

Investigating the Effect of Teaching Aesthetic Skills to Faculty Members on Development of Their Effective Teaching Performance¹

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Abstract

This quasi-experimental study investigated the effect of teaching aesthetic skills to faculty members on development of their effective teaching performance through a two-group pretest-posttest design. The sample included 32 faculty members at a major Iranian university who were divided into the experimental (11 participants) and control groups (21 participants). The experimental group was taught to use aesthetic skills in the teaching and learning processes; however, no intervention was applied to the control group. To evaluate the effective teaching performance of the faculty members, a tailor-made questionnaire was used in two pretest and posttest stages, where randomly chosen students were asked to express their opinions about the faculty members' performance. The sample size of the students was 1096 in the pretest stage and 935 in the posttest stage. Paired t-test results showed that there was no significant difference between the mean effective teaching scores of the faculty members in the control group in the pretest stage and in the posttest stage. However, the mean effective teaching scores of the faculty members in the experimental group were found to be significantly higher in the posttest. In addition, although there was no significant difference between the mean effective teaching scores of the two faculty groups in the pretest, faculty members in the experimental group outperformed their counterparts in the control group. Based on the findings, applying aesthetic skills by faculty members in the teaching and learning processes can pave the way for sustainable development of their effective teaching performance. Therefore, faculty members are recommended to acquire the required knowledge and skills to better use aesthetic skills in the teaching process.

Keywords: higher education, faculty members, effective teaching, aesthetic skills

Introduction

Nowadays educational systems have an important mission for responding to the needs of different communities. The complex organizational nature of educational centers, accompanied by evolving pedagogies, requires multiple professional development strategies

to effectively address needs, respond to emerging trends in teaching and learning and facilitate improvements (Mohammadi & Moradi, 2017). Sustainable development of education is impossible without the professional competence of teachers. Special attention should also be paid to the training of teachers, youth leaders and other educators (UNESCO, 2005). In this way, the problem of improving the teachers' professional competence is relevant in terms of sustainable development of education (Korsun, 2017), and for educational improvement, teacher professionalism is essential (Reid & Horváthová, 2016). Yoo (2016) has argued that to ensure sustainable development, educators should focus on studies related to teacher programmes. In order to provide a sustainable development field in the higher education system, the quality of faculty members educating should be considered.

Faculty members and professors are among the most effective and efficient factors of the higher education system, and their professional performance and conduct are significantly manifested in the quality of education and their effective teaching performance. Teachers have the most highlighted contribution in students' learning as well as the effectiveness of the educational systems (Gholami & Qurbanzada, 2016). As Biggs (2007) states, teaching at university and teaching-related activities are considered as the heart of higher education systems, and provision of high-quality teaching can lead to short- and long-term efficiencies in the educational system and can also improve specialized services in the community in a way that micro and macro scientific changes and the development of scientific excellence are influenced by a progressive and dynamic teaching process. Therefore, today there is a special global attention to the quality and effectiveness of teaching in higher education.

Considering the major role of effective teaching by faculty members in achieving the objectives of the higher education system, several studies, such as Murray (1980), Marsh (2001), Cashin (1995), Young and Shaw (1999), Chalkley, Fournier, and Hill (2000), Rueda (2002), Marzen (2003), Berg and Lindseth (2004), Muijs, Campbell, Kyriakides, and Robinson (2005), Knapper and Cropley (2000), Miller and Miller (2004), Dalby (2001), Nicoll and Harrison (2003), Codde and Joseph (2004), Algozzine, Beattie, Bray, Flowers, and Grete (2004), Nelson (1998) and Asadi and Gholami (2015) among others have been conducted to determine the effective teaching components in higher education. According to these studies, the most important and comprehensive effective teaching components include: designing teaching strategies, implementation of teaching strategies, classroom management, human relationships, evaluation, and desirable personality traits.

In addition to determining the components and criteria of effective teaching, another critical issue is identification of those skills and characteristics which can help professors to better utilize the effective teaching components. Faculty members need specific capabilities, skills, and characteristics to optimally utilize each of the effective teaching components and to develop their teaching quality. Based on theory and the views of scholars such as John Dewey, Elliot Eisner, Maxine Greene, Mehrmohammadi, etc., it can be said that aesthetic skills are among the most important and, yet, neglected factors which can significantly contribute to improvement of effective teaching performance of university professors.

