research	2019	Quarterly Journal of Training and Development of Human Resources
11. Abili et al.	Identifying the competencies of teaching assistants in the electronic teaching-learning process: A qualitative research	2018	Quarterly Journal of Training and Development of Human Resources
12. Gholami et al.	Information literacy of Qom University master's students in the digital environment	2017	Quarterly Journal of Information Management Sciences and Techniques
13. Zarrabian et al.	Investigating the degree of tendency to critical thinking in virtual master's degree students	2016	Research in medical science education
14. Hosseini & Shakeri	Understanding the effect of electronic learning on student performance: The role of digital literacy	2016	International conference on new research in management, economy, and accounting

15. Jafarian et al.	Investigating the effect of information literacy electronic content on students' problem-solving skills	2015	Quarterly journal of research and planning in higher education
16. Keshavarz et al.	The information literacy level of students of a distance education system: A case study	2015	Bimonthly Scientific Research Journal of Education Strategies in Medical Sciences
17. Abdolvahabi et al.	Investigating the students' basic skills in the age of globalization	2013	Quarterly journal of research and planning in higher education

**Table 2:** English sources selected in the field of research

Author	Title of Book/Article/Thesis (English)	Publication Date	Place and Publication of the Book/ Journal Name/ University Name
1. Kim & Klinger	Investigation and analysis of sentiments in computational literary studies	2022	ZFDG Journal
2. Monster	Three-dimensional digital technologies for humanities research and education	2022	Journal of Applied Sciences
3. Ben Youssef et al.	Information and communication technology, digital skills and academic performance of students: Examining the digital divide	2022	Information Journal
4. Voda et al.	Investigating digital literacy skills in social sciences and humanities students	2022	Sustainability Journal
5. Khan & Gul	Investigating the relationship between digital literacy skills and technological educational and content knowledge among middle school teachers	2022	Journal of Global Social Science Reviews
6. Eghbal et al.	Examining the challenges of digital literacy among visually impaired students studying at the higher education level	2022	Pakistan Journal of Humanities and Social Sciences
7. August and Engel	Project-based training for graduate students in the field of digital humanities	2022	Kios Journal
8. Shock	An introduction to Python programming in digital humanities	2021	Publications of the Faculty Library
9. Zhang et al.	Content analysis of job advertisements for digital humanities-related positions in academic libraries	2021	Journal of University Librarianship
10. Weelms	Digital humanities in European research libraries: Beyond the providing digital collections	2021	LIBER Quarterly
11. Walsh et al.	Digital humanities in schools	2021	Journal of Information Science and Technology Association
12. Monterio & Leit	Digital Literacy in higher education: Skills, uses, opportunities and barriers to digital transformation	2021	Distance Education Journal
13. Rodriguez et al.	Technological skills in higher education- different needs and different applications	2021	Journal of Educational Sciences
14. Breez	Correction and numbering of digital copies	2020	Digital Humanities Quarterly
15. Gifen et al.	Artificial intelligence for digital humanities and computational social sciences	2020	Open Science Journal
16. Lucchiari et al.	Developing digital humanities competencies in different educational environments	2020	Journal of Education for Intellectual Disability
17. Pertiwi & Musthafa	Digital literacy competency of university students: A case study with learning management system	2020	Proceedings of the 13th Applied Linguistics Conference
18. Chitz	Digital humanities as an impetus for digitization strategies in Eastern European universities: A Romanian case study	2020	European Journal of Higher Education: Challenges of a New Decade
19. McLeod & Tures	Strengthening the digital skills of first-year students with a digital skill development framework	2020	Higher Education Research and Development Journal
20. Falun	From digital literacy to digital competency: A teacher digital competency framework	2020	Educational Technology Research and Development Journal
21. Globe et al.	Digital humanities in Sweden and its infrastructure: The current situation and unintended conditions	2020	Digital Scholarship in the Humanities
22. De Maria et al.	Digital humanities and big microdata: New approaches to demographic research	2019	Toward Mathematics, Computer, and Environment

