

## Formation of a spiritual worldview in students of art education specialties with the help of ethno-design technology

**Gadilbek Alzhanov** <sup>\*1</sup>, Abai Kazakh National Pedagogical University, Institute of Arts, Culture and Sports, Dostyk Avenue 13, Almaty, Kazakhstan <https://orcid.org/0000-0001-9552-5181>

**Akmaral Smanova** <sup>2</sup>, Abai Kazakh National Pedagogical University, Institute of Arts, Culture and Sports, Dostyk Avenue 13, Almaty, Kazakhstan <https://orcid.org/0000-0003-3547-4743>

**Aydin Zor** <sup>3</sup>, Akdeniz University, Antalya, Türkiye Pınarbaşı, Dumlupınar BLVD, 07058, Antalya, Turkey <https://orcid.org/0000-0003-1338-3445>

**Zoya Rabilova** <sup>4</sup>, Abai Kazakh National Pedagogical University, Institute of Arts, Culture and Sports, Dostyk Avenue 13, Almaty, Kazakhstan <https://orcid.org/0000-0002-6066-6969>

**Yerzhan Ryssymbetov** <sup>5</sup>, Khoja Akhmet Yassawi International Kazakh-Turkish University Sattarhanov avenue 29, Turkistan, Kazakhstan <https://orcid.org/0000-0003-4115-9387>

**Urazbay Karabalin** <sup>6</sup>, Kh. Dosmuhamedov named Atyrau University, Studenchesky Avenue, 1, Atyrau, Kazakhstan <https://orcid.org/0000-0002-7471-7851>

### Suggested Citation:

Alzhanov, G., Smanova, A., Zor, A., Rabilova, Z., Ryssymbetov, Y., & Karabalin, U. (2022). Formation of a spiritual worldview in students of art education specialties with the help of ethno-design technology. *World Journal on Educational Technology: Current Issues*. 14(1), 189-199. <https://doi.org/10.18844/wjet.v14i1.6715>

Received from October 31, 2021; revised from November 15, 2021 accepted from; January 05, 2022.

Selection and peer review under responsibility of Prof. Dr. Servet Bayram, Yeditepe University, Turkey.

©2022 Birlesik Dunya Yenilik Arastırma ve Yayıncılık Merkezi. All rights reserved.

### Abstract

The aim of this study is to evaluate student views on the creation of spiritual well-being of art education residency students with the help of ethno-design technology. This research was designed in accordance with the qualitative research method. In order to collect data in the research, a semi-structured interview form was prepared by the researchers. The study group of the research consists of 20 graduate students studying in the field of art education at various universities in Kazakhstan in the 2021–2022 academic year. In the research, it was concluded that art education residency students frequently use ethno-design technologies in art education and find ethno-design technologies important in terms of art education. In addition, as a result of the research, it was observed that the art education residency students were undecided about their spiritual well-being and the majority of the students stated that ethno-design technology had a positive effect on their spiritual well-being. In order to popularise the use of ethno-design technologies by art education specialisation students, the education curricula should be enriched and seminars should be organised to increase the spiritual well-being of students.

Keywords: Ethno-design technology, art education, spiritual well-being, students of art education specialties

\* Address of correspondence: Gadilbek Alzhanov, Abai Kazakh National Pedagogical University, Institute of Arts, Culture and Sports, Dostyk Avenue 13, Almaty, Kazakhstan,  
Email address: [alzhanov82@gmail.com](mailto:alzhanov82@gmail.com)

## 1. Introduction

Art is an ancient phenomenon that has existed with humans. In the ages when even writing was not known, human beings found a way to express themselves with colours, lines and shapes. Art, which has developed from the beginning to the present, has become the most important layer of human creativity. Rapid changes and developments in the age of science and technology we live in have also changed the structure of societies. Accordingly, it is not just art. The aims and methods of art education have also changed. Today, technological developments necessitate the use of contemporary technological tools and methods, as well as the ongoing classical understanding in art education (Turker and Sabahat, 2011).