The term aesthetic is a fairly young term in philosophical and aesthetic literature, and it is not older than one century. However, it can be meaningful to some extent for anyone, even in the first confrontation. The term aesthetic comes from the Greek word

“aisthetikos” and Greeks consider it as one’s ability to perceive via his/her senses (Pourhoseni, Sajadi, & Imani, 2014). The word “art” comes to our mind when we hear the words beauty and aesthetics. Today, in studies in the field of philosophy, “aesthetics” is considered as a part of the “knowledge of philosophy”. Indeed, sometimes some scholars consider it as equal and synonymous with “philosophy of art”. However, beauty is far more extensive than the area of art, is not limited to artistic works, and has a wide range of vast areas, ranging from the natural world to the spiritual affairs and beyond them” (Bavandian, 1999).

Due to the great importance of aesthetic in the development of human and emotional capacities, aesthetic-related studies have increasingly expanded in various scientific areas (Shelley, 2009). Education is one of the scientific areas influenced by aesthetic-related issues. Aesthetic skills and attitudes are crucial elements in development of different personality dimensions. They are also fundamental capacities and key aspects for stabilization of education-related activities and teaching and learning processes. According to experts, neglecting aesthetic education is a serious obstacle to the realization of fundamental objectives of higher education systems (Kaelin, 1989). Therefore, colleges and universities must take the responsibility to promote teaching on the basis of aesthetic criteria. They must also discover the aesthetic dimensions of teaching in higher education and effective ways to implement them. This way they will become a practical guide toward the theories of aesthetic education (Gadsden, 2008), and this will be realized only in the light of utilization of teaching methods based on the aesthetics principles and criteria by faculty members. Applying these skills in teaching and learning processes will provide a sustainable and active learning opportunity to share experiences and enjoy learning, and this way teaching and learning activities will become interesting and exciting activities for students and professors. In fact, the aesthetic dimension of formation of teaching and learning processes has a significant impact on its essence (Mehrmohammadi & Abedi, 2001), and teaching and learning are aesthetic experiences (Amini, 2005).

Today, educators need aesthetic education to increase the integrity of their educational knowledge. Therefore, many scholars have insisted on the importance of aesthetic-based education (Miller, 2011). According to Bianling and Zhengzhou (2014), there are reasons for applying the idea of aesthetic-based education in higher education systems, such as the need to understand the scientific concepts and phenomena as a whole, the need for obtaining an integrated understanding of multiple concepts, learners’ need for an active experience, the desire and passion of learners to enjoy learning, and the need to stimulate the creative imagination and thinking of learners in the teaching and learning processes. Accordingly, the idea of aesthetic education can lead to the harmonious and sustainable development of all aspects of learners and can promote all their talents.

In this regard, John Dewey believes that aesthetic components play an important role in the teaching and learning processes. According to him, teaching and learning are aesthetic experiences and aesthetic components such as feeling, imagination, intuition, reflection, will, association, and affection should be considered in the teaching process (Amini, 2005). Elliott Eisner also gives a special importance to the aesthetic nature of teaching and learning processes, and this is because of its necessity for teachers to acquire a thorough perception and interpretation of classroom events which is obtained only through ingenuity, insight, creativity, and imagination (Eisner 1994, cited in Mehrmo-

hammad, 2010). Also, studies by Girod, Rau, and Schepige (2010), Hobbs (2012), Chou, Ching Cheng, and Cheng (2016), Medina (2012), and Kokkos (2011) indicate that aesthetic understanding of teaching and learning processes and paying attention to the aesthetic nature of education can prepare the ground for sustainable development of the quality of learning and teaching; however, despite the emphasis of experts and scholars on the necessity of paying attention to the aesthetic components in the teaching process and their major role in improving instructors' teaching performance, few field studies are available in this area. Meanwhile, the current educational system has ignored the aesthetic dimensions of education and teaching (Aligh, 2011; Alexander, 2000; Yoo, 2014).

