On the Spot Scaffolding as the Hermeneutic Phenomenology Action Field: Critical Thinking Case for Medical Students in Iran

Mahdi Aghabagheri[1], Mahmoud Mehrmohammadi[2]*, Khosrow Bagheri Noaparast[3]

Abstract

Background: A major contribution to the humanities literature has been the development and application of Vygotsky's sociocultural theory in relevant fields. Constructivism as a paradigm is owed to Vygotsky and his efforts. On-the-spot scaffolding in this regard is one of the innovations that can be triangulated with hermeneutic phenomenology to pave the way for a paradigm shift in the educational system in a broad view and for critical thinking for medical students in a narrow view. This study aimed to illuminate the other side of the behavioristic lesson plan, which is on-the-spot scaffolding in implementing one of the modules of essential skills for doctors of medicine (Adab-e Pezeshki), which is critical thinking.

Methods: This study was qualitative and longitudinal. It is longitudinal due to the 3 years of involvement and qualitative due to the study design approach and the use of discourse analysis and hermeneutic phenomenology as tools.

Results: Three main findings emerged from the study's qualitative nature: first, students who attended the sessions or who merely completed the assignments created an on-the-spot critical thinking scaffolding design, which is an alternative to a behavioristic lesson plan; and second, the students wrote numerous movie reviews in both Persian and English. One of the components of reflective autobiography is these film critics and a student-written, instructor-edited paper submitted to ICHPE 2023.

Conclusion: There is an urgent need for a paradigm shift and comparative-historical investigations in the medical education system in Iran.

Keywords: Hermeneutic Phenomenology, Critical Thinking, Medical Education

Introduction

There are 3 concepts in need of more elaboration—on-the-spot scaffolding, hermeneutic phenomenology, and critical thinking. The present study's implementation of on-the-spot scaffolding aligns with Vygotsky's sociocul-

_____
Corresponding author: Dr Mahmoud Mehrmohammadi, Mehrmohammadimahmoud@TMU.ac.ir

1. Department of Curriculum Planning, School of Islamic Education, Science and Research Branch, Islamic Azad University, Tehran, Iran
2. Department of Education, School of Humanities, Tarbiat Modares University, Tehran, Iran
3. Department of Philosophical and Social Foundations of Education, School of Psychology and Education, University of Tehran, Tehran, Iran

↑*What is "already known" in this topic:*
The tenets of curriculum, educational program, instructional design, course plan, and lesson plan have been negotiated in Iran Ministry of Health and Medical Education over the years; however, insufficient emphasis has been given to the philosophical basis of the terminology above.

→*What this article adds:*
The results of this qualitative study demonstrate the critical need for a paradigm shift in Iranian medical education from positivism to constructivism, from lesson plans and courses to on-the-spot scaffolding, and from teaching-learning-assessment prediction to individualized curriculum. From this perspective, medical educators should conclude that teaching medicine only requires a certain level of medical education; other humanities, such as philosophy, sociology, psychology, and others, need a similar, unavoidable transformation.

tural theory, as elucidated by Scott and Palincsar (1). It is intentionally interpreted in this context as complementing behavioristic lessen plan. As the orchestra leader in a behavioristic lesson plan, the instructor tries their hardest to lead the concert, which means that they are fully qualified to predict all or most of the components of the teaching-learning-assessment triangulation in line with the objectives of teaching, learning, and testing or assessment. The scenarios are rigidly defined to optimize the process, and this well-organized process can be guaranteed just via achievement tests which mostly would be in the MCQ format to respect the objectivity—passing means learning, and failing means repeating the well-organized process. All mentioned from the beginning to the end of the scenario is exactly in line with the positivistic paradigm—an eagerness to measure anything, even learning. However, because humans are dynamic, the constructivist paradigm holds that while measurement and prediction are OK in other contexts, they are inappropriate in human learning. Learners in the class are not robots; this means that personalized learning and curriculum are more significant than prediction. Scaffolding especially on the spot version can pave the learning ground for any learner. Some medical students dislike thinking because they despise their major. These were orchestrated by a cutthroat educational system; according to Read, the school was dubbed the "murder house of intellect, talent, and interest killing" (2), and ultimately, the families chose to declare the impoverished child to be a doctor of medicine; another Shakespeare play is needed to write this wretched tragedy. Hermeneutic phenomenology must be used to infer and interpret the nature of the triangulation process stated. The mission and vision of the medical schools must be rewritten regarding the pedagogy as joy, and they should provide the environment to promote the skills for social life, not memorizing the lines of Harrison and Gray. Respect is given to understanding, but only after careful consideration and not like a parrot. After the final exam, those with bad memory loss forget everything they have learned. According to Plato, learning occurs when a student's interest candle is lit by a flame from the instructor's heart.

