



DOI: 10.54919/physics/55.2024.123di7

The use of digital technologies in the development of the spiritual culture of primary school teachers

Karakat Nagymzhanova*

Turan-Astana University

010013, 29 Dukenuly Str., Astana, Republic of Kazakhstan

Zhannur Asetova

E.A. Buketov Karaganda University

100028, 28 Universitetskaya Str., Karaganda, Republic of Kazakhstan

Shnar Demissenova

A. Baitursynov Kostanay Regional University

110000, 47 A. Baitursynov Str., Kostanay, Republic of Kazakhstan

Zhanna Akhmediyeva

Astana International University

020000, 8 Kabanbay Batyr Ave., Astana, Republic of Kazakhstan

Balsulu Tasbulatova

Turan-Astana University

010013, 29 Dukenuly Str., Astana, Republic of Kazakhstan

Abstract

Relevance. The relevance of this article is conditioned by the flexible development of the educational possibilities of the virtual environment at the present time. From an early age, every student has free access to any information on the Internet, considering this fact, a priority area in the training of teachers is formed, assigning the role of virtual communication in the development of personality since elementary school. The article actualises the content of the development of spiritual culture among modern primary school teachers at the personal and professional levels. The study considers the value bases of the professional activity of primary school teachers.

Purpose. The purpose of this research is in the theoretical substantiation and development of methodological theses for the use of a virtual educational environment in the practice of primary school teachers. This article is devoted to the issue of preparing primary school teachers to use a virtual educational environment in their practice for the development of their spiritual culture by means of a virtual educational environment.

Methodology. To achieve this purpose, the corresponding tasks were determined, including methods for solving them (namely analysis and modelling methods).

Results. As a result of this study, the main problems of using the virtual educational environment were identified, the positions of the selection of material for the development of spiritual culture using the virtual educational environment in the practice of primary school teachers were characterised.

Suggested Citation:

Nagymzhanova K, Asetova Z, Demissenova S, Akhmediyeva Z, Tasbulatova B. The use of digital technologies in the development of the spiritual culture of primary school teachers. *Sci Herald Uzhhorod Univ Ser Phys.* 2024;(55):1237-1245. DOI: 10.54919/physics/55.2024.123di7

*Corresponding author



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)

Conclusions. Reasoned theoretical provisions and conclusions of the study "The use of the virtual educational environment in the development of the spiritual culture of primary school teachers" base the prerequisites for their practical introduction in the educational process of higher educational institutions in the Republic of Kazakhstan, which will allow solving the issue of selecting conditions, methods, and opportunities for teaching primary school teachers using a virtual educational environment to develop spiritual aspects.

Keywords: spiritual culture; primary school teachers; virtual educational environment; spiritual aspects.

Introduction

The current society is constantly undergoing fundamental changes due to such processes as the introduction of new information technologies. Changes in the labour market impose new requirements on the specialist. Thus, education, as the main factor influencing the personality of a future specialist, should correspond to changing living conditions. Therefore, new sources of information suitable for ordinary youth, new forms of educational interactions, new methods, and techniques that teachers are required to learn should appear in a promising educational information environment. The importance of the research problem from the standpoint of training a future specialist in a virtual educational environment is due to the influence of the following factors: flexibility in mastering the virtual environment; free access of students to any information; the presence of priorities in shaping the educational trajectory; the role of virtual communication [1].

The definition of the virtual educational environment should be considered based on concepts that characterise the space in which the educational process takes place. It follows from the fact that the category of space is an integral part of human life and represents the main form of existence of matter. The sources of educational influence, factors, and people as subjects of education are concentrated in the educational space. The basic pedagogical principles and laws of educational activity are expressed in this area [2]. Educational space is a dynamic set of different educational environments interacting with which a person develops, socialises, and elevates. Initially, the environment as an ordered space was introduced into the exact and natural sciences, where it includes not only the whole organised elements but also the totality of people with the world around them, the conditions of communication, interaction, communication, interdependence.

The research focuses on the educational environment. The educational environment is a possible functional characteristic of any environment, which does not always manifest itself in the positive value of its impact. Notably, the educational environment has its own educational opportunities in the form of values, content, semantics, objectivity, technologies, etc. The educational environment is considered a part of the educational space, that is, its special status, and helps in achieving educational goals, remains positive, and solves educational problems through various pedagogical interactions.