On the other hand, it seems that the majority of university professors have not undergone formal education to acquire the required skills for proper utilization of effective teaching components (such as aesthetic skills). Most professors are experts in the content, issues, and the material they teach; however, they have not undergone the needed training to teach in accordance with the developments of various fields of science and the growing needs of students (Barratt & Murray, 2004, McDougall & Drummond, 2005). Many of them do not know enough about the desirable teaching, planning, and evaluation methods, and this is a major educational gap in the higher educational system. This is so because the effectiveness of a teaching method depends on the professors' skills and their ability in determining their educational objectives and expectations, creating a supportive learning environment, applying appropriate teaching methods, establishing desirable relationships with students, and using proper assessment and evaluation procedures (Houston, Clark, & Levine 2004; Steinert, 2005). Few studies have investigated the effect of aesthetic skills on development of teaching quality of faculty members in Iran and in other countries. Below is a review of some similar studies conducted in various countries:

Nasrabadi et al. (2013), in their study, concluded that aesthetic-based educational environments create capabilities in individuals to develop their social aspect (acquisition of experience in social and personal life, simplicity, elegance, coordination and harmony, emotions and feelings, wisdom, empathy, and accountability), personal aspect (formation of science and knowledge along with research to develop all personal aspects and to connect material and spiritual aspects) and purposiveness and insight (creativity, construction, practice, integrating experiment and experience with science, and formation of aesthetic taste), and thus learners will acquire aesthetic experience and knowledge with full satisfaction.

Girod et al. (2002) studied the effectiveness of an education method, designed based on Dewey's aesthetic theory, and compared the learning of two groups of students in two classrooms, using semi-structured interviews. There were two different educational objectives in the two groups (aesthetic understanding of teaching and conceptual understanding of teaching). The results revealed the higher efficiency of teaching activities designed based on the aesthetic understanding of teaching, and the students in this classroom were more satisfied with the quality of the learning experience.

Hobbs (2012) conducted a study entitled "examining the aesthetic dimensions of teaching: the relationship between teacher's knowledge, identity and passion". This research used experimental data to investigate the role of teachers' aesthetic understanding of teaching in the discovery and application of effective teaching methods in mathematics.

The results showed that in order to effectively teach different topics, a teacher should have an aesthetic understanding of different topics and must pay attention to various dimensions of aesthetics in education.

As noted before, providing high quality and effective teaching at universities is among the most important and determinant factors in achieving the missions and orientations of the higher education system. In this line, theory and experts' opinions show that applying aesthetic skills plays an important and valuable role in the development of teaching and learning quality. However, few studies have investigated this issue in Iran and in other parts of the world. Therefore, this study investigated the effect of teaching "aesthetic skills" to faculty members – as missing links – on development of their effective teaching performance and tapped the neglected factors in the research literature.

Method

This quasi-experimental study adopted a two-group pretest-posttest design. The aim of this study was to investigate the effect of teaching aesthetic skills to faculty members on their effective teaching performance.

Participants

The study population included all the faculty members and students of the University of Isfahan in the first and the second semesters of the academic year of 2016–2017. Using simple random sampling method, 38 faculty members of the University of Isfahan were selected, who were then divided into control and experimental groups. 21 individuals were assigned to the control group, and 17 others were assigned to the experimental group. Six faculty members refused to continue attending the workshop or did not attend a minimum number of workshop sessions; thus, the size of the experimental group was reduced to 11. Therefore, a total of 32 faculty members participated in the study (11 participants in the experimental group and 21 participants in the control group).

In order to investigate the effective teaching performance of the faculty members, three classrooms were selected from different educational levels and academic years for each of the faculty member. Simple random sampling method was used to select students to evaluate their professors. First, classrooms and students associated with each of the professors were identified, and then three classrooms were randomly selected to evaluate each of the professors. The students answered the effective teaching performance questionnaires. The sample size of the students was 1096 in the pretest stage. 585 of the students evaluated the performance of the faculty members in the control group, while 511 individuals evaluated the performance of those in the experimental group. The sample size of the students was 935 in the posttest stage, of which 508 individuals evaluated the performance of the faculty members in the control group, and 427 individuals evaluated the performance of those in the experimental group.