Hermeneutic phenomenology can be elaborated from different perspectives, such as French or German school or even classic interpretation; however, the version of HP in this study is allocated to the works of Gadamer via the focal point of *Truth and Method* (3). Gadamer believes that there are different steps in understanding a process, and 2 of the most vital steps are interpretation and inference. Regarding interpretation and inference, philosophy is insufficient; logic and linguistics principles are also required. If meaning can be represented in at least 2 layers, surface and deep, on the surface, the focus is on phonetics, phonology, morphology, syntax, and semantics; however, in the deep layer, pragmatics and discourse are vital. The major difference between these 2 layers is the issue of different context understanding. The interpretation and inference can be perfectly different due to varying forms of context. **A** asks, how are you? **B** answers, I'm gay and happy. Without context understanding via communicative competencies, the negotiation stream cannot continue, especially if A and B are men. In this regard, Austin and Searle presented the speech act theory as elaborated in Kissine, focusing on 3 different dimensions of meaning: Locutionary (meaning layer 1), illocutionary (meaning in mentioned layer 2 or intended or invisible meaning), and perlocutionary (response) (4).

On-the-spot scaffolding as an alternative for behavioristic lesson plan and hermeneutic phenomenology as a vision for the mentioned triangulation inference and interpretation can appropriately pave the way for the pedagogy as joy in critical thinking courses included in the series of essential skills for doctors of medicine (*Adab-e Pezeshki)* to maximize the effectiveness of the triangulation of teaching, learning, and evaluation while adhering to a customized curriculum.

Methods
This was a qualitative-longitudinal study owing to the design approach utilizing the hermeneutic phenomenology and discourse analysis methods to evaluate the efficacy of critical thinking courses for medical students through a paradigm shift from a behavioristic lesson plan dogmatism to on-the-spot scaffolding. Hermeneutic phenomenology, as Gadamer illuminated in *Truth and Method*, can be used as a qualitative method to discover the real intention of a work creator. Discourse analysis and hermeneutics can be intertwined, and they can be used to discover the real meaning behind critical thinking for medical students (3).

In 2017, the reformed national medicine curriculum was announced for medical schools to implement. One of the metamorphoses in accordance with the comparative and contractive studies and investigations was courses in terms of longitudinal themes named *Adab-e Pezeshki*, as mentioned. Some of the modules in this series were based on the competencies (must, should, better) required of a medical graduate; on the other hand, a graduate of medicine must be qualified regarding entrusted professional activities. Some modules included communication and negotiation skills, study skills, critical thinking, problem-solving, early exposure, etc. The mentioned curriculum was designed flexibly, and each university or school could implement it regarding the faculties, instructors, students, and the general context of the school.

A concise report from the outset is required because the Yazd Shahid Sadoughi University of Medical Sciences School of Medicine was given the scope of the investigation. The implementation of the series was allocated to the Community Medicine Department of the School of Medicine, and from 2017 to 2019, the mentioned department performed all the modules utilizing the faculties of the department. In 2020, the critical thinking module was also allocated to a linguist majoring in education. Regarding the essential nature of thinking and the scrutiny of critical thinking in different parts of the world and Iran, he decided to design, develop, implement, and evaluate an instructional-based paradigm shift in medical schools. For terms 2, 3, and 4, he had to instruct the medical students in critical thinking. In term 1, other modules of *Adab* were covered. Some points were crucial for the paradigm shift, as follows:

First, the teaching, learning, and assessment triangulation should be interpreted and inferred in accordance with hermeneutic phenomenology. Second, a shift should be made from behavioristic lesson plans to on-the-spot scaffolding. Third, reflective autobiography should be emphasized as a form of ongoing dynamic assessment that adheres to the principles of portfolios. Fourth, contextual validity should take precedence over face, content, construct, predictive, concurrent validity, et cetera.