There are physical, artificial, real, and virtual environments [3]. Each environment manifests its own style of interaction, ethics of relationships, and educational opportunities. Strengthening the educational potential of the educational environment is one of the ways to manage its quality and determines the ability of the environment to have a positive educational impact. In this study,

educational opportunities as a special quality of the environment that can be controlled will be considered [4]. The information environment is a key component of all educational environments of the school: educational, methodical, and experimental. The use of a virtual environment in the educational process increases the effectiveness of the educational process through the creation and active use of the virtual space of educational work; focuses the student's view of the world on a scientific standpoint, is also crucial for informing [5].

The purpose of this study is the theoretical substantiation and development of methodological theses for the use of a virtual educational environment in developing the spiritual culture of primary school teachers.

Materials and Methods

The methodological basis for the study of the use of the virtual educational environment in the development of the spiritual culture of primary school teachers in this article was the research of national and foreign teachers, sociologists, and psychologists, such as Pavolini [6], Prayitno et al. [7], Salazar and Alarcón-Espinoza [8], Smolkowski et al. [9], Vorkapić [10], Zembylas [11], etc., who examined this research problem in the context of the Republic of Kazakhstan.

Based on the analysis of scientific and methodological sources of information, the study describes the key concepts related to the research subject. The list of analysed concepts includes "virtual educational environment", "value orientations", "spiritual culture", the essence and specific features of all the above definitions are covered. The analysis of the influence of the virtual educational environment on the development of the spiritual culture of primary school teachers of the Republic of Kazakhstan is conducted.

For the effective use of the virtual educational environment in the development of the spiritual culture of primary school teachers, the following research methods were determined:

- theoretical methods of information collection (analysis of scientific and psychological-pedagogical material on the subject of the study);
- empirical data collection method (diagnostic, modelling, the study of internal charters of educational institutions of the Republic of Kazakhstan; study of legislative documentation);
- methods of data processing and interpretation (quantitative and qualitative analysis of the results obtained).

The whole essence of the study provided for the analysis of literature on the considered subject (analysis of scientific, psychological, educational, sociological, and methodological sources of literature): definition of the object, purpose, subject; formulation of tasks and research

methods; analysis, generalisation, selection of material on the development of the spiritual culture of primary school teachers and its implementation. The relevant material on the subject "The use of the virtual educational environment in the development of the spiritual culture of primary school teachers" was collected, the possibility of solving research problems was identified, the relevance and purpose of the research were substantiated, the prospect of further study of the spiritual values of primary school teachers in the Republic of Kazakhstan was outlined. The analysis of the mastered scientific literature is conducted, which is a mental fragmentation of a thing or object to its component parts (sides, signals, properties, or relationships) for their general study. Analytical methods are also common in science, so the term analysis commonly refers to any research conducted in the field of natural sciences, social sciences (quantitative and qualitative analysis in economics, dynamic analysis, physics, etc.). The features of analysis are an integral part of any research and are manifested in the form of the first stage when a researcher shifts from an undifferentiated description of the studied object to the definition of structure, properties, and attributes. Therewith, analysis is present at other stages of the study, acting in unity with other research processes.

There are several types of analysis as a scientific method. One of them is theoretical or real (experimental) disassembly completely in parts. Such an analysis covers the entire structure, is intended not only to identify the parts that constitute the whole but also to establish links between them. Another method is the analysis of common properties of objects and relationships between objects when ownership is divided into joint ownership or relationships, and some of them are subject to further study, while others are distracted. Such a generally accepted scientific technique as classification was also applied. It divides sets of objects into subclasses according to certain criteria, it is a type of analysis. All analytical processes of science are used for obtaining new knowledge and for the systematic presentation of existing scientific results.

The reliability of the results of the study of "The use of the virtual educational environment in the development of the spiritual culture of primary school teachers" is ensured by the methodological and theoretical rationality of all initial positions; the integrity of general and specific research methods, adequate relevance and purpose, tasks, and logic of the research; the combination of quantitative and qualitative analysis.

Results

Virtual educational space can extend to the outside world and external areas through the activities of students, using their emotions, emotional and intellectual abilities. Virtual educational environment, including information and communication capabilities of local, corporate, and global computer networks are created and used for educational purposes by all participants in the educational process; It is created and designed for effective communication of all participants in the educational process; the conventional way of obtaining an education is drastically different from educational communication [3]. Virtual educational environment, parameters provide feedback (high-level

interaction); multiple opportunities for different types of responses; diversity language (information disclosure tools); personal orientation.

Virtual educational environment (from a technical standpoint), an information space for the interaction of participants in the educational process, created using information and communication technologies, includes a set of computing tools and technologies that allow managing the content of education and the communication environment of participants [12].