To create homogeneity between the participants in the control and experimental groups, the professors were selected to be somewhat homogeneous in terms of gender, academic rank, teaching experience, and their average teaching evaluation scores by students. The average teaching evaluation scores of the faculty members in the experimental group was 81.36/100, while the average teaching evaluation scores of those in the

control group was 82.33/100. Indeed, the difference between the average scores of the faculty members in the experimental group and those in the control group was insignificant. In terms of academic rank, there were two associate and nine assistant professors in the experimental group and three associate and eighteen assistant professors in the control group. Therefore, the test and control groups were homogeneous in terms of academic rank. With regard to teaching experience, in the experimental group, four people had a work experience of one to five years, five people had a work experience of six to ten years, one person had a work experience of 11 to 15 years, and one person had a work experience of 16 to 20 years. In the control group, six people had a work experience of one to five years, nine people had a work experience of six to ten years, four people had a work experience of 11 to 15 years, and two people had a work experience of 16 to 20 years. Therefore, the test and control groups were homogeneous in terms of teaching experience. In terms of gender, the experimental group included four females and seven males, while the control group included seven females and fourteen males.

Instruments

Using research literature, a questionnaire was designed by the researcher, based on the 5-point Likert scale, to collect data. This questionnaire contained 30 five-choice questions in the form of six components, including: designing teaching strategies (questions 1–5), implementation of teaching strategies (questions 6–10), classroom management (questions 11–15), human relationships (questions 16–20), evaluation (questions 21–25), and desirable personality traits (questions 26 to 30). The scores of each of the questions ranged from 0 to 4, and the lowest and highest scores for each of the components ranged from 0 to 20. Therefore, the overall scores of each professor for all the six components of effective teaching ranged from zero to 120. Content validity was used to check the validity of this questionnaire. To measure the content validity of the questionnaire, it was provided to a number of professors and scholars in the area of teaching, and necessary corrections were made. In addition, test-retest method was used to test the reliability of the questionnaire. For this purpose, the questionnaire was completed by 52 students at two different times. The results showed a very high total correlation for all the six components ($r = 0.82$).

Procedure

In the pre-test stage, tailor-made questionnaires were distributed among the students attending the classes held by the target professors, and they were asked to complete them. This way, data were collected to determine the effective teaching performance of the professors before conducting the intervention. After conducting the pretest, an aesthetic skills-based teaching workshop was held for the members of the experimental group. No intervention was applied to those in the control group; thus, they continued teaching with their traditional teaching approach.

The inclusion criteria included: teaching at the University of Isfahan as a faculty member, teaching in two semesters of the academic year of 2016–2017, and willingness to participate in the research and to study and follow the aesthetic skills-based teaching process during the semester (members of the experimental group). The exclusion criteria

included: unwillingness to participate in the teaching workshops, skipping some sessions, and unwillingness to follow and use the aesthetic skills-based teaching process (those in the experimental group). Participants in the experimental group participated in the aesthetic skills-based teaching workshop for 6 sessions and 12 hours and were trained by two faculty members specialized in dialogue-based teaching. In addition, some relevant sources were handed to those in the experimental group to use in their teaching process. After the workshop and before the posttest stage, the researcher also visited the professors in their offices and encouraged them to utilize aesthetic skills in their classes. After conducting the required coordination with the deputy of education and other authorities, the researcher visited the faculty members who were selected to attend the workshops and talked with them about the importance of the workshops, the time and location, the procedures, and the advantages of participating in the workshops. All this procedure took around four months. The researcher, then, consulted with the supervisors and workshop instructors about the content and sources, time and location, procedures, provision of meals and snacks, and giving presents to the participants during the workshops. In the following stage, the faculty members of the experimental group were invited to participate in the workshop entitled "utilization of aesthetic skills in the teaching and learning processes" on the due date. Moreover, before holding the workshops, the goals, the study strategies, and the possibility of the positive impact of aesthetic skills-based teaching on the teaching quality were explained to the professors of the experimental group. To comply with ethical principles, the participants studied and signed some written consent forms.