23. Gay	Using content management system for student digital humanities projects	2019	Binghamton
24. Alton et al.	Review for spatial geography review	2019	Primetron
25. Morai	Illustration in digital humanities	2019	Publications of the Faculty Library
26. Arnold et al.	Using R programming for text analysis in digital humanities	2019	Language Resources and Evaluation
27. Supendra et al.	Identifying issues related to digital literacy skills of undergraduate students of Negeri Padang universities in using the Internet as a source of online learning	2019	International Conference on Education Technology
28. Gisking	Mapping method with GIS in digital humanities	2018	American Quarterly
29. Funkental et al.	Digital humanities: How data mining techniques support pattern recognition	2017	Computer Sciences-Research and Development
30. Grandgian	Network analysis using Gaffey software	2017	Anthropology and Sociology Sciences
31. Saum-Pascual	Teaching electronic literature as digital humanities	2017	Digital Humanities Quarterly
32. Kennedy	Acceptance of digital humanities methods in non-online classrooms	2017	Digital Humanities Quarterly
33. Janik et al.	Visual text analysis in digital humanities	2016	CGF Journal
34. Janik et al.	Visual text analysis in digital humanities	2016	Computer Graphics Association
35. Garcia Penalovu	Digital humanities data processing	2016	Journal of Information Technology Research
36. Kerenmer	Digital skills and competencies in schools	2014	International Federation of Information Processing
37. Schamit	The role of markup in digital humanities	2012	Controversies around digital humanities

In order to collect the data in the present research, at the beginning, what was of interest and importance for the researcher in the selection of textual data were: the desirable literary and content quality of the sentences in the texts, comprehensiveness and completeness of the texts, clarity and comprehensibility. and the understanding of the texts and finally the exact connection of the text with the research concepts. After that, the textual data and primary codes were selected to the point that no new information and data were received from the sources more than what was collected, and any information that is obtained in addition to the information from the above sources. came, repeating the collected information in the form of various grammatical literature. All sources were analyzed according to the steps of Clark and Brown (2017) thematic analysis method.

## RESULTS

**Table 3:** Format of themes of moral and skill competencies of digital humanities

Global Theme	Organizing Theme	Basic Theme
		1- Accountability

The first question of the research: What are the ethical and professional skills of digital humanities scholars to develop a framework based on thematic analysis method?

In order to examine the first question of the research, the process of thematic analysis led to the extraction of a number of themes that, after initial coding, in order to summarize the data, similar and repeated themes in the researched sources in line with the research based on the views of digital humanities skills with each other It has been combined and their abundance has been obtained. Since the investigation process is from the comprehensive theme of moral and skill competencies of digital humanities to the basic themes, based on the analogical-exploratory method and the synthesis of 322 basic themes obtained, finally, the theme format in Table 3 is as follows It has been drawn that it includes a comprehensive theme of moral and skill competencies of digital humanities, 8 organizing themes and 77 final basic themes.

Digital Skills	Humanities Competencies	Competencies related to features and characteristics	2- Flexibility 3- Insight and positive attitude 4- High motivation 5- Confidence 6- Compatibility 7- Self-assessment
		Competencies related to technical and technological skills	8- Using a computer (software and hardware) 9- Using the Internet 10- Using the database 11- Using internet software 12- Using social networks 13- Visualization 14- Creating three-dimensional technology 15- Digitization 16- Designing and producing research tools 17- Programming languages 18- Mapping 19- Database designing 20- Intelligent processing 21- Data analysis 22- Text mining 23- Remote reading
		Competencies related to reading and digital learning skills	24- Insight skills 25- Writing skills in a digital environment 26- Familiarity with learning objectives 27- Identification of information needs 28- Identification of information 29- Awareness of information sources 30- Access to information 31- Continuous and active learning 32- Interactive learning 33- Use of information 234- Evaluating the credibility and validity of information 35- True judgment about the information 36- Recognition of digital learning methods
		Competencies related to social-communication skills	37- Negotiation and discussion 38- Social influence 39- Teamwork 40- Consulting and giving advice 41- Interaction with others 42- Electronic exchange of information 43- Scientific communications 44- Digital consultation and guidance
		Competencies related to moral-legal skills	45- Appropriate behavior in the digital environment 46- Compliance with values and norms of digital use 47- Personal protection 48- Awareness of personal rights 49- Information security 50- Respecting the rights of others 51- Commitment 52- Honesty
		Competencies related to knowledge skills	53- Previous digital skills 54- Production and interpretation of electronic content

	55- Production of new knowledge
	56- Familiarity with the English language
	57- Sustainable development of the desired field
	58- Knowledge sharing
	59- Ability to develop scholarship
	60- Digital publishing
	61- Maintaining the data
	62- Digital revision
	63- Multimedia training
Competencies related to executive skills	64- Time management
	65- Planning
	66- Organization
	67- Self-control
	68- Self-regulation
	69- Decision-making
	70- Strategic thinking
Competencies related to digital mindset skills	71- Systemic thinking
	72- Analytical thinking
	73- Creative thinking
	74- Critical thinking
	75- Problem-solving
	76- Questioning
	77- Self-awareness

According to the format of ethical and skill competencies of digital humanities scholars in

Table 3, the MAXQDA output from the theme network is drawn in Figure 2 as follows.