Virtual learning environment (in organisational and cross-cutting aspects) is a comprehensive tool for self-improvement, correction of behaviour, actions of participants in the communication process, used depending on the development of the situation (including the gradual establishment of effective relationships, improving the mastery of more complex types of relationships) is a communication system that promotes interaction between the teacher, student, and other participants in the educational process [9]. Virtual educational environment is fast, multi-level, and multifunctional for entertainment: innovative and conventional technologies specific to the interaction of participants in the educational process within the framework of an open asynchronous model of individual learning; information resources: databases, information, libraries, materials for e-learning, etc.; with modern programmes: software, electronics, communications. Virtual educational environment, its effectiveness: information and training (educational information is presented in various forms); communication (training is provided in dialogue form with participants in the educational process); administrative control (comprehensive measures to be taken to control the level of knowledge, skills, and management) [13].

In virtual educational environment, the role of a teacher is [10] organiser of the educational process, cognitive and creative activity of students, joint activity of students; performer of educational activities in a virtual environment involving innovative technologies (introduction to training; online consultations; participation in forums, blogs, web assignments, conversations; training in the creation of an integrated educational environment, etc.); author and developer of an electronic training course; consultant of a professional pedagogical organisation for training and post-secondary education; virtual psychologist who creates a pleasant learning environment; designer who develops forms of organisation of educational processes and actions, the most relevant to the purposes and content of the course being studied, often independently; predictor of the results of actions who establishes their sequence in the learning process, according to which strategies and tactics of learning, development or developmental activities will be determined; colleague and employee (within the framework of innovative courses aimed at professional teachers using a virtual educational environment); student in pedagogical activity through self-study and mutual training of teachers and students, which is a sign of innovative learning within an open model of lifelong learning.

The main advantages of the virtual educational environment today are [2]:

1. Flexibility (studying in a convenient place, as the entire training cycle is provided using Internet technologies), the distance from the place of study, the university is not an obstacle to an effective educational process.

2. Training at a convenient time. Each person has their own biological rhythm and depending on it, it is possible to choose and change the time of classes: one is more productive early in the morning, and the other is more productive late in the evening. Learning at one's own pace and rhythm. The ability to arrange the learning process to create one's own didactic material: read a section of lectures, seminars, recheck oneself to enter a new, previously saved course, etc. Simultaneously using virtual lessons with a teacher.

3. Focusing on specific sections, repeating each section, module as many times as necessary.

4. Individual communication with the teacher. Through technical and interactive interaction, the learning process in a virtual educational environment allows understanding the importance of anthropocentrism and objectivity in the education system.

5. Modularity: from a series of autonomous courses-modules, the programme is developed individually or in accordance with the requirements; modules are developed considering the age, experience, skill level, and quality requirements of teachers.

6. Cost-effectiveness: student costs associated with the training system should be reduced since educational spaces, time, and methods of characterisation are most often used.

7. The new role of the teacher. New opportunities: preparation of an educational and methodological complex, placement of materials in a virtual educational environment; for introduction, an organisational lesson explains how training takes place in a virtual educational environment and allows teachers to get acquainted with the course content, perform tasks, participate in forums, communicate, and much more; training in the conditions of learning future professional activity in an educational environment; monitoring the effectiveness of mastering material for teaching students; checking and monitoring the completion of tasks for independent work of a student; participation in collective discussions, forums, and chats, webinars, web tasks; summary discussions, answers to new questions; communication with teachers through forums, rapid learning systems communication, Skype, etc.; analysis of the results of the given tasks; professional-pedagogical support for all subjects of the education system, etc.

8. Practical use of the innovative potential of the virtual educational environment: provision of the educational process with the necessary materials; feedback between the teacher and the student; exchange of information about management in the education system; access to international information networks for communication, professional-pedagogical support, control of information assimilation; virtual educational environment becomes primarily a working environment and educational innovation; the ability to apply the skills acquired using information, quickly evaluate the results of activities and feel the benefits of learning using modern tools and technologies [14; 15].

9. Interaction: adaptation to a new form of education and understanding of using the innovative potential of the virtual educational environment in constant communication between students-teachers, teachers, administrators; dependence of information exchange between students and systems in general; creation of a system of diverse interaction.

10. Productivity and efficiency of the educational process. Determined by the independent and conscious choice of course teachers, guided by teachers' estimation of their professional skills and the real need for specific professional knowledge, skills, and abilities to be used in pedagogical practice, the effectiveness of this type of training is incomparably higher than that of other types.

11. Individualisation. Since different learning models are designed for teachers with or without education, with more or less teaching experience, with or without skills in a virtual educational environment, general learning focuses on teaching the basic levels of learning and the needs of students. This approach also allows students to combine their studies with their main professional activity.