Autobiography is one of the crucial tenets of reconceptualization. As Pinar, Slattery, Reynolds & Taubman elaborate via autobiography, personalized learning and curriculum can be fulfilled (5). However, owing to the competitive passive nature of the educational system from the beginning of formal education in Iran, the learning process has been predicted from the beginning to the entrance exam, which is a real instance of educational exploitation. A student is trained to record, report, and reflect on the process—such an incredible journey to uncover the abilities and intelligence anybody possesses from childhood on—through reflective autobiography, which teaches him how to monitor the learning process using trend analysis. A developed society needs all academic disciplines, and one of all, undoubtedly, is the humanities.

The following vital issue was a move from quantitative types of validity to contextual validity. First, the mentioned validities were searched in Google, and the search results were sorted as follows:

- Construct validity: 19,200,000
- Content validity: 8,600,000
- Predictive validity: 6,080,000
- Face validity: 2,460,000
- Concurrent validity: 2,370,000
- Contextual validity: 17,200

If a systematic review and meta-analysis were carried out on the critical thinking studies in Iran and concentrated on some significant ingredients, namely study design, statistical analyses, instruments, and treatment protocols, as an experience-based prediction, some results would be obtained in accordance with the involvement of critical thinking studies for more than a decade. In this regard, in ICHPE 2020, a symposium was conducted on critical thinking, and the organizer was the Medical Education Testing Center. Most of the instruments used were standard or researcher-made questionnaires; however, they reported quantitative validities as mentioned and did not consider the contextual validity. Simply put, contextual validity encompasses all possible contexts—political, social, cultural, geographical, ethical, economic, psychological, educational, etc.—that could impact the outcomes. The California B Questionnaire (6) represents a significant advancement in critical thinking. The Peter Honey Questionnaire is a commendable tool in the academic domain (7); additionally, Naeini conducted the psychometrics of its Persian translation in Iran, and this translation lacks contextual and linguistic validity (8). From personal experience, the mentioned questionnaire has been used for over a decade, and in most cases, the participants cannot understand the real meaning of the statements. A miserable ca-

tastrophe regarding the mentioned instrument is the psychometric process. The original questionnaire and its explanation guide, which are unavailable online, were created using specific categories. These categories are crucial to critical thinking because, although critical thinking can be thought of as a concept, an individual can know himself through analysis thanks to the categories. After reporting the overall score, the psychometrics suggested dividing it into 3 ranges: low, mid, and high. Contextual validity is a significant factor to consider while creating an instrument; otherwise, the study's findings and generalizability are seriously questioned.

The results are presented in the next section according to the methodology considering four tenets.

Results

Regarding the qualitative nature of the study, 3 significant results were listed and explained as follows:

❖ On-the-spot scaffolding design on critical thinking, which is an alternative to a behavioristic lesson plan

❖ Several film reviews in both Persian and English were written by the students who either attended the sessions in person or only completed the tasks. One of the components of reflective autobiography is these film critics.

❖ A student-written, instructor-edited paper was also submitted to ICHPE 2023.

• Results I: On-the-Spot Scaffolding Design on Critical Thinking

The first result, which is represented in Table 1, is a sample of scaffolding design contrary to a lesson plan. As mentioned in a lesson plan, all the steps are required to predict the learning progress and process; however, in scaffolding design, the framework is set, and the progress and function depend on the participants and the class context because contextual validity is paramount. The necessities are vivid, but the end depends on the learner's will and interest. In the ending sessions, all the present participants were asked to write 3 positive and positive-to-be points on the sessions to teach them how to learn the autobiography and then reflective autobiography. All the documents are at hand, and they can be analyzed thoroughly.

• Result II: Sample of Movie Critic

As its boarding school setting would suggest, Dead Poets Society is, in large part, a novel about education. The book articulates 2 competing theories about how young people should be educated: first, the process of rote memorization and blind obedience practiced by most teachers at Welton Academy (the "Welton way"); second, the process of training students to think for themselves (the "Keating Way").