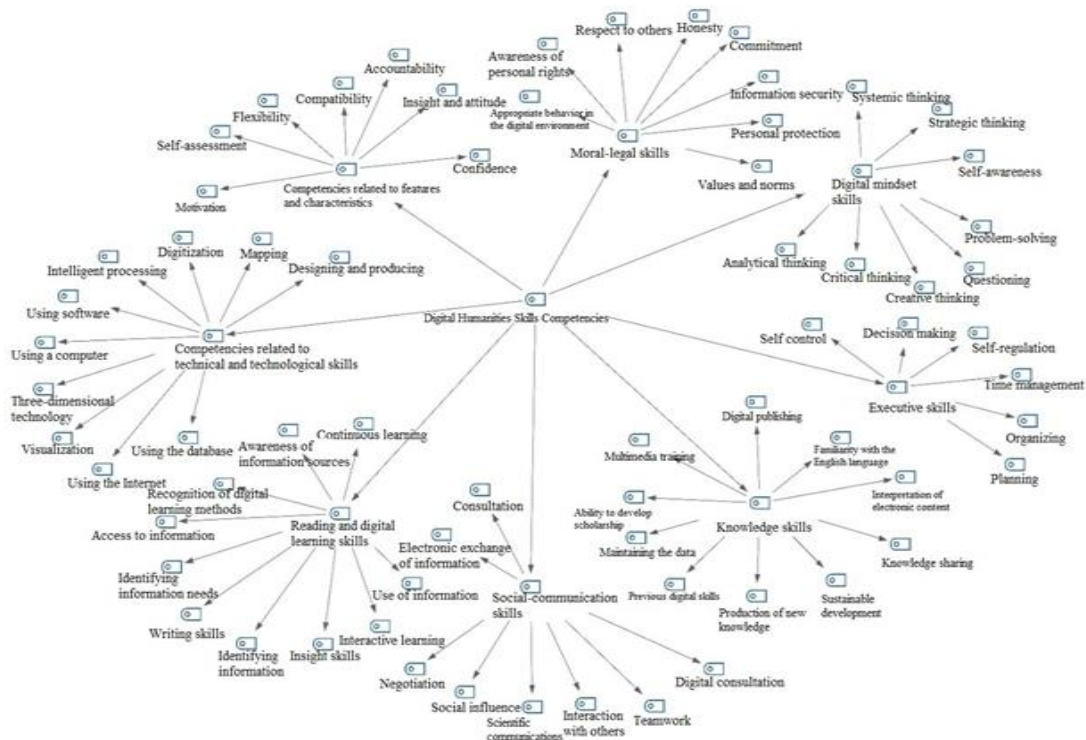


Figure 2. MAXQDA output from the theme network

The second research question: Are the themes of moral and skill competencies of digital humanities scholars valid?

In order to review the validity of the framework of the network of themes of ethical and skillful competencies of digital humanities scholars, two doctoral students in the field of information science and epistemology were selected as samples, and they retested and controlled the codes separately but in parallel. With each other and finally, their findings were compared. In the qualitative review of the content of this topic format, the researcher, while compiling the opposing and agreeing columns, specified the explanation column in front of each topic in the list of topics and asked the experts to express the necessary feedback in relation to each topic if needed. To include the desired items based on them. Finally, the content validity index was calculated for each theme and their average is defined as the overall content validity index of the theme format. The value of content validity index about the format of created themes is equal to 0.8 to 1, which is a larger value compared to the standard value of this index (0.79). Therefore, for each basic theme, the content validity coefficient was calculated in the same way, and the results showed that the overall content validity index of the theme format is 0.97. Therefore, the obtained content validity coefficient is confirmed.

## DISCUSSION

Using theme analysis for moral and skill competencies of digital humanities, 77 basic themes, 8 organizing themes (competencies related to characteristics and features, competencies related to technical and technological skills, competencies related to study skills and digital learning, competencies related to social-communication skills, competencies related to ethical-legal skills, competencies related to knowledge

skills, competencies related to executive skills and competencies related to digital mindset skills) and Only one overarching theme (Ethical and Skill Competencies of Digital Humanities) was obtained.