12. Motivation. Due to the fact that through the interaction using the virtual educational environment the student can be physically isolated from the school and be outside the visual control of the teacher, in order for the student to have motivation, it is necessary to show self-discipline, diligence, ability and desire to work independently. Since students are teachers who need to improve their professional skills, their own motivation and desire to master the innovative potential of the virtual educational environment is sufficient to ensure the effectiveness of training. As the virtual educational environment is full of information, it is a kind of educational potential with which the teacher creates and maintains hope before trying to understand the students' aspirations, and then offers them information through which motivation is enriched and stimulated.

13. Student events. Virtual learning environment promotes active and dynamic, mental, and emotional participation of students in the learning process, involves all feelings in the work, causes reactions, questions, offers choices, makes analysis, summarises, tracks, etc., provides active participation in learning through various correctly selected activities.

Virtual educational environment and its procedural aspects of learning. The technology of teaching in a virtual educational environment is based on the use of the Internet: the web resource of a state educational institution provides students with educational materials and materials for constant interaction with the administrator, teacher, and teacher of the virtual educational environment; training is conducted in the appropriate section of web resources; the main participants in the educational process are a teacher in a virtual educational environment, a student, a teacher, and a network administrator. According to many researchers, the virtual learning environment is an open learning architecture with moving purposes, content, methods and forms of organisation, consisting of communication, information, and physical space.

One of the most important ways of learning when using a virtual educational environment is video conferencing (this is a form of network educational audio-visual interaction between all participants of the educational

process using network audio-video technologies). Video conferencing brings indirect communication closer to direct communication, thereby increasing the productivity of teacher-teacher interaction.

Video conferencing functions [16]: point-to-point mode (when video transmission is possible with only one participant) in programmes such as Messenger and Skype; or mode when you can broadcast video to multiple participants. Advantages of video conferencing: versatility – does not require special equipment; accessibility – the real cost of organised communication (registration in the system is free, the client application is free, incoming calls are free); video conferencing quality compared to standard communication lines; user interface does not require any special knowledge; multipoint communication between subscribers of email addresses; mobility – listeners can communicate with each other from anywhere, only Internet access is required. Video conferences, types of conferences: standard conference for two users; group conference with several users at once; transfer session from one user to many sources [17].

The rules of dialogue in a virtual educational environment [18]: the transmitted information should be, as far as possible, definitive, without contradictions and/or ambiguous information; the most important information should not be hidden to avoid discomfort or anxiety in the system; there should be a desire to learn more about how others understand our actions, how they react to our statements; in writing, all major connections and opinions must be identified and reflected, therefore a more systematic and coherent statement is needed; in writing, everything should be understood solely from the standpoint of semantic content, context, no speculation and humiliation; written speech requires special thinking, flexibility, and awareness. From the standpoint of verbal communication, the interlocutor helps to regulate speech. Direct contact with the interlocutor in a conversation quickly discloses misunderstandings; the listener's reaction involuntarily directs one's speech in the area necessary for the speaker, forcing one to go into more detail, clarify, etc. Teachers must define the structure of their speech in such a way that the reader can understand.

Discussion

The philosophical concept of the word spirituality is based on morality since it includes cognitive, moral, and aesthetic principles. Spirituality as a psychological category belongs to the highest substructure of a person, regulates activities and relationships with other people. Based on this, the psychological characteristics of spirituality are values, value orientations, moral traits, and motives of behaviour [19; 20].

Spiritual culture is an awareness of the value of the individual, which determines the moral relations and the need for spiritual development [14]. Undoubtedly, the spiritual and moral improvement of society and, above all, children and youth is a pedagogical problem. The role of the education system in solving this problem is exceptional since it can be a pedagogical factor and a mechanism capable of reaching all layers of society in the targeted educational process. Thus, educational institutions should become a cultural and educational centre for the entire

population aimed at educating a real citizen who is able to organise personal life.

Primary school is an appropriate time to get acquainted with the philosophy of life, since at this age a child has a deep interest in the surrounding world, society, personality, human relations, etc. Modern primary school teachers should understand that their role is not only to teach children to read, write, and count, but also to teach them to become good people, make them strive for spiritual growth. The willingness of teachers to spiritual and moral education is a dynamic personality trait that includes the study of psychology and pedagogy in the spiritual and moral education and orientation of the personality, which helps to attract students to the system of moral and spiritual values, creates conditions for research and personal development [21; 22]. The use of a virtual educational environment in educational settings can enhance culture in relation to the outside world and educational effect. If the teacher successfully identifies and uses the educational and developing potential, students develop a humanistic view of the world: an active life position, a high level of moral education, such qualities as responsibility and a sense of duty manifest themselves [1]. Children are educated with responsibility for the development of their own personality, an attitude towards lifelong self-education is formed.