At Welton, students are trained to obey authorities and internalize whatever knowledge their teachers deem fit to pass on to them. According to the "Welton Way," education consists of an older, more experienced teacher passing on specific information to a classroom of younger, relatively inexperienced students. Therefore, the ideal

Table 1. On the Spot Scaffolding Design on Critical Thinking

Teaching Objectives	Critical Thinking I	Critical Thinking II	Critical Thinking III
Thought and Critical Thinking Basics and Principles	Assessing exposure to critical thinking in the action field through film criticism	Assessing the understanding of the action field of critical thinking in the context of education through film criticism	Explaining critical thinking position in Western philosophy
	Assessing decision-making in the context of critical thinking through film criticism	Comparative-historical investigation of critical thinking position	Explaining critical thinking position in the research action field
			Explaining the role of reasoning in medicine based on critical thinking
			Explaining the position of classical medicine and complementary medicine based on critical thinking
Assessment Objectives	**Critical Thinking I**	**Critical Thinking II**	**Critical Thinking III**
Thought and Critical Thinking Basics and Principles	Assessing exposure to critical thinking in the action field through film criticism	Assessing the understanding of the action field of critical thinking in the context of education through film criticism	Assessing identification in the action field of critical thinking in the context of World War II through book criticism
	Assessing decision-making in the context of critical thinking through film criticism	Assessing the understanding of the cause-and-effect system of thesis, antithesis, and synthesis through film criticism	Assessing the understanding of the relationship of critical thinking with the context and human agency in determining destiny through book criticism
Educational Materials	**Critical Thinking I**	**Critical Thinking II**	**Critical Thinking III**
Thought and Critical Thinking Basics and Principles	Contents		
	Instructor podcast	Ahmad Haeriyan lecture	Masud Mirzaei and Akbar Soltani lectures
	Activities		
	Patch Adams movie	Dead Poets Society movie	Man's Search for Meaning by Victor Frankl
Resources	**Critical Thinking I**	**Critical Thinking II**	**Critical Thinking III**
Thought and Critical Thinking Basics and Principles	Hinkle, J. L., & Cheever, K. H. (2018). Brunner and Suddarth's textbook of medical-surgical nursing: Wolters kluwer India Pvt Ltd. (Critical Thinking)	Ahmad Haeriyan lecture https://www.aparat.com/v/9Cebf\	Masud Mirzaei lecture https://www.aparat.com/v/9hsrn
	Instructor podcast	Dead Poets Society movie, 1989	Akbar Soltani lecture on criticizing traditional medicine and other complementary medicines from the perspective of critical thinking
	Patch Adams movie, 1998		Man's Search for Meaning by Victor Frankl, translated by Amir Lahuti

Welton student will obey authority without question, memorizing Latin, trigonometry, history, etc. But although the Welton way defines education as the internalization of a specific pieces of information, education itself is just a means to an end: i.e., a way for Welton students to go to a good college and later get a good job. The Welton way isn't designed to foster any real passion for knowledge whatsoever; rather, it's designed to produce graduates who will go on to make lots of money.

The "Keating Way" of educating students, by contrast, is designed to get young people to think for themselves. Content-wise, Keating's classes stress the idea that a "good life" must be structured around one's unique passions, not society rules. Similarly Keating's theatrical, sometimes over-the-top methods push students to think originally and independently. He lets his students stand on desks, walk around the schoolyard, yell in class, and generally break out of their old, familiar habits at school. The goal of these seemingly frivolous exercises is to train students to "un-learn" their blind obedience to Welton, and to authority in general, Keating believes that students have innate passions and talents - his job, then, isn't to pass on information to the students, but rather to help them cultivate the abilities they already have.

The second result is a sample of movie criticism by 1 of the students. As a medical student, she wrote very well; however, there were some errors. The organization and meaning of negotiation are excellent, receiving at least a 7 out of 9 on the Academic IELTS assessment scale. Although attendance at sessions is not required, each student is required to submit a critique in either Persian or English. Respecting human differences is the slogan of individualized learning and curriculum; some students write entirely independently, while others only copy and paste. According to constructivism, individual advancement is more important than the normal distribution because each

person aspires to advance. The teacher would act as a guide to illuminate the way; force would never be used. It is love, desire, passion, interest, and zeal.

• Result III: Paper Writing for ICHPE 2023

The last result is an abstract written by the students, then edited by the instructor, and sent to the conference (Appendix). Because the process matters more than the outcome, encountering new phenomena is a means of learning in reflective autobiography. The learners can only accomplish the desired result if they understand the rules that an instructor must impart to them on learning; however, if it does occur for the first time.

Discussion

In line with the results, some studies are explained in 3 aspects—on-the-spot scaffolding, hermeneutic phenomenology, and critical thinking. Then, comparisons and contrasts according to the study results are fulfilled.