### 1.1. Theoretical and conceptual framework

The fact that traditional methods are not sufficient in the field of education in our age shows that it will be beneficial to benefit from computer technology in the field of education. The chance of the young generation after 2000 is to catch up with the developing technology and grow up in the computer age. Innovations brought about by technology such as the Internet and computers are important in the preparation of auxiliary programmes in order to provide a return to all their interests and needs in their education life.

It is stated in the sources that technologies such as computers and printers have been used in art education since the mid-1980s (Hubbard & Greh, 1991). According to Dolunay (2016), using the Internet to follow worldwide artistic events, making visual designs by making use of technological opportunities in art education, develops and expands students' perspectives on art. The use of technology has become an indispensable necessity in the field of art education, as it is in every field.

In 21st-century art, the number of artists and art educators who are close to technology and computers has increased considerably. Technology, which has a great place in life today, has taken its place in all fields of art, and contemporary art has become not only a tool of production, but also its environment and media. The use of art-oriented technology by art educators, especially artists, has increased. After centuries of cave paintings, human beings have started to produce works of art with lights and pixels, as well as paints obtained from nature (Turkmenoglu, 2014).

The Internet offers a new tool and a new environment with unique features for arts education (Dempsey, 2002). It has become very ordinary to see the effects of technology on art at certain times and in certain situations. However, nowadays, technological art concepts have emerged by going beyond being influenced and technology itself has become an art medium (Shanken, 2001).

For the general definition of digital art, we can say that it is the way of producing a work of art by using the computer, brought about by technology. It can also be defined as the understanding that digital technology is involved in its construction and reaching the audience. Like the innovations that digital art brought to the field of art, technology has brought a new form of expression to the field of art and provided new areas for young people. It is more difficult to educate these young people who are introduced to a new way of expression in an old way of expression than to teach them a new way of expression. This shows that digital art education is important in art education. 'The use of technology such as smart boards and computers has benefits such as increasing motivation in the use of visual and auditory materials, attracting attention, saving time in the processing of a subject, realising plastic thoughts and simplifying and clarifying complex thoughts' (Asker, 2018).

Spirituality is a common human denominator that can be expressed in all religions and cultures. Spirituality has been studied by many researchers recently and there has been controversy over its definition. Helminiak (2001) defines spirituality as the pursuit of one's best and a presupposition that the guide is within the individual. According to this definition, the power to find the meaning of life is within man. The concepts of spirituality and religion are often confused with each other and used interchangeably. Spirituality is often used synonymously with religious belief; however, spirituality is a broader and more comprehensive definition that helps people to add ultimate meaning to their

lives and gives meaning to life according to their personal values (Bekelman et al., 2007). From this point of view, the formation of a spiritual worldview in art education specialisation students with the help of ethno-design technology is considered important.

### *1.2. Related research*

Therhault (2009) focused on visual culture as the main subject of theoretical discussions in the field of art education in his study titled 'The New Age of Art, The Effects of Visual Culture and Technology on Students' Attitudes About Art and Aesthetics'. He states that visual culture studies have a significant impact on students' experience of their environment, and this impact can often be defined by the role played by technology and mass communication in the teaching, creation and evaluation of art. Since theorists do not experience the concept of visual culture like students, this research explores the perspectives of young people.

Ghods (2007), in his study titled 'Painting with Pixels: Computer as a Medium in the Learning and Teaching of Art', stated that the inadequacy of digital education in teacher training also causes a pedagogical inadequacy in teaching computer art in schools.

Sengul (2006) worked on 'The Use of Technology in Visual Arts and Its Contribution to Art Education' in his research. This study aims to reveal how the concept of technology, which is effective in every field, has an effect on art education. As a result, it is possible to benefit from technology in the field of art as well as in every field. It has been concluded that technologically supported art education subjects should be added to the art education curricula.

Wilks, Cutcher and Wilks (2012), in their study called 'Digital Technology in Visual Arts Classrooms', stated the technology and tools included in visual arts courses, the use of the Internet and information and communication technologies.