A computer is an informational and educational tool. Children participate with interest in the search for information and the preparation of messages, abstracts, reports, brochures, children's books, which also contributes to the development of a person's spiritual and moral personality. Events using information technologies not only expand and strengthen the acquired knowledge but also considerably increase the creative potential and intellectual potential of students, developing a spiritual orientation.

The use of information technology can transform the teaching of conventional academic subjects, rationalise child labour, optimise understanding and memorisation of educational material, increase children's interest in learning, the ability to learn and, certainly, the desire to always study at a higher level. The use of information technology allows solving the following tasks: an acquaintance of students with universal cultural values, the viewed and commented slides, the built-in sound become recognisable in the further process of the cultural socialisation of the individual; teaching students has a historical approach to phenomena since pedagogical commentary on them has a mandatory historical context.

Attracting students' attention to certain moral and educational concepts by choosing a visual series in each conversation is not based on external classification (authorship, historical epoch, etc.), but mainly on presenting materials chosen according to purposes and objectives. Deeper assimilation of moral values accompanied by a memorable visual series with the activation of associative thinking becomes especially relevant in the conditions of the almost complete absence of moral guidelines and images in the modern youth subculture [3]. Consolidation of the material can be conducted by selectively restoring previously reviewed slides using the functions of a computer programme. Advantages of using a virtual educational environment for

the development of spiritual culture: accessibility of reproduction of visual and audio materials; unlimited ability to add information to the database; modern technologies provide great opportunities for the exchange of experience; availability of illustrative material in any field of culture and science; ample opportunities for adapting materials to a specific audience; minimal financial costs for illustrative material.

Students should explain not only the laws of science, but also show that the progress of civilisation does not consist in the creation and accumulation of material goods, but in the gradual separation of opposite moral principles – good and evil. Regardless of the time, there can only be a moral goal, which means that only the moral meaning of progress is possible: the upbringing of a harmoniously developed personality, physically and morally. It is necessary to constantly remind students that the use of information technologies should be evaluated and understood, firstly, in the spiritual and moral aspect. These principles fulfil the task of educating the younger generation to be kind, honest, and hardworking [23].

A virtual educational environment for the development of spiritual culture will increase the productivity of the educational process only if the teacher is well-aware and understands the psychological foundations of their application. Clarity, if it means all possible ways of influencing the student's senses, is called by many researchers the golden rule of didactics and requires that everything imaginable is perceived by the senses. It is known from modern psychology that visual analysers have considerably higher throughput than auditory analysers. The eye can perceive millions of bits per second, the ear can only perceive tens of thousands. According to psychological studies, information perceived visually is more meaningful and is better stored in memory [3].

The highest quality of assimilation is achieved through the direct combination of the teacher's words and the image presented to students during the educational process. For its part, the virtual educational environment for the development of spiritual culture allows using the abilities of visual and auditory analysers of students in a better way. This primarily affects the initial stage of acquiring knowledge – sensation and perception. In the educational interaction of teachers and students, one of the most urgent and difficult problems is to attract and retain the attention of children throughout the lesson. Every teacher should be able to attract the student's attention to the right subject. The teacher is instructed in several ways to keep the children's attention: to strengthen the impression, to demand attention directly, to take measures against distraction and ensure interesting learning [8].

These tools are also inherent in video materials. When using a virtual educational environment for the development of spiritual culture, it is necessary to consider the following psychological features of attention. The focus of shooting is to keep one's attention on a particular subject. Attention stability, which, even when actively working with the studied subject, can last from 15 to 20 minutes in children, and then requires switching attention, a short rest. In children, this skill is underdeveloped, so the main image on the screen attracts the most attention, this fact should be focused on since the student loses many necessary functions against the general background. The

knowledge gained through the video allows one to rise to a higher level of knowledge – concepts and theoretical conclusions. The diverse and inexhaustible possibilities of the virtual educational environment for the development of spiritual culture for many teachers create gravity for them, and then these means turn into the goal itself. “Measure is a treasure” – this rule applied to pedagogy can be called the second golden rule of education and training. Any excellent tool or method is doomed to failure if the teacher loses a sense of moderation when using them [24].

The use of information technologies in the development of spiritual culture in practical work is more complex. A computer is a modern educational tool for organising educational and extracurricular activities. Multimedia – multifunctional computers with software and hardware that allow one to play audio and video information. Currently, classrooms are equipped with a TV, computer, printer, and video recorders. Modern technologies allow (when using a small portable set of equipment: a laptop, a multimedia projector, a display) conducting a multimedia conversation in the school classroom and in a large hall. A computer monitor is used for broadcasting to a small audience, and a large screen is used for a large group. The use of masterpieces of world and Russian instrumental and choral classics in the presentation enhances the emotional effect. The videos included in the conversation also facilitate solving educational problems [25; 26].