McDonald et al argue that instructors should be involved in innovations in 3 related but distinguished facets of program design and implementation: "organizational structures and policies, content and curriculum, and teacher education pedagogy" (9). Based on the study, education development centers at universities of medical sciences nationwide should provide continuous professional development programs that incorporate educational paradigms in a broad perspective and on-the-spot scaffolding in a specific view.

Coelho argues for a broader, more extensive, constant, and innovative utilization of different scaffolding strategies in Content and Language Integrated Learning classes as an operative means to nurture the learners' autonomy and progressively build their confidence in using a foreign language for efficiently dealing with content (10); an autonomous learner is one of the final achievements of reflective autobiography.

Ma states that the "perfect scenario" was to possess a fair amount of on-the-spot assistance that intertwines experience with explanations, attaining a good balance between students' reasoning and teachers' scaffolding. In the future, on-the-spot scaffolding should be promoted to support students in their constructivist process and form collaborative interactions (11). Iran's educational system needs to undergo the necessary paradigm transformation. McDill states that in the last half of the 20th century, a minor but increasing number of biblical academics have appealed to linguistics as a discipline that can significantly influence biblical studies. One of the main ways that linguistics has been utilized in biblical studies is via discourse analysis. Nonetheless, linguistic methods such as discourse analysis have not been welcomed by all or rapidly embraced by biblical academics in general. Should discourse analysis, the critical explanation or interpretation of a text, particularly of scripture, be used in biblical exegesis? To answer this question, one must ascertain and appraise the linguistic presuppositions on which discourse analysis is founded (12). Research methods, hermeneutic phenomenology, and discourse analysis are required to reach the appropriate interpretation and inference.

Xiaotian declares that Gadamer is not the only philosopher studying language. His point of view was influenced by and related to many philosophers, such as Plato, Aristotle, and Heidegger. The interrelationship between phenomenology, dialogues of Platonic philosophy metaphysics, and Gadamerian perspectives of language can be seen in *Truth and Method*. The vitality of hermeneutic interpretation of language is evident and significant in both scientific and social contexts, so scholars are certainly anticipating a more complete explanation of this reality (13). According to a comparative historical analysis, several philosophers from other great civilizations were already interested in language studies before Plato.

Mousavi Bazaz and Mousavi Bazaz surveyed the critical thinking skills of medical students in Mashhad Medical School, and they concluded that the essential skills of thinking of the participants are analogous to some of the universities of the country, although deficient compared with the students of the universities of other countries. Consequently, educating and teaching critical thinking skills should be included in the educational programs (14).

Critical thinking and similar abilities are crucial not only for *Adab* and medical students but also for the following essential life skills, as predicted by the World Economic Forum for 2025:

1. "Analytical thinking and innovation
2. Active learning and learning strategies
3. Complex problem-solving
4. Critical thinking and analysis
5. Creativity, originality and initiative
6. Leadership and social influence
7. Technology use, monitoring and control
8. Technology design and programming
9. Resilience, stress tolerance and flexibility
10. Reasoning, problem-solving and ideation" (15).

To sum up, there is an urgent need for a paradigm shift, and comparative-historical investigations should be conducted to save medical education in Iran.

In terms of paradigm change, 4 macroparadigms can be regarded as follows (16, 17), as Kohn highlighted in the science literature and Mohammadpour highlighted in the social sciences from the start of the scientific movement:

- Objectivist, Absolutist, Realist
- Subjectivist, Relativist, Idealist
- Criticalist
- Synthetist

Some microparadigms can be considered regarding each macroparadigm and some influential scholars who developed the macro or micro paradigm. Davari Ardakani highlighted that positivity permeates all aspects of Iran's educational system, from elementary school to PhD programs (18). Most evaluation procedures in Iran's educational system use multiple-choice questions (MCQs) across various grade levels. For a pedagogy of/for/as joy, quantification-in-love is a cancerous sickness. The error should be accepted as a necessary part of learning and should not be avoided when administering tests or assessments. Error

ANTH

tolerance is a significant factor to consider when learning because, as humans, we are not angels. The second conclusion, as mentioned, is allocated to the need for comparative-historical investigations. As considered, contextual validity in education is of paramount importance. For paradigm shift, comparative-historical considerations must be considered simultaneously because paradigm shift cannot be implemented authoritarian. The Achaemenian, Sassanid, and Samanid Dynasties have brought forth some renaissances in Persian civilization. One of the finest examples of the earliest universities in history is Gondishapur University, which existed during the Sassanid dynasty. Borzuya, the physician, was a graduate of this university.