Liu's (2007) study titled 'Digital Art Teaching in Art Teacher Training: Recommendations for Taiwanese Art Teacher Candidates in the Digital Age' aimed to gain an in-depth understanding of computer art learning and teaching in art teacher training. This study sheds light on how the instructors in art teacher training institutions will structure the content and aesthetic education in addition to technical education in computer art courses, as well as the curriculum planners in higher education to add digital technologies to the curricula of art education institutions.

In addition, there are studies in the literature in which students' spiritual well-being is also evaluated. Gencer et al. (2021), in their study, aimed to determine the relationship between university students' spiritual well-being and gender perception. At the end of the research, it was determined that the students' spiritual well-being levels were high and their perception of gender was positive. Yikilmaz and Demir-Gudul (2015) stated in their study that university students' level of meaning in life is a significant predictor of life satisfaction, which is a concept closely related to resilience.

### *1.3. Purpose of the research*

The aim of this study is to evaluate student views on the creation of spiritual well-being of art education residency students with the help of ethno-design technology. Depending on this purpose, answers were sought for the following sub-objectives:

1. What are the views of art education residency students regarding their tendencies to use ethno-design technologies?
2. What are the views of art education residency students about their spiritual well-being?
3. What are the views of art education residency students on the effect of ethno-design technology on their spiritual well-being?

## 2. Method and Materials

This section contains information about the research method, data collection tools and participants.

### 2.1. Research method

This research was designed in accordance with the qualitative research method. The qualitative research process consists of the stages of realising the problem, identifying the details by analysing the problem, choosing the approach to problem-solving, designing the study, data collection, classification and analysis of the data, interpreting the data and reporting the data (Creswell, 2002). Accordingly, in this study, the views of art education residency students on the creation of their spiritual well-being with the help of ethno-design technology were evaluated in accordance with the qualitative research process.

### 2.2. Participants

The study group of the research consisted of postgraduate students studying in the field of Art Education at various universities in Kazakhstan. The study group of the research was formed on a voluntary basis. 20 students studying in the field of art education in 2021–2022 participated in the research. The study group of the research was determined by the simple random sampling method. In random sampling, also called simple random sampling, every possible combination of elements in the universe has an equal probability of being included in the sample. In this sample selection, the researcher assigns a number to each item within the framework of the sample, which is usually created as a list. Then, the researcher generates random numbers as many as the number of items he wants in the sample, or uses a computer programme or random number lists, to randomly select items from the list he has created (Kerlinger, 1966). 12 students in the study group formed were girls and 8 were boys.

### 2.3. Data collection tools

In order to collect data in the research, a semi-structured interview form was prepared by the researchers. In the process of developing the semi-structured interview form, primarily a literature review was conducted. After the literature review, interview questions were formed. Some criteria were taken as a basis in the formation of the interview questions. These criteria are to write easily understandable questions, to write focused questions, to ask open-ended questions, to avoid directing, to avoid asking multidimensional questions, to prepare alternative and final questions and to organise the questions well (Bogdan & Biklen, 1997). The interview questions created in line with these criteria were presented to experts for their opinions. The interview questions were evaluated by three experts apart from the researchers. In addition, questions were shown to two faculty members in the field of art education and they were asked if there were any unclear points. In line with the suggestions received from the opinions of the experts and faculty members, the interview questions were given their final form. Interview questions were converted into semi-structured interview forms and made ready for application. The semi-structured interview form is given in Table 1.

Table 1. Semi-structured interview form

<b>Part 1: Questions about the demographic characteristics of the students</b>				
Your gender:	Female ( )		Male ( )	
<b>Part 2: Questions about students' use of ethno-design technologies</b>				
<b>1. How often do you use ethno-design technologies in art education?</b>				
Always( )	Often ( )	Sometimes ( )	Rarely ( )	Never ( )
Your opinions:.....				
.....				