The use of computer technologies in the development of spiritual culture allows establishing a conversation and choosing visual and audio materials adapted to a specific audience: a small classroom or a crowded hall, a school meeting, or an organisational conference of teachers. Multimedia presentation is the fastest and most modern way to convey any information. It allows clearly, vividly, quickly, and interestingly submitting and, accordingly, getting the information that is needed. Considerable attention has been paid in recent years to the use of multimedia technology, which is an interactive information technology combining text, graphics, sound, and video [27-29].

In modern life, multimedia presentations have a very wide range of applications. Commonly, such types of multimedia presentations as illustrated dictionaries, photo galleries, animated diagrams, catalogues are used. Sometimes presentations contain various video clips and are voiced by professional speakers. It is worth noting the following advantages of multimedia presentations: the use of various multimedia presentations will enliven any material and simplify the perception of the presentation; dynamic and thoughtful presentation of any developed materials in the presentation raises the interest of students; multimedia presentations created for a specific event will allow quickly getting acquainted with the most important information; developed presentations can be used as a handout or illustrative material [4; 30].

The development of a multimedia presentation is primarily the creation of its basis, an animated video containing the necessary information in the form of text, images, diagrams. There are a number of programmes that help the user prepare a speech using a visual aid in the form of a multimedia presentation. The main package for creating such presentations is the MS PowerPoint package,

its main purpose is to assist the user in preparing a presentation in the form of a set for making presentations in a programme format. This programme provides absolutely unlimited possibilities for varying any educational subjects. It allows creating an animated presentation with pictures, photos, video clips, sound, animated special effects. Therewith, processing results obtained in other virtual programmes can be used, for example, tables from other programmes, such as Word, sheets and diagrams from Excel, organisational charts from the Microsoft Organisation Chart application, and many others [6].

Conclusions

Summing up the entire study, it can be concluded that theoretical analysis has allowed identifying the importance of using the virtual educational environment in the development of the spiritual culture of modern primary school teachers as a quality that determines attention to the creation of semantic space, as a means of mastering the fundamental values of life and professional activity. Based on this, the spiritual culture of the future primary school teacher becomes a professionally important personal quality, characterised by an emphasis on spiritual values in the personal development and interaction of individuals. Considering the use of the virtual environment in the pedagogical activities of primary school teachers, it is possible to identify indicators of spiritual culture acquired using such technologies: cultural competence, spiritual orientation, spiritual and practical activity. Spiritual and pedagogical mentoring provides knowledge of the spiritual component of human culture, the use of spiritual and cultural knowledge in personal development, life, professional activity, and the possibility of achieving goals in the field of spiritual life, analysing the results of activities.

Based on the analysis of the concepts considered, the development of the spiritual culture of future primary school teachers using a virtual educational environment

involves the integration of all knowledge about the values of spiritual culture, spiritual needs, and experience of spiritual development of the teacher's personality. Therefore, the spiritual culture of the future primary school teacher using a virtual educational environment is advisable to be developed in the higher education system of the Republic of Kazakhstan in the following areas: the study of disciplines that cover the basic concepts of spiritual culture, the features of spiritual development of the teacher; the inclusion in the content of the virtual educational environment of the studied psychological and pedagogical disciplines about the values of the spiritual life of a person; the development of the spiritual culture of the future primary school teacher should be initiated considering modern educational approaches. Furthermore, modern research on similar subjects uses an integrated approach to the development of the spiritual culture of the future teacher as an indicator of the maturity of the entire system of personal qualities, which is productively implemented in professional activities.

Notably, the main disadvantage is the difficulties of forming the spiritual culture of the future primary school teacher due to the inability to properly master cultural values, the content of spiritual activity, the transfer of knowledge in the learning process, and the assimilation of new modern technologies. It is important to remember that one of the most important principles of spiritual and moral education is continuity – an interconnected process of lifelong learning, education, and human development. The work on the spiritual and moral education of the younger generation should proceed as a continuous process, not episodic, but holistic and systematic.

Acknowledgements

None.

Conflict of Interest

None.