About three months after the workshops and after several sessions of teaching different courses to the students, the posttest stage was conducted. The tailor-made questionnaires were again distributed among the students, and, this way, the data of the posttest stage were also collected through the professors' self-assessment of their own teaching.

The teaching workshops were held by professors and experts in applying aesthetic skills in the teaching and learning processes. The workshops were held on the basis of training packages and flexible scenarios designed based on the content of valid sources. A training package was designed, developed, and handed to two workshop instructors. To develop the training package, all the documents, sources, and studies related to aesthetic skills in general and those associated with aesthetic teaching were first studied and analyzed in detail. Then, the researchers and the workshop instructors consulted with each other to determine the issues and factors associated with applying aesthetic skills in the teaching and learning processes; the training package was developed and provided to the workshop instructors. The instructors then utilized this training package to teach the aesthetic concepts, principles, and skills to the professors through different ways, such as lectures, discussions, audiovisual equipment, provision of training sources and books, and PowerPoint presentations, and in a collaborative atmosphere. All the participants were asked to use these major skills in their teaching process. Free books and relevant sources were also given to the faculty members for further study.

Based on the views of scholars, scientific documents, and related studies, the most important component of aesthetic teaching taught to faculty members included: paying attention to the emotional dimension along with the cognitive dimension in the teaching-learning process, providing open-structure project-based learning opportunities, Coher-

ence and integrity in teaching and learning activities, attention to the situation and conditions of the classroom, flexibility in the choice and implementation of teaching approaches, utilizing the element of imagination to develop the creativity of learners in the teaching process, application of visual contact in the teaching process, attention to ethical values in the teaching and learning process, and using fair qualitative and process evaluation methods.

Data were analyzed in SPSS 22, using descriptive statistics (frequency table, percentage, mean, standard deviation) and inferential statistics (independent and paired t-tests).

Results

In this section, demographic information about the participants is first presented, and then the data and explanations about the main results are provided.

Table 1
Demographic Information about the Participants (faculty members)

Variables		Control Group	Experimental group	Total
		N = 21 (65.6%)	N = 11 (34.4%)	N = 32
Sex	Female	7 (33.3%)	4 (36.4%)	11 (34.4%)
	Male	14 (66.7%)	7 (63.6%)	21 (65.6%)
Academic Rank	Assistant professors	18 (85.7%)	9 (81.8%)	27 (84.37%)
	Associate professors	3 (14.3%)	2 (18.2%)	5 (15.63%)
Teaching Experience	1 to 5 years	6 (28.6%)	4 (36.3%)	10 (31.25%)
	6 to 10 years	9 (42.9%)	5 (45.5%)	14 (43.75%)
	11 to 15 years	4 (19%)	1 (9.1%)	5 (15.62%)
	16 to 20 years	2 (9.5%)	1 (9.1%)	3 (9.38%)

Table 1 indicates that among the 32 faculty members participating in the research, 21 (65.6%) were assigned to the control group, and 11 (34.4%) were assigned to the experimental group. 11 individuals (34.4%) were female, while 21 individuals (65.6%) were male. In terms of academic rank, there were 27 assistant professors (84.37%) and 5 associate professors (15.63%). In terms of teaching experience, 10 professors (31.25%) had a working experience of 1 to 5 years, fourteen (43.75%) had a working experience of 6 to 10 years, five (15.62%) had a working experience of 11 to 15 years, and three (9.38%) had a working experience of 16 to 20 years. In terms of gender, the experimental group included four females and seven males, while the control group included seven females (33.3%) and 14 males (66.7%). In terms of academic rank, there were two associate (18.2%) and nine assistant professors (81.8%) in the experimental group, and three associate (18.2%) and 18 assistant professors (85.7%) in the control group. In terms of teaching experience, in the experimental group, four participants (36.4%) had a working experience of 1 to 5 years, five (45.6%) had a working experience of 6 to 10 years, one (9.1%) had a working experience of 11 to 15 years, and one (9.1%) had a working experience of 16 to 20 years. In the control group, six participants (28.6%) had a working experience of 1 to 5 years, nine (42.9%) had a working experience of 6

to 10 years, four (19%) had a working experience of 11 to 15 years, and two (9.5%) had a working experience of 16 to 20 years.