---

**2. Do you find ethno-design technologies important for art education?**

Very important ( ) Important ( ) A little important ( ) Unimportant ( ) Very unimportant ( )

Your opinions: .....

---

**Part 3: Questions about students' spiritual well-being**

	Absolutely I agree	I agree	I'm undecided	I Disagree	I strongly disagree
<b>3. I understood my life's purpose</b>	( )	( )	( )	( )	( )
<b>4. I can be rational in solving my problems</b>	( )	( )	( )	( )	( )
<b>5. I am confident in managing and improving my life</b>	( )	( )	( )	( )	( )
<b>6. I finish what I start</b>	( )	( )	( )	( )	( )

---

**Chapter 4: Questions about the impact of students' ethno-design technology on their spiritual well-being**

	Yes	No
<b>7. Do you think ethno-design technology has an impact on spiritual well-being?</b>		

Your opinions: .....

---

The semi-structured interview form consists of four parts. In the 1st part, there is a question about the demographic characteristics of the students; in the 2nd part, there are two questions about the students' use of ethno-design technologies; in the 3rd part, there are four questions about the spiritual well-being of the students; and in the 4th part, there is a question about the effect of the students' ethno-design technologies on their spiritual well-being.

*2.4. Data collection process*

Before the interview date, the students were contacted via email to explain the purpose of the research and an appointment was made from the students who agreed to participate in the research voluntarily. Care was taken to conduct face-to-face and one-on-one interviews. In line with the appointments received from the students, the appropriate environment was selected within the university where they studied, and the dates of the interviews were clarified. A voice recorder was used during the interviews. During the interview, the participants acted in accordance with the principles of the interview. Care was taken to ask the interview questions in order. During the interview, questions that were not understood by the students were repeated or questions were asked at the end. Interviews with students lasted 30–40 minutes. The process of completing the interviews with all students took approximately 4 weeks.

*2.5. Data collection analysis*

In this study, the content analysis method was used in the analysis of the data. Content analysis requires a more detailed examination of the collected data and reaching the concepts, categories and themes that explain this data. Content analysis focuses on collected data. Codes are extracted from the events and facts that are frequently repeated in the data set or that the participant emphasises heavily. One can go to categories from codes and to themes from categories. In short, data (codes) that are found to be similar and related to each other are interpreted by bringing them

together within the framework of certain concepts (categories) and themes. In content analysis, the content of participants' views is systematically separated (Bengtsson, 2016). In this direction, the answers given by the students to the questions in the semi-structured interview form are given in the findings section of the research. The direct answers of the students were included in the research by keeping their personal information confidential and giving a number to each teacher.

In addition, after the percentage distributions of the answers given by the students to the Likert-type questions in the semi-structured interview form were interpreted one by one, comments were made according to their arithmetic averages in general. The grading and interpretation of the average scores obtained in accordance with the 5-point rating scale used in the data collection tools are as follows: 1.00–1.80 never, 1.81–2.60 rarely, 2.61–3.40 sometimes 3.41–4.20 often and 4.21–5.00 always. Frequency (f), percentage (%) and arithmetic mean (X) distributions of the responses given to each of the options are presented in the form of tables.

### 3. Results

In this section, the answers given by the students participating in the research to the questions in the semi-structured interview form are included.

#### Students' answers to questions about their use of ethno-design technologies

Table 2 contains information about the frequency of using ethno-design technologies in art education by the art education residency students participating in the research.

Table 2. Frequency of students using ethno-design technologies in art education

Student opinions	Always		Often		Sometimes		Rarely		Never		Sum	
	F	%	F	%	F	%	F	%	F	%	F	%
<b>How often do you use ethno-design technologies in art education?</b>	5	25	8	40	5	25	2	10	-	-	2	10
<b>Arithmetic Mean</b>											3,8	

In Table 2, the answers of the art education residency students participating in the research on the frequency of using ethno-design technologies in art education were evaluated. 25% of the students answered always, 40% often, 25% sometimes and 10% rarely. When the arithmetic averages of the answers given by the students are taken, it is possible to say that they frequently use ethno-design technologies in art education.