The results of the research findings are consistent with research results [22] that personality traits such as high motivation, self-regulation, self-control, positive attitude, management skills, the ability to interact and communicate properly are essential needs of digital scholars. It is also related to the results of another study [2] that the existence of knowledge-related competencies, attitude-related competencies, skill-related competencies, and ability-related competencies are necessary for digital scholars.

The results of this research are also consistent with research findings [23] regarding the importance of high organizational ability, self-motivation, internet and computer skills, awareness and use of information sources, and critical thinking and problem solving for digital scholars.

Also, the results of the present study with the results of a study [24] on the importance of active behavior and participation, creative thinking, digital communication skills, the ability to produce, understand and interpret digital content, ethical competencies and personal rights of using technology for the success of digital scholars. It is consistent.

Finally, the findings of this research are with the findings of researches that focus on the role of knowledge sharing, group behaviors, positive attitude, responsibility, the effect of technological skills, cognitive skills and ethical skills, creative thinking, mental skills and compliance Ethical values, critical thinking, flexibility ability, management skills, sustainable development skills, ability to use and knowledge of digital tools and methods, content management, high motivation and knowledge sharing emphasize the success of digital scholars [25-28].

Based on the findings, it is suggested:

- Competencies related to traits and characteristics: Due to the special conditions of life in the modern world and its institutional requirements, it is necessary for the university to pay attention to

creating and institutionalizing a set of capabilities in students, which are called competencies. These competencies increase the ability of scholars for modern social life. The term focal competence necessarily emphasizes knowledge and skills that include a set of personality traits and are related to each other and can increase the number of variables that explain and predict academic performance.

- Competences related to technical and technological skills: the rapid growth of human knowledge resources and the emergence and expansion of information and communication technologies, today's humanity has faced unprecedented confusion in finding information sources, the only way to overcome this Confusion and acceleration in finding the required information is increasing the learning of different skills related to new technology. These skills enable scholars to use computers, application software, databases and other technologies to perform various tasks related to their education, career and personal affairs. In fact, scholars who want to achieve digital literacy must first acquire relevant technological skills such as using computers and the Internet efficiently and effectively. Therefore, the skills of using Windows operating system, internet and web, electronic reference sources, electronic publications, office software suite, e-mail, newsgroups, websites and personal blogs, digital libraries and search engines can be competences. to improve students' digital skills.
- Competencies related to digital study and learning skills: digital study and learning skills have been considered due to the expansion of communication networks and electronic resources in order to choose the best and most relevant source based on the information needs of students. Therefore, scholars with digital skills can correctly recognize their information needs, identify the resources necessary to meet this need, and search, identify and select information by formulating appropriate strategies in these sources. Achieve more success in digital learning.
- Competencies related to social-communication skills: Digitally literate scholars, individually or as members of a group, use information effectively to

achieve a specific purpose. Digital literacy empowers people to connect with others, do work more effectively, and increase productivity, especially with those who have similar skills and expertise. In fact, reducing individualistic behaviors is of great importance to promote forms of collaborative human capital. Therefore, the skills of listening, self-expression, conflict resolution, collaborative problem solving, teamwork, and choosing appropriate communication skills can improve the social-communicative skills of digital students.

- Competencies related to ethical-legal skills: in the digital society, personal and social rights must be pursued together so that everyone can be useful and effective. People should know that the use of digital has a culture in which the user of technology learns how to protect himself (physically and mentally) through education and there is a need for a balance between the virtual world and the real world. be created Therefore, digital security and personal protection is one of the skills that cause electronic prevention to ensure the security and protection of hardware and software. Also, ethical competences in the digital space mean how Internet users participate in Internet networking activities in an appropriate, safe, ethical and responsible manner. Digital etiquette is one of the digital skills that includes standards of behavior and behavior in the electronic environment. Therefore, having the skills to be familiar with the concepts of information security, to be familiar with the legal methods of obtaining and publishing text, to be familiar with citation methods, to be familiar with etiquette, to respect the rights of authors and to use the online environment correctly, will promote legal and ethical competences.
- Competencies related to knowledge skills: Scholars must learn science and knowledge related to digital environments. In other words, digital knowledge skills require teaching and learning of scholars in a new way. So that the educational content in the digital learning environment should be designed and produced in a self-learning, multimedia and hyper-media way. Electronic learning in digital education and electronic content production can

have a profound positive effect on engaging scholars, positive attitudes of professors, personalization of learning, and creativity of scholars.