References

- [1] Bidin S, Mariapan M. Nature conservation volunteerism among school students. *Malays Forest*. 2020;83(1):48-63.
- [2] Abaci S, Robertson J, Linklater H, McNeill F. Supporting school teachers rapid engagement with online education. *Educ Tech Res Develop*. 2021;69(1):29-34.
- [3] Boström L. Teachers' perceptions of gender differences – what about boys and girls in the classroom. *Int J Learn, Teach Educ Res*. 2018;17(4):28-44.
- [4] Elizarov E, Ziv Y. Preschool children's social information processing mediates the link between the quality of the parent-child relationship and the child's learning difficulties. *Int J Env Res Publ Health*. 2021;18(4):1972.
- [5] Kılınç AÇ. Investigating the factors affecting teacher leadership: A qualitative study. *Educ Admin: Theor Pract*. 2019;25(3):419-468.
- [6] Pavolini E. How schools directly contribute to the reproduction of social inequalities. Evidence of tertiary effects, taken from Italian research. *Polit Social*. 2020;7(1):149-176.
- [7] Prayitno HJ, Utami RD, Saputri DY. Primary teachers perspectives on teaching critical reading incorporating multimodal text. *J Physic: Conf Series*. 2021;1842(1):012034.
- [8] Salazar OG, Alarcón-Espinoza M. Evaluation of the positive effects of a multimodal treatment for children with attention deficit hyperactivity and primary health care from the perspective of female users. *Interdisciplin*. 2019;36(1):237-256.
- [9] Smolkowski K, Ogden T, Melby-Lervåg M. Validation of the elementary social behaviour assessment: Teacher ratings of students social skills adapted to Norwegian, grades 1–6. *Emotion Behav Difficult*. 2018;23(1):39-54.
- [10] Vorkapić ST. Students attitudes toward education of gifted children and competencies as future teachers. Pp. 19-42 in J. Cannaday (Ed.), *Curriculum Development for Gifted Education Programs*. Pennsylvania: IGI Global; 2018.

- [11] Zembylas M. Conceptualizing and contextualizing the concept of refugee in education: A phenomenological study of teachers and students perceptions in a conflict-affected society. *Diasp, Indige, Minor Educ.* 2019;13(2):97-112.
- [12] Kerimkhulle S, Koishybayeva M, Alimova Z, Baizakov N, Azieva G. Created and Realization of a Demographic Population Model for a Small City. *Proceed Eng Sci.* 2023;5(3). DOI: [10.24874/PES05.03.003](https://doi.org/10.24874/PES05.03.003).
- [13] Kerimkhulle S, Alimova Z, Slanbekova A, Baizakov N, Azieva G, Koishybayeva M. The Use Leontief Input-Output Model to Estimate the Resource and Value Added. In: *SIST 2022 - 2022 International Conference on Smart Information Systems and Technologies, Proceedings*. Nur-Sultan: Institute of Electrical and Electronics Engineers. 2022. DOI: 10.1109/SIST54437.2022.9945746
- [14] Szczepanski A. Mobile augmented reality and outdoor education. *Built Env.* 2021;47(2):223-242.
- [15] Kerimkhulle S, Aitkozha Z, Saliyeva A, Kerimkulov Z, Adalbek A, Taberkhan R. Using Technical and Structural Coefficients of Economic Statistics to Equalize Flows of Input-Output Table. *Lect Notes Networks Syst.* 2023;596:501-511. DOI: 10.1007/978-3-031-21435-6_44
- [16] Mosito C. Experiences of teachers in implementing inclusion of learners with special education needs in selected Fort Beaufort District primary schools. *Cogen Educ.* 2019;6(1):1703446.
- [17] Kerimkhulle S, Kerimkulov Z, Aitkozha Z, Saliyeva A, Taberkhan R, Adalbek A. The Classification of Vegetations Based on Share Reflectance at Spectral Bands. *Lect Notes Networks Syst.* 2023;724:95-100. DOI: 10.1007/978-3-031-35314-7_8
- [18] Fauzi A, Rifai H. Practicalities in the development of integrated science textbook of junior high school drought theme using problembased learning. *J Physic: Conf Series.* 2019;1185(1):012056.
- [19] Tunçer BK, Demir MK. Primary school teachers views on constructive classroom management. *Int Electron J Element Educ.* 2016;8(3):363-378.
- [20] Zholmagambetova B, Mazakov T, Jomartova S, Izat A, Bibalayev O. Methods of extracting electrocardiograms from electronic signals and images in the python environment. *Diagnost.* 2020;21(3):95-101.
- [21] Aarts B, Smith-Dennis E. Using corpora for English language teaching and learning. Pp. 163-175 in D. McIntyre and H. Price (Eds.), *Applying Linguistics: Language and the Impact Agenda*. London: Routledge; 2018.
- [22] Abildina SK, Asetova ZB. Curriculum on the discipline “Fundamentals of spiritual culture of primary school teachers” for the specialty 6B01301 – Pedagogy and methods of primary education. Karaganda: KarSU Publishing House; 2020.
- [23] Sun J, Bieliatynskiy A, Krayushkina K, Akmalidinova O. Research of properties on graphite conductive slag in asphalt concrete. *E3S Web Conf.* 2020;175:11015.
- [24] Fernández J. Design and initial validation of a questionnaire on prospective teachers’ perceptions of the landscape. *Educ Sci.* 2021;11(3):112.
- [25] Gillies RM. Teachers and the teaching of self-regulated learning: The emergence of an integrative, ecological model of SRL-in-context. *Educ Sci.* 2020;10(4):98.
- [26] Tanaka M, Desai D, Fujiwara Y, Arataki S, Latka K, Sake N, Liang W, Kodama Y, Miyamoto Y, Yamauchi T. Effect of an Adjustable Hinged Carbon Fiber Operating Table on Sagittal Alignment of the Lumbar Spine. *Appl Sci (Switz).* 2023;13(1):138.
- [27] Aas M. Understanding leadership and change in schools: Expansive learning and tensions. *Int J Leadersh Educ.* 2017;20(3):278-296.
- [28] Latka K, Kozłowska K, Waligora M, Kolodziej W, Latka D. Effect of DiscoGel treatment of the intervertebral disc at MRI. *Clin Radiol.* 2023;78(12):928-934.
- [29] Bieliatynskiy A, Yang S, Pershakov V, Shao M, Ta M. The use of fiber made from fly ash from power plants in China in road and airfield construction. *Construct Build Mater.* 2022;323:126537.
- [30] Mazakov T, Wójcik W, Jomartova S, Karymsakova N, Ziyatbekova G, Tursynbai A. The stability interval of the set of linear system. *Int J Electr Telecommun.* 2021;67(2):155-161.