"To ensure that the competencies of medical doctors are globally applicable and transferable, readily accessible and transparent documentation of the levels of quality of educational institutions and their programs is essential. The Avicenna Directory of Medical Schools, developed by WFME in 2007 to replace the World Health Organization World Directory of Medical Schools, aimed to constitute a roster of medical educational institutions, indicating specifically whether institutions included have attained globally approved standards for medical education programs."

This passage accurately takes from the WFME Global Standards for Basic Medical Education, and if line 4's contextual validity is taken into account, it's a document of honor for Iranians (19). Several papers are similar to the ones mentioned above. For example, the Encyclopedia of intellectuals on Education published by UNESCO under Morsy lists 40 scholars, 3 Iranian: Farabi, Avicenna, and Ghazali (20). Gatha by Zoroaster dates back to 1000 BC; however, Plato was born in 424 BC. Because historical narcissism is the flip side of the honor coin, contextual validity consideration is as crucial to comparative-historical investigations as the interactions between the great civilizations. As Shahnameh mentions, the Persian Empire was once Persia ruled the first in the world, and seventeen realms during the Fereydoun Era (21).

Conclusion

In general, the educational system in Iran is under the tenets of positivist philosophical school and behavioristic psychology. Medical education is not an exception in this environment, but any paradigm in line with generational change also needs to change. The new generation of learners will force this transition if policymakers do not; they prefer to study through technology-enhanced learning. The positivist life should be welcomed by Iranian policymakers for medical education.

Acknowledgment

Conflict of Interests

The authors declare that they have no competing interests.

References

1. Scott S, Palincsar A. Sociocultural theory. 2013. Retrieved from: https://www.dr-hatfield.com/theorists/resources/sociocultural_theory.pdf
2. Read H. Education through art. 1948. London.
3. Gadamer HG. Truth and method. 2013. New York: A&C Black.
4. Kissine M. Locutionary, illocutionary, perlocutionary. Lang Linguist Compass. 2008;2(6):1189-1202.
5. Pinar WF, Slattery P, Reynolds WM, Taubman PM. Understanding curriculum: An introduction to the study of historical and contemporary curriculum discourses. 1995 (Vol. 17): Peter lang.
6. California critical thinking skills test manual. 2011. Millbrae, CA.
7. Honey P. CT Questionnaire. 2004. Retrieved from Peter Honey Learning Website: http://www.Peter Honey Publications.com.
8. Naeini J. The effects of collaborative learning on critical thinking of Iranian EFL learners. 2005. Unpublished M.A. Thesis, Islamic Azad University, Central branch, Tehran, Iran.
9. McDonald M, Kazemi E, Kelley-Petersen M, Mikolasy K, Thompson J, Valencia SW, et al. Practice makes practice: Learning to teach in teacher education. Peabody J Educ. 2014;89(4):500-515.
10. Coelho M. Scaffolding Strategies in CLIL Classes–supporting learners towards autonomy. in Languages and the Market: A ReCLes.pt Selection of International Perspectives and Approaches. 2017. Published by ReCLes.pt – Associação de Centros de Línguas do Ensino Superior em Portugal. www.recles.pt. Editors' Foreword, 106-114.
11. Ma A. Merging earth science with environmental education for teachers through inquiry, constructivist and place-based learning. 2019. Thesis submitted in partial fulfillment of the requirements for the degree of master of science. University of British Columbia, Faculty of Science, Department of Earth Sciences.
12. McDill M.D. Discourse analysis and hermeneutics. 2013. http://static.squarespace.com/static/519b889fe4b01af80eda43d8/519b 90c7e4b05d60bdfd9fc4/519b90c9e4b05d60bdfda06d/1265889035000/ DISCOURSE-ANALYSIS-AND-HERMENEUTICS-PAPER.pdf?format=original
13. Xiaotian W. Gadamerian Perspectives of Language: Inevitably Limited. Philos. 2022;12(5):271-279.
14. Mousavi Bazaz N, Mousavi Bazaz M. A Survey on Critical Thinking Skills of medical students in Mashhad Medical School (2017-18 academic year). Future Med Educ J. 2021;11(4):33-39.
15. World Economic Forum. Future of jobs report. 2020. Retrieved from www.weforum.org.
16. Kohn TS. The structure of scientific revolutions. 2012 (4th ed.). University of Chicago Press.
17. Mohammadpour A. Counter-Method: The philosophical underpinnings and practical procedures of qualitative methodology. 2018 (2nd ed.). Tehran: Logos Publications.
18. Davari Ardakani R. Wisdom and development. 2018. Tehran: Sokhan Publications. [Persian]
19. WFME global standards for basic medical education. 2015. Retrieved from www.WFME.org
20. Morsy Z. Thinkers on education. 1997. Volume 2: ERIC.
21. Ferdowsi A. Shahnameh; Khaleghi Motlagh J. Edition. 2006. Tehran: Sokhan Publications.