'What is the frequency of your use of ethno-design technologies in art education?' Their answers to the question are as follows:

4: *Design technologies and art education are now intertwined. I always benefit from technology due to the education I have received.*

2: *It is not possible to separate art education from technology. Now, there are especially technological design trainings. I find the use of technology very attentive, especially in terms of ethnic design. I often use these technologies in my work.*

19: *I think that design technologies and ethno-design technologies should be used in art education. Depending on the work or research I will do, I can say that I use technology.*

11: *I think the use of ethnic design technologies in art is partially important, but I also think that art education has a technology-independent aspect. That's why I rarely answer.*

In Table 3, the status of finding ethno-design technologies important in terms of art education of the art education residency students participating in the research was evaluated.

Table 3. Students' finding ethno-design technologies important in terms of art education

Student opinions	Very important		Important		A little important		Unimportant		Very unimportant		Sum	
	F	%	F	%	F	%	F	%	F	%	F	%
<b>Do you find ethno-design technologies important for art education?</b>	4	20	7	35	6	30	3	15	-	-	2	10
<b>Arithmetic Mean</b>												3,6

In Table 3, the status of finding ethno-design technologies important in terms of art education of the art education residency students participating in the research was evaluated. 20% of the students answered very important, 35% important, 30% somewhat important and 15% unimportant. When the arithmetic averages of the answers given by the students are taken, it is possible to say that they find ethno-design technologies important in art education.

'Do you find ethno-design technologies important in terms of art education?' Their answers to the question are as follows:

13: *I find it very important. Because now, using technology outputs in art has become a requirement of our age.*

3: *The art of technology also affects technology. It is impossible to separate these two concepts from each other. For this reason, I find ethno-design technologies important in terms of art education.*

14: *Technology now exists in every aspect of our lives. We cannot think of art in isolation from technology. Although I do not see the use of ethno-technology in art education as the main element of education, I find it somewhat important.*

11: *I find every use of technology useful in design, but ethno-design is a field that depends more on people's creativity than technology. For this reason, I think ethno-design technologies are not very important in terms of art education. So it's unimportant.*

### Questions about students' spiritual well-being

In Table 4, the answers given by the art education residency students participating in the research regarding their spiritual well-being are evaluated.

Table 4. Students' views on their spiritual well-being

Student opinions	Absolutely I agree		I agree		I'm undecided		I do not agree		I strongly disagree		Sum		
	F	%	F	%	F	%	F	%	F	%	F	%	X
<b>I understood my life's purpose</b>	2	10	4	20	5	25	5	25	4	20	20	100	2,75
<b>I act rationally in solving my problems</b>	5	35	8	40	-	-	5	25	2	10	20	100	3,45
<b>I am confident in managing and improving my life</b>	4	20	9	45	1	5	5	25	1	5	20	100	3,50

<b>I finish what I start</b>	8	40	6	30	1	5	4	20	1	5	20	100	3,8
													0
<b>Overall Average</b>													3,3
													7

In Table 4, the responses of the art education residency students participating in the research to the items related to their spiritual well-being are evaluated. When the arithmetic averages of the answers of the students are taken, it is seen that they gave an undecided answer to the item 'I understood the meaning of my life' and 'I agree' to the item 'I act rationally in solving my problems'. In addition, the students answered 'I agree' to the item 'I am confident in managing and improving my life' and 'I agree' to the item 'I finish the things I start'. When the general averages of the answers given by the students to the items related to their spiritual well-being were taken, it was found that they were undecided.

#### Questions about the impact of students' ethno-design technology on their spiritual well-being

In Table 5, the views of the art education residency students participating in the research on the effect of ethno-design technology on spiritual well-being are evaluated.