Використання цифрових технологій у розвитку духовної культури вчителів початкової школи

Каракат Нагимжанова

Університет "Туран-Астана"

010013, вул. Дукенули, 29, м. Астана, Республіка Казахстан

Жаннур Асегова

Карагандинський університет імені Є.А. Букетова

100028, вул. Університетська, 28, м. Караганда, Республіка Казахстан

Шнар Деміссенова

Костанайський регіональний університет імені А. Байтурсинова

110000, вул. А. Байтурсинова, 47, м. Костанай, Республіка Казахстан

Жанна Ахмадієва

Міжнародний університет Астана

020000, проспект Кабанбай Батира, 8, м. Астана, Республіка Казахстан

Балсулу Тасбулатова

Університет "Туран-Астана"

010013, вул. Дукенули, 29, м. Астана, Республіка Казахстан

Анотація

Актуальність. Актуальність даної статті обумовлена гнучким розвитком освітніх можливостей віртуального середовища в даний час. З раннього віку кожен учень має вільний доступ до будь-якої інформації в Інтернеті, враховуючи цей факт, формується пріоритетний напрямок у підготовці педагогів, що відводить роль віртуальному спілкуванню в розвитку особистості, починаючи з початкової школи. У статті актуалізовано зміст розвитку духовної культури сучасного вчителя початкових класів на особистісному та професійному рівнях. У дослідженні розглядаються ціннісні засади професійної діяльності вчителя початкових класів.

Мета. Мета дослідження полягає в теоретичному обґрунтуванні та розробці методичних положень щодо використання віртуального освітнього середовища в практиці роботи вчителя початкових класів. Стаття присвячена проблемі підготовки вчителів початкових класів до використання віртуального освітнього середовища у своїй практиці для розвитку їх духовної культури засобами віртуального освітнього середовища.

Методологія. Для досягнення поставленої мети було визначено відповідні завдання, а також методи їх вирішення (зокрема, методи аналізу та моделювання).

Результати. У результаті проведеного дослідження було визначено основні проблеми використання віртуального освітнього середовища, охарактеризовано позиції відбору матеріалу для розвитку духовної культури засобами віртуального освітнього середовища у практиці роботи вчителів початкових класів.

Висновки. Обґрунтовані теоретичні положення і висновки дослідження "Використання віртуального освітнього середовища у розвитку духовної культури вчителів початкових класів" створюють передумови для їх практичного впровадження в освітній процес вищих навчальних закладів Республіки Казахстан, що дозволить вирішити питання відбору умов, методів і можливостей навчання вчителів початкових класів з використанням віртуального освітнього середовища для розвитку духовних аспектів.

Ключові слова: духовна культура; вчителі початкових класів; віртуальне освітнє середовище; духовні аспекти.