Table 2 presents the findings of the comparison between effective teaching performances of the professors in both groups in the pretest stage with the posttest stage experimental group. Paired t-test results showed that there was no significant difference between the mean effective teaching scores of the professors in the control group, in the pretest stage and their scores in the posttest stage ($p < 0.05$). In addition, there was no significant difference between the mean scores of the professors in the control group in the pretest stage and their scores in the posttest stage, in terms of each individual component of effective teaching. The results also showed that the mean effective teaching scores of the professors in the experimental group (professors who underwent training intervention and learned aesthetic skills) were significantly higher in the posttest stage after the intervention, compared to their scores in the pretest stage – before intervention ($p < 0.05$). In addition, the mean scores of the professors in the experimental group were significantly higher in the posttest stage, compared to their scores in the pretest stage, in terms of all the components of effective teaching ($p < 0.05$).

Table 2

Paired T-test on Mean Effective Teaching Scores of Faculty Members in Pretest Stage with Posttest Stage in Two Groups

Components of Effective Teaching		Pre-test		Post-test		Paired t-test	df	P
		Mean	SD	Mean	SD			
Designing Teaching	Control Group	13.04	2.51	12.58	2.66	$t = -3.408$	20	0.433
	Experimental group	13.55	2.44	16.62	1.90	$t = 4.077$	10	0.031
Implementation of Teaching	Control Group	13.68	2.04	13.08	1.46	$t = -2.308$	20	0.317
	Experimental group	13.57	2.14	16.98	2.22	$t = 3.159$	10	0.022
Classroom Management	Control Group	13.76	1.97	13.96	2.02	$t = -6.664$	20	0.601
	Experimental group	13.59	1.88	16.63	2.09	$t = 4.022$	10	0.042
Human Relationships	Control Group	15.06	2.42	14.90	3.04	$t = -3.771$	20	0.664
	Experimental group	14.89	2.58	16.90	1.59	$t = 3.338$	10	0.039
Evaluation	Control Group	13.46	3.35	14.11	2.55	$t = -2.031$	20	0.476
	Experimental group	13.42	2.11	16.77	2.44	$t = 3.851$	10	0.019
Desirable Personality Traits	Control Group	15.93	3.58	14.57	2.66	$t = -2.670$	20	0.499
	Experimental group	15.33	3.14	17.87	2.38	$t = 4.127$	10	0.026
Total	Control Group	84.93	16.14	83.20	14.39	$t = -20.852$	20	0.299
	Experimental group	84.35	14.29	101.77	12.59	$t = 22.574$	10	0.029

As indicated in Table 3, the results of the independent T-test showed that there was no significant difference between the mean effective teaching scores of the professors in the control group with the mean effective teaching scores of those in the experimental group in the pretest stage ($p < 0.05$). In addition, in the pretest stage, there was no significant difference between the mean scores of the professors in the control group with those in the experimental group, in terms of each individual component of effective teaching.

Table 3

Independent T-test Results on Effective Teaching Scores of Faculty Members of Both Groups in Pretest Stage and Posttest Stage

Components of Effective Teaching		Control Group		Experimental group		Independent T-Test	df	P
		Mean	SD	Mean	SD			
Designing Teaching	Pre-test	13.04	2.51	13.55	2.44	t = -3.089	30	0.678
	Post-test	12.58	2.66	16.62	1.90	t = 7.606	30	0.009
Implementation of Teaching	Pre-test	13.68	2.04	13.57	2.14	t = -7.330	30	0.807
	Post-test	13.08	1.46	16.98	2.22	t = 6.507	30	0.012
Classroom Management	Pre-test	13.76	1.97	13.59	1.88	t = -7.002	30	0.088
	Post-test	13.96	2.02	16.63	2.09	t = 6.605	30	0.016
Human Relationships	Pre-test	15.06	2.42	14.89	2.58	t = -7.064	30	0.212
	Post-test	14.90	3.04	16.90	1.59	t = 4.249	30	0.026
Evaluation	Pre-test	13.46	3.35	13.42	2.11	t = -9.819	30	0.134
	Post-test	14.11	2.55	16.77	2.44	t = 6.428	30	0.019
Desirable Personality Traits	Pre-test	15.93	3.58	15.33	3.14	t = -4.107	30	0.257
	Post-test	14.57	2.66	17.87	2.38	t = 6.358	30	0.010
Total Components	Pre-test	84.93	16.14	84.35	14.29	t = -38.411	30	0.362
	Post-test	83.20	14.39	101.77	12.59	t = 37.753	30	0.015