Table 5. Students' views on the effect of ethno-design technology on spiritual well-being

Student opinions	Yes		No		Sum	
	F	%	F	%	F	%
<b>Do you think ethno-design technology has an impact on spiritual well-being?</b>	15	75	5	25	20	100

Table 5 includes the evaluations of the art education residency students participating in the research on the effect of ethno-design technologies on spiritual well-being. While 75% of the students thought that ethno-design technology had an effect on spiritual well-being, 15% stated that it had no effect.

Some of the students who participated in the research were asked 'Do you think that ethno-design technology has an effect on spiritual well-being?' Their answers to the question are as follows:

1: *I think that being creative in my field of education, setting a goal and being able to produce innovative products positively affect my spiritual well-being.*

15: *For spiritual well-being, concepts such as knowing what you want, aiming at the goal, being determined, and awareness are very important in my opinion. I think that the tendency to learn and use new trends in art education by following them will support spiritual well-being.*

7: *I am generally someone who supports the use of technology in education. But I don't think it will have any effect on spiritual well-being.*

20: *My answer is 'No'. Whatever you deal with, the formation of the spiritual worldview is formed or developed independently of the work and education one receives, I think. So I think ethno-design technology has no effect on spiritual well-being.*

#### 4. Discussion

In the research, it was concluded that art education specialisation students frequently use ethno-design technologies in art education. Similar to the research findings, Taskesen (2020) stated in his article titled 'Examination of the effects of mobile technology use on student opinions and motivations in art education' that the majority of students benefit from technology in order to conduct research in accordance with the content of the course or to work on a subject. In addition, Stokrocki (2007) theoretically discussed the place of Internet technologies in art education and pointed out positive student attitudes in the use of Internet technologies in art education. Students stated that the application in the study, which was carried out with experimental and control groups



called 'Creating Internet-Based Learning Environments in Fine Arts Education Departments of the Faculty of Education', prepared by Unalan (2016), was beneficial. They stated that it has advantages such as providing technology and being in compliance with the technology usage requirements of the age.

In the study, it was concluded that art education residency students found ethno-design technologies important in terms of art education. In their study, Mustafa and Sahin (2013) found that the use of computer and Internet-supported educational equipment and the creation of educational environments in educational environments contribute to the increase in knowledge, skills and competencies of learners and teachers and encourage creativity.

In the research, it was concluded that art education residency students were undecided about their spiritual well-being. Toprak (2018) conducted research on university students in his study examining the relationship between spirituality, life goals and spiritual well-being. As a result of the research, it has been revealed that there is a positive and significant relationship between students' inner life goals and spiritual well-being. Mahdian and Ghaffari (2016) stated in their study that people with high levels of spiritual well-being have a healthier lifestyle, are happier and are more satisfied with their lives.

In the research, it was concluded that the majority of art education residency students stated that ethno-design technology had a positive effect on spiritual well-being. Patneau (2006) stated in his study that the spiritual well-being levels of university students are at a moderate level and that it also affects their physical, emotional, social and professional well-being.

## **5. Conclusion**

In the historical process, the effects of art and technology on each other have become visible. Technological developments, which are an indispensable product of the information age, have started to show their effects in art education over time. Based on the idea that individuals' spiritual well-being increases their quality of life, the effects of the use of ethno-design technologies in the field of art education on spiritual well-being emerge as an important research topic. Accordingly, in this research, students' views on the creation of spiritual well-being of art education residency students with the help of ethno-design technology were evaluated. In the research, it was concluded that art education residency students frequently use ethno-design technologies in art education and find ethno-design technologies important in terms of art education. In addition, as a result of the research, it was observed that the art education residency students were undecided about their spiritual well-being and the majority of the students stated that ethno-design technology had a positive effect on their spiritual well-being.

## **6. Recommendations**

Considering the results obtained from the research, the following recommendations were obtained:

1. Seminars should be organised to increase the spiritual well-being of art education specialisation students.
2. Education curricula should be enriched in order to popularise the use of ethno-design technologies by art education specialisation students.
3. Technology classes should be created for specialisation students receiving art education, and students should be encouraged to use ethno-design technology in these classes.
4. The development and implementation of new art education programmes should be given importance by ensuring that the artistic creativity of specialisation students receiving art education is provided with technologically supported art education.