- Competencies related to executive skills: scholars who have high executive skills have high-level cognitive actions that are important for directing behavior and forming targeted behavior. These skills help digital scholars to regulate and control their behaviors in order to achieve their goals in digital environments and to be more successful in organizing information and resources from the digital space. Therefore, the skills of attention and concentration, impulse control and self-regulation, activity initiation, active memory, the ability to plan and organize and monitor performance are skills that increase the executive competencies of digital scholars. Also, meta-cognitive skills such as planning and determining the purpose of study, predicting and accurately determining study time, monitoring progress and self-regulation can be considered as executive skills in the learning of digital scholars. In general, in the digital age, the university should train students who, instead of memorizing and storing information, have the ability to classify, analyze and combine information, have managerial and technological skills, so that they can adapt to rapid technological, industrial and social changes. reach an effective alignment.
- Competencies related to digital mindset skills: In addition to technical skills as the basis for understanding and applying digital technology, digitalization requires students who have a digital mindset. Digital mentality is the same cognitive capabilities, which are related to the mind, analytical power and mental skills and abilities of digital scholars. Scholars with a digital mentality can recognize and evaluate opportunities and challenges related to digital transformation in a timely and correct manner.

## CONCLUSION

Based on the results, it was determined that the following factors play a role in the skills and morals of humanities scholars; Features and characteristics, technical and technological skills, digital study and

learning skills, social-communication skills, ethical-legal skills, knowledge skills, executive skills and digital mindset skills.

## ETHICAL CONSIDERATIONS

Ethical issues (such as plagiarism, conscious satisfaction, misleading, making and or forging data, publishing or sending to two places, redundancy, etc.) have been fully considered by the writers.

## CONFLICT OF INTEREST

The authors declare that there is no conflict of interests.

## REFERENCES

1. Saykilia A. Higher education in the digital age: the impact of digital connective technologies. *Journal of Educational Technology & Online Learning*, 2019; 2 (1): 1-15.
2. Narenji Thani F, Pourkarimi J, Tizhoosh Jalali F. Identifying and examining the e-learning Competencies for students in higher education. *Journal of New Approaches in Educational Administration*, 2021; 12(2): 1-22. DOI: <http://doi.org/10.30495/jedu.2021.26671.5330>
3. Febliza A, Oktariani A. Development of digital literacy instruments for students and teachers. *Journal Pendidikan Kimia Universitas Riau*, 2020; 5(1): 1–9. DOI: <http://dx.doi.org/10.13106/jafeb>
4. Soleimani Nezhad A, Droudi F. The effect of digital literacy on the consumption of digital content among graduate students of Shahid Bahonar University of Kerman. *Iranian Journal of Information processing and Management*, 2021; 37(2): 641-664. DOI: <http://doi.org/10.52547/jipm.37.2.641>
5. Asari A, Kurniawan T, Ansor S, Bagus A, Rahma N. Digital literacy competencies for teachers and students in Malang Regency Schools. *BIBLIOTIKA: Jurnal Kajian Perpustakaan Dan Informasi*, 2019; 3(2): 98–104.
6. Gholami T, Bagheriyan N, Khaleghi N. Information literacy of master's students of Qom University in the digital environment. *Quarterly Journal of Information Management Sciences and Techniques*, 2017; 3(3): 15-34. DOI: <http://doi.org/10.22091/stim.2017.2163.1145>
7. Zhang Y, Su F, Hubschman B. A content analysis of job advertisements for digital humanities-related positions in academic libraries. *The Journal of Academic Librarianship*, 2021; 47: 1-11
8. Butler D, Leahy M, Twining P, Akoh B, Chtouki Y, Farshadnia S, Moore K, Nikolov R, Pascual C, Sherman B, Valtonen T. Education systems in the digital age: the need for alignment. *Technology, Knowledge and Learning*, 2018; 23(3): 473–494. DOI: <http://doi.org/10.1007/s10758-018-9388-6>
9. Porat E, Blau I, Barak A. Measuring digital literacies: Junior high-school students' perceived competencies versus actual performance. *Computers and Education*, 2018; 126:

- 23-36. DOI: <http://doi.org/10.1016/j.comperdu.2018.06.030>
10. Van Laar E, Van Deursen AJAM, Van Dijk JAGM, De Haan J. The relation between 21st-century skills and digital skills: A systematic literature review. *Comput. Human Behav*, 2017; 72: 577-588. DOI: <https://doi.org/10.1177/2158244019900176>
  11. Aguirre T, Aperribai L, Cortabarría L, Verche E, Borges A. Challenges for Teachers' and Students' Digital Abilities: A Mixed Methods Design Study. *Sustainability*, 2022; 14 (4729): 1-9. DOI: <https://doi.org/10.3390/su14084729>
  12. Shahpouri S. Digital humanities: a tool for humanities research. *Scientific communication monthly*, 2017; 43(1): 1-11.
  13. Kennedy K. A long-belated welcome: accepting digital humanities methods into non-DH classrooms. *DHQ: Digital Humanities Quarterly*, 2017; 11 (3): 1-17.
  14. Walsh J, Cobb P, de Fremery W, Golub K, Keah H, Kim J. Digital humanities in the school. *Journal of the Association for Information Science and Technology*, 2021; 73(2): 1-16. DOI: <http://doi.org/10.1002/asi.24535>
  15. Lucchiari C, Folgieri R, Gaevskaaya E, Borisov N. Digital humanities competencies development in various learning environments. *Socrate Training for Intellectual Disability*, 2020; 4: 1-13
  16. Pertiwi UG, Musthafa B. University students' digital literacy competence: a case study with learning management system. *Proceedings of the 13th Conference on Applied Linguistics. Advances in Social Science, Education and Humanities Research*, 2020; 546: 620-626. DOI: [10.2991/assehr.k.210427.094](https://doi.org/10.2991/assehr.k.210427.094)
  17. Saeidpanah M, Alvani SM, Hashemi SZ. Designing a model of basic and technological competencies of IT managers. *Journal of Development & Evolution Management*, 2020; 40: 1-8.
  18. April K, Dalwai A. Leadership styles required to lead digital transformation. *Effective Executive*, 2019; 22 (2): 14-45
  19. Hosseini Nasab SM, Shami Zanjani M, Gholipor A. A competency model for the chief digital officer as organizational governor of digital transformation. *Iranian Journal of Information Processing and Management*, 2021; 36(3): 835-860. DOI: [10.22034/jhrs.2021.130495](https://doi.org/10.22034/jhrs.2021.130495)
  20. Rodrigues AL, Cerdeira L, Machado-Taylor ML, Alves H. Technological skills in higher education-different needs and different uses. *Education Sciences*, 2021; 11 (7): 326. DOI: [10.3390/educsci11070326](https://doi.org/10.3390/educsci11070326)
  21. Saum-Pascual A. Teaching electronic literature as digital humanities: a proposal. *DHQ: Digital Humanities Quarterly*, 2017; 11 (3): 1-14. <http://islamiclifej.com/article-1-11-y-fa.html>
  22. Bohtoyi L, Surani Yancheshmeh R, Imani Gale Pardari MN, Khonsari Y, Ameri Habibabadi MA. Identification of indicators, components, and dimensions of virtual education in order to improve the quality of learning of students of Islamic Azad University of Tehran province. *Journal of Islamic Lifestyle Focusing on Health*, 2021; 5(1): 220-236.
  23. Bani Asadi N, Keyhani Nasab F. Investigating the relationship between information literacy (with an emphasis on digital literacy) and students' academic level. *Behavioral Studies in Management*, 2021; 6(12): 1-14.
  24. Joodzadeh S. Examining digital citizenship competencies of students of Shahid Chamran University of Ahvaz. [M.A. thesis], Shahid Chamran University, Ahvaz. 2020.
  25. Ben Youssef A, Dahmani M, Ragni L. ICT use, digital skills and students' academic performance: exploring the digital divide. *Information*, 2022; 13 (3): 129. DOI: <https://doi.org/10.3390/info13030129>
  26. Voda AI, Cautisanu C, Gradinaru C, Tanasescu Ch, Moraes GHSM. Exploring digital literacy skills in social sciences and humanities students. *Sustainability*, 2022; 14 (2483): 1-31. DOI: <https://doi.org/10.3390/su14052483>
  27. Khan R, Gul F. Exploring the relationship between digital literacy skills and Technological Pedagogical and Content Knowledge (TPACK) among secondary school teachers. *Global Social Sciences Review*, 2022; 7 (2): 196-206. DOI: [http://doi.org/10.31703/gssr.2022\(VI-II\).19](http://doi.org/10.31703/gssr.2022(VI-II).19)
  28. Augst T, Engel D. Project-based learning for graduate students in digital humanities. *Qeios*. 2022. DOI: <https://doi.org/10.32388/4W5TXN>.