In the posttest stage and after the intervention, the mean effective teaching scores of the professors in the experimental group were significantly higher than those in the control group ($p < 0.05$). In addition, in the posttest stage, the mean scores of the professors in the experimental group were significantly higher than those in the control group, in terms of all components of effective teaching ($p < 0.05$).

Therefore, teaching aesthetic skills to the faculty members prepared the ground for their effective teaching performance development.

Discussion and Conclusion

The findings showed that teaching aesthetic skills to the faculty members of the experimental group paved the way for development of their effective teaching performance and enhanced their potential to utilize all of the six components of effective teaching (designing teaching strategies, implementation of teaching strategies, classroom management, human relationships, evaluation, and desirable personality traits). Few studies have investigated the effect of aesthetic skills on development of teaching quality in Iran and in other countries; however, the findings of a limited number of similar studies, such as Nasrabadi et al. (2013), Girod et al. (2002), and Linda (2012), are consistent with the findings of this study. These studies confirmed the positive role of applying aesthetic criteria in improving and developing the quality of teaching and learning. The results of this study also confirm the views of leading scholars of the field of education, such as John Dewey, Elliot Eisner, Maxine Greene, Mehrmohammadi, etc., who have insisted on the importance of aesthetic skills and criteria in sustainable development of the quality of teaching and learning.

The major aesthetic skills taught to the faculty members in this study, which are utilized in the teaching and learning processes, include: paying attention to the emotional dimension along with the cognitive dimension in the teaching-learning process, providing open-structure project-based learning opportunities, Coherence and integrity in teaching and learning activities, attention to the situation and conditions of the classroom, flexibility in the choice and implementation of teaching approaches, utilizing the element of imagination to develop the creativity of learners in the teaching process, application of visual contact in the teaching process, attention to ethical values in the teaching and learning processes, and using fair qualitative and process evaluation methods. In fact, even a basic utilization of these skills by professors in their teaching and communication with students could significantly develop their effective teaching performance. In the researchers' eyes, utilizing these aesthetic skills by the professors in the teaching and learning processes can prepare the ground for the enjoyment, emergence, and purification of students' learning experiences and professors' teaching knowledge. It can also foster a spirit of creativity, increasing the self-esteem and emotional, personal, and collective satisfaction of students and faculty members, and, altogether, these factors will result in the realization of effective teaching and learning.

Based on the findings of this study, university faculty members should acquire aesthetic teaching skills with an aesthetic attitude, and they must care about aesthetics in the teaching and learning processes. Different variables, such as the diversity of student needs and differences, faculty members' decisions and beliefs, intuitive, creative, innovative and emotional activities, unique classroom conditions, complexities and delicacies of teaching, utilizing intuitive perceptions, and instant insight and creativity in creating professional teaching knowledge, affect the teaching and learning process. Thus, it is necessary to take an aesthetic look at the teaching process to pave the way for the application of each of the effective teaching components and sustainable development of faculty members' effective teaching performance.

Despite the findings of the present study which confirm the significant role and effect of aesthetic skills in the development of effective teaching performance of professors, and in spite of the strong theoretical basis of aesthetic teaching approach in the area of education and teaching and growing importance of aesthetic teaching in the higher education system, applying aesthetic skills in the teaching and learning processes has been neglected by the higher education system authorities and university professors. Applying aesthetic skills in the teaching and learning processes at universities is a missing link and a neglected factor. Therefore, these findings can be a step towards highlighting the importance of aesthetic criteria and skills in the sustainable development of teaching quality of university faculty members.