## References

- Asker, M. (2018). *Teachers' views on the use of interactive whiteboards and digital art media in visual arts class (Example of Denizli Province)* (Master's thesis). <http://acikerisim.pau.edu.tr:8080/xmlui/bitstream/handle/11499/26462/Mustafa%20Asker.pdf?sequence=1&isAllowed=y>
- Bekelman, D. B., Dy, S. M., Becker, D. M., Wittstein, I. S., Hendricks, D. E., Yamashita, T. E., & Gottlieb, S. H. (2007). Spiritual well-being and depression in patients with heart failure. *Journal of general internal medicine*, 22(4), 470-477. <https://link.springer.com/content/pdf/10.1007/s11606-006-0044-9.pdf>
- Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus Open*, 2, 8-14. <https://doi.org/10.1016/j.npls.2016.01.001>
- Bogdan, R., & Biklen, S. K. (1997). *Qualitative research for education*. Boston, MA: Allyn & Bacon. [http://math.buffalostate.edu/dwilson/MED595/Qualitative\\_intro.pdf](http://math.buffalostate.edu/dwilson/MED595/Qualitative_intro.pdf)
- Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative* (p. 676). Upper Saddle River, NJ: Prentice Hall. [https://www.academia.edu/3262007/Educational\\_research\\_Planning\\_conducting\\_and\\_evaluating\\_quantitative\\_and?bulkDownload=thisPaper-topRelated-sameAuthor-citingThis-citedByThis-secondOrderCitations&from=cover\\_page](https://www.academia.edu/3262007/Educational_research_Planning_conducting_and_evaluating_quantitative_and?bulkDownload=thisPaper-topRelated-sameAuthor-citingThis-citedByThis-secondOrderCitations&from=cover_page)
- Dempsey, A. (2002). *Styles, schools and movements*. Thames and Hudson. <http://faculty.winthrop.edu/stockk/modernism/styles%20impression001.pdf>
- Dolunay, A. (2016). Contribution of technology to visual arts and art education. *Journal of International Social Research*, 9(42). <https://web.s.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=0&sid=2607f358-4b32-4491-8e5d-17faf701565a%40redis>
- Gencer, N., Obuz, A. T., & Babahanoglu, R. (2021). Spiritual Well-Being and Gender Perception of University Students. *Hittite Journal of Theology*, 20(2), 717-750. <https://dergipark.org.tr/en/pub/hid/issue/66270/951202>
- Ghods, M. Y. (2007). *Painting pixels: The computer as the medium for teaching and learning in the arts* (pp. 1-248). Teachers College, Columbia University. <https://www.learntechlib.org/p/128973/>
- Helminiak, D. A. (2001). Treating spiritual issues in secular psychotherapy. *Counseling and values*, 45(3), 163-189. <https://doi.org/10.1002/j.2161-007X.2001.tb00196.x>
- Hubbard, G., & Greh, D. (1991). Integrating computing into art education: A progress report. *Art Education*, 44(3), 18-24. <https://www.tandfonline.com/doi/abs/10.1080/00043125.1991.11652877?journalCode=uare20>
- Kerlinger, F. N. (1966). *Foundations of Behavioral Research: Educational and Psychological Inquiry*. by Fred N. Kerlinger; Handbook of Research Design and Social Measurement. *American Sociological Review*, 30(5). <https://doi.org/10.2307/2091188>
- Liu, K. H. (2007). *Teaching digital art in art teacher education: recommendations for Taiwanese pre-service elementary art teachers in the digital age* (pp. 1-231). Teachers College, Columbia University. <https://www.learntechlib.org/p/118409/>
- Mustafa, M. Q., & Sahin, S. (2013). Opinions of instructors about internet use for teaching purposes. *Educational Technology Theory and Practice*, 3(2), 42-52. <https://dergipark.org.tr/en/pub/etku/issue/6269/84214>
- Patneau, A. B. (2006). *Spiritual wellness among undergraduate college students*. Colorado State University. <https://www.proquest.com/docview/305340556?pq-origsite=gscholar&fromopenview=true>
- Sengul, E. (2006). *The use of technology in visual arts and its contribution to art education*. (Doctoral dissertation, Marmara University (Turkey)). <https://www.proquest.com/docview/2546556550?pq-origsite=gscholar&fromopenview=true>