Appendix. Encyclopedic Knowledge Raising of Humanities through on-the-spot Scaffolding: Adab-e Pezeshki Case

Background

The concept of human has been intertwined with the arts, and this intertwinement backs to the civilization dawn. The arts can be divided into fine and liberal and for each; there are categorizations of traditional and modern. In this regard, the arts as a concept is a universal principle and in each civilization, it has been represented through different parameters, and these parameters has been interacting over ages like the interactions of Greek and Persia. Art theory of Plato as described in Read (1948) concentrated on two wings for human sublimeness, namely wisdom and art and these two wings has been focused on wisdom and art education in different curriculum over ages and one of these curriculum is national curriculum for students of Medicine revised in 2017. One of the complementarinesses of the mentioned curriculum is competencies required for a general practitioner graduate and among seven competencies; three of them are directly germane to the arts in broad or humanities in narrow viewpoint. This competency-based curriculum was enriched by humanities in a longitudinal theme by courses named as Adab-e Pezeshki. These courses if appropriately designed and implemented can nurture a physician who can respect to humanity owing to his understanding of personalized medicine.

Methodology

Number of Medicine students engaged in Adab courses were voluntarily selected as the participants in this qualitative research. They were willing to continue the course via awareness raising of shared background knowledge regarding humanities; therefore, in Delphi rounds through expert consultations; first, scopes of interest were chosen, then the priority of scopes was ranked. Twelve scopes and the interest vote for each were as follows: Philosophy(21), Politics(21), Mythology(16), Rumi(15), Shahnameh(14), Psychology(13), Self-awareness(12), Sociology(11), History(10), Cinema(10) Economics(5), and Art(5). Top five were selected and for each, two books were introduced by the mentor; some brief explanations were provided and then the voting via hand raising was performed. Among all, 1984 by George Orwell was ranked as the case. Participants were debriefed to study the first fifty pages and then in an onsite session, they were planned to discuss. Due session was scheduled and before discussion, the rudiments of an art work namely, plot, characters, and setting were explained by the mentor then, the students discuss on the issues; the session was continued in the form of a coffee break which was a part of the lesson plan. As the assignment, participants undertook to find some podcasts on World Wars and then listen to them to raise the awareness for better understanding because in onsite session, they were informed three types of analysis namely, text, context, and text-context interaction. Podcasts were provided in a virtual group, participants were asked upon to listen and asked questions, and then the second session of discussion was performed via Google Meet. They were called upon to write their experiences on the book, and send the pieces to the research team. When the majority of descriptions were received, they were analyzed via MAXQDA software.

Results

Because in the case of 1984, there is a movie, podcasts, critics, and translations, the categories and subcategories extracted from the descriptions majorly focused on the philosophical, social and political issues as Marxism principles, Totalitarianism, and World Wars. The participants, in general, were satisfied with the choice and they were willing to continue the sessions with other books.

Discussion and Conclusion

The principles of art education as mentioned in Perkins (1994), and Broudy (1994) were observed in this study in which through personalized learning and curriculum, art education can be led to learning as joy. Without any force, 40 Medicine students voluntarily started a movement which has been continued up to now. Respecting to human agency even in lesson plan designing probably is a resort to fulfill the pedagogy of joy in action. However, lesson plan can be inferred as a behavioristic term and it can be replaced by on-the-spot scaffolding.

References
• Broudy HS. Enlightened cherishing: An essay on aesthetic education: University of Illinois Press. 1994.
• Perkins DN. The intelligent eye: Learning to think by looking at art: Getty Publications. 1994.
• Read H. Education through art. London. 1948.