Training aesthetic skills to the faculty members was one of the important challenges in this paper. Actually, aesthetic skills training to professors and also measuring the impact of this training on the teaching performance of professors are very difficult tasks and for these reasons, this issue can be considered as the challenges and limitations of the present study. Nevertheless, because of the importance and value of aesthetic skills in the field of education and the important roles these skills can play in developing educational knowledge of the professor, we tried to teach these skills to the professors through qualified instructors and examined the effect of this on the teaching performance of professors. Despite the problems mentioned above, this study and its results can be an important step in considering the role and effect of aesthetic education in improving teaching performance.

Note:

(1) This study is part of a larger study as PhD dissertation in Educational Sciences at the University of Isfahan.

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Appendix

Teaching Performance Questionnaire

To evaluate the effective teaching performance of faculty members, a tailor-made questionnaire was used in the pretest and posttest stages, where students were asked to express their opinions on faculty members' performance. This questionnaire was developed with reference to the research literature and based on the 5-point Likert scale. The questionnaire contained 30 five-choice questions in the form of six components, including: designing teaching strategies (questions 1–5), implementation of teaching strategies (questions 6–10), classroom management (questions 11–15), human relationships (questions 16–20), evaluation (questions 21–25), and desirable personality traits (questions 26 to 30). The scores of each of the questions ranged from 0 to 4, and the lowest and highest scores for each of the components ranged from 0 to 20. Therefore, the overall scores of each professor for all the six components of effective teaching ranged from zero to 120.

Dear Participant

The following questionnaire is designed to conduct a scientific research to evaluate the effective teaching of faculty members of the university. Please study the questionnaire carefully and determine the performance of the respective professor in each of the items raised in this questionnaire. Thank you in advance for your sincere and honest cooperation.

Gender: Field of study: Educational level: Course title: Semester:

No.	Items	Always	Most times	Some times	Rarely	Never
1	Providing students with training objectives before beginning the teaching and learning processes					
2	Providing topics, content, syllabus and resources before beginning the teaching and learning processes					
3	Providing an appropriate schedule for teaching and learning activities and presenting them to students before beginning the teaching and learning processes					
4	Providing appropriate teaching and learning patterns, methods and strategies in accordance with the topics and syllabus of each course					
5	Determining learning activities and assignments (scientific and research assignments) for students and their evaluation methods					
6	Mastering different teaching patterns, methods and techniques in accordance with the subjects of the lessons and different learning situations					
7	Mastering the application of teaching aids and technologies such as video projector, overhead, etc. in the teaching and learning processes					
8	Guiding students to pursue their studies and research in accordance with their motives, interests and their scientific and research potentials					
9	Providing students with group learning opportunities to participate in scientific and research activities					
10	Summarizing and organizing topics skillfully					
11	Punctuality and timely presence in classroom and sensitivity toward timely presence of students in the classroom					
12	Establishment of necessary discipline in the classroom to create an optimal learning environment					
13	Time management and optimal use of time to advance the teaching and learning processes in accordance with presented syllabus					
14	Using appropriate admiration and criticism techniques regarding students' learning activities and academic performance					
15	Ability to keeping track of classroom activities					
16	Establishment of friendly relationships with students both inside and outside the classroom					
17	Using respectful words to address students and respecting them inside and outside the classroom					
18	Reasonable response to students' suggestions, criticisms and views					
19	Understanding students' individual differences and independent identities and supporting them					
20	Observing values and ethics in teacher-student relationships					

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| 21 | Providing appropriate quantitative and qualitative tests to evaluate students' learning trend in the teaching and learning processes |
| 22 | Compliance of the content of classroom evaluations and exams with the goals, subjects and topics provided during the course |
| 23 | Providing continuous feedback to students about their learning quality |
| 24 | Observing ethical considerations and using an appropriate and fair scoring or ranking system in evaluating student performance |
| 25 | Continuous review of the results of student evaluations to address learners' learning weaknesses |
| 26 | Appropriate dress and appearance in the classroom and in teaching/learning situations |
| 27 | A deep sense of responsibility, duty and commitment to teaching profession |
| 28 | Physical, mental and intellectual health |
| 29 | Interest and love for education, teaching and learning activities |
| 30 | Adherence and commitment to social and moral norms and religious beliefs |
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