Alzhanov, G., Smanova, A., Zor, A., Rabilova, Z., Ryssymbetov, Y., & Karabalin, U. (2022). Formation of a spiritual worldview in students of art education specialties with the help of ethno-design technology. *World Journal on Educational Technology: Current Issues*, 14(1), 189-199. <https://doi.org/10.18844/wjet.v14i1.6715>

Shanken, E. A. (2001). *Art in the information age: cybernetics, software, telematics, and the conceptual contributions of art and technology to art history and theory*. Duke University. <https://www.proquest.com/docview/304691676?pq-origsite=gscholar&fromopenview=true>

Stokrocki, M. (2007). Art education avatars in cyberspace: Research in computer-based technology and visual arts education. In *International handbook of research in arts education* (pp. 1361-1379). Springer, Dordrecht. [https://link.springer.com/chapter/10.1007/978-1-4020-3052-9\\_93](https://link.springer.com/chapter/10.1007/978-1-4020-3052-9_93)

Taskesen, S. (2020). Investigation of the effects of mobile technology use on student opinions and motivations in art education. *AKEV Academy Journal*, (24), 585-600. [http://www.ekevakademi.org/Makaleler/675005525\\_31%20Selma%20TASKESEN.pdf](http://www.ekevakademi.org/Makaleler/675005525_31%20Selma%20TASKESEN.pdf)

Therhault, G. G. (2008). *"A new age of art": The effects of visual culture and technology on student attitudes about art and aesthetics*. Southern Connecticut State University. <https://www.proquest.com/docview/304325142?pq-origsite=gscholar&fromopenview=true>

Toprak, Y. (2018). *The relationship between spirituality, life goals and well-being* (Master's thesis, Tokat Gaziosmanpasa University, Institute of Educational Sciences). [https://acikbilim.yok.gov.tr/bitstream/handle/20.500.12812/683094/yokAcikBilim\\_10203809.pdf?sequence=-1&isAllowed=y](https://acikbilim.yok.gov.tr/bitstream/handle/20.500.12812/683094/yokAcikBilim_10203809.pdf?sequence=-1&isAllowed=y)

Turker, H. I. & Sabahat, S. N. (2011). "Sculpture" from Image to Digital, From Digital to Reality. *Journal of Art and Design*, 1(7), 141-157. <https://dergipark.org.tr/en/pub/sanatvetasarim/issue/20660/220407>

Turkmenoglu, H. (2014). The relationship between technology and art and Instagram as an example of digital art. *Ulakbilge Journal of Social Sciences*, 2(4), 87-100. <https://www.ceeol.com/search/article-detail?id=685205>

Unalan, H. T. (2016). Creation of internet supported learning environments in the Fine Arts Education departments of the Faculty of Education. *Journal of Open Education Practices and Research*, 2(1), 130-147. <https://dergipark.org.tr/en/pub/auad/issue/34011/376531>

Wilks, J., Cutcher, A., & Wilks, S. (2012). Digital technology in the visual arts classroom: An [un] easy partnership. *Studies in Art Education*, 54(1), 54-65. <https://doi.org/10.1080/00393541.2012.11518879>

Yikilmaz, M., & Demir Gudul, M. (2015). The relationships between meaning in life, mindfulness, perceived socioeconomic level and life satisfaction in university students. *Aegean Education Journal*, (16). <https://earsiv.anadolu.edu.tr/xmlui/bitstream/handle/11421/14970/14970.pdf?sequence=1&isAllowed=y>