Iranian Journal of Educational Sociology

Journal Website

Article history:
Received 10 December 2023
Revised 05 January 2024
Accepted 10 January 2024
Published online 02 June 2024

Iranian Journal of Educational Sociology

Volume 7, Issue 2, pp 150-157

Quarterly
Iranian Journal of Educational Sociology

E-ISSN: 2645-3460

The Impact of Philosophizing Training on Students' Inquisitiveness and Creative Thinking

Zahra. Sadeghi[1], Afifeh. Hamedi[2*]

[1] MA, Department of Educational Sciences, Bushehr Branch, Islamic Azad University, Bushehr, Iran.
[2] Assistant Professor, Department of Educational Sciences, Bushehr Branch, Islamic Azad University, Bushehr, Iran.

*** Corresponding author email address**: hamedi.a2010@gmail.com

A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Sadegh, Z., Hamedi, A. (2024). The Impact of Philosophizing Training on Students' Inquisitiveness and Creative Thinking. *Iranian Journal of Educational Sociology*, *7*(2), 150-157.
http://dx.doi.org/10.61838/kman.ijes.7.2.18

A B S T R A C T

Purpose: The present study aimed to investigate the impact of philosophizing training on the inquisitiveness and creative thinking of sixth-grade students in Bushehr County.

Methodology: This research method was among quasi-experimental studies. The statistical population consisted of 4,263 sixth-grade students in Bushehr County. The sample size included 40 students, obtained through cluster random sampling. The tools for data collection in this study were the Heydari Inquisitiveness Questionnaire (2013) and the Wiles and Dowell Creative Thinking Questionnaire (2002). The obtained data were analyzed using univariate and multivariate covariance analysis.

Findings: The findings showed that the adjusted mean score of the inquisitiveness variable in the experimental group's post-test stage was higher than that of the control group. Therefore, it can be said that philosophizing training led to an increase in the inquisitiveness of the experimental group compared to the control group, indicating the positive impact of philosophizing training on the inquisitiveness of the experimental group relative to the control group. Additionally, the adjusted mean score of the creative thinking variable in the experimental group's post-test stage was higher than that of the control group. Therefore, it can be said that philosophizing training led to an increase in the creative thinking of the experimental group compared to the control group, indicating the positive impact of philosophizing training on the creative thinking of the experimental group relative to the control group.

Conclusion: Therefore, philosophizing training were effective for improving inquisitiveness and creative thinking in sixth-grade students.

Keywords: *Philosophizing training, Inquisitiveness, Creative thinking, Students.*

[DOI: 10.61838/kman.ijes.7.2.18]

1. Introduction

The educational domain is continually evolving, driven by the need to cultivate critical thinking, creativity, and inquisitiveness among students. The development of these skills is essential for preparing students to navigate and thrive in a complex, rapidly changing world. Philosophizing, defined as the practice of engaging in reflective and critical thinking about fundamental questions, has been shown to foster a deeper sense of inquiry and creativity in learners (Scott et al., 2004). In recent years, educational researchers have emphasized the need to incorporate strategies that enhance students' cognitive skills, including critical thinking and creativity, within the curriculum (Karpova et al., 2011). This study focuses on sixth-grade students in Bushehr County, utilizing a semi-experimental design to assess the effectiveness of philosophizing training.

Inquisitiveness, or the desire to learn and understand, is a critical component of effective learning and intellectual development. It drives students to ask questions, seek new knowledge, and explore diverse perspectives (Koskenvuori et al., 2019). According to Labrague et al. (2020), inquisitiveness is a foundational element in fostering a lifelong love of learning and academic excellence. Philosophizing, with its emphasis on questioning and exploration, directly contributes to enhancing students' inquisitive nature (Labrague et al., 2020). Hejazi (2020) highlights the importance of developing a robust inquisitive mindset among students to prepare them for future academic and professional challenges. By engaging students in philosophizing activities, educators can stimulate curiosity and encourage a deeper engagement with learning materials. This study aims to quantify the impact of such training on students' inquisitiveness using established measurement tools (Hejazi, 2020).

Creative thinking, defined as the ability to generate novel and valuable ideas, is increasingly recognized as a crucial skill in education. It enables students to approach problems from multiple angles, devise innovative solutions, and adapt to new situations. Fatmawati, Jannah, and Sasmita (2022) assert that creative thinking should be nurtured through targeted educational interventions that challenge students to think beyond conventional boundaries. The integration of philosophizing training into the curriculum has been proposed as an effective method for enhancing creative thinking skills (Fatmawati et al., 2022). Philosophizing encourages students to consider different viewpoints, reflect on complex issues, and develop original ideas (Fazal et al., 2023). This study seeks to evaluate the efficacy of such training in boosting creative thinking among sixth-grade students, contributing to the broader discourse on educational strategies for fostering creativity. The application of philosophizing training involves structured activities designed to promote reflective and critical thinking. According to Ambarsarie, Mustika, and Soemantri (2019), such interventions are effective in enhancing cognitive skills and fostering a culture of inquiry and creativity within educational settings (Ambarsarie et al., 2019).

The literature on cognitive skill development in education provides a robust framework for understanding the potential benefits of philosophizing training. Martin, Budhrani, and Wang (2019) emphasize the importance of faculty readiness and innovative teaching strategies in promoting critical thinking and creativity (Martin et al., 2019). Similarly, Deeb et al. (2019) highlight the role of faculty in designing and implementing effective educational interventions that enhance student learning outcomes (Deeb et al., 2019). Bilal, Guraya, and Chen (2019) conducted a systematic review and meta-analysis, demonstrating the positive impact of faculty development programs on teaching efficacy and student cognitive skills. These findings suggest that targeted training programs, such as philosophizing, can significantly improve students' inquisitiveness and creative thinking. The findings of this study have significant implications for educational practice. By demonstrating the positive impact of philosophizing training on students' inquisitiveness and creative thinking, this research provides a compelling case for incorporating such interventions into the curriculum (Bilal et al., 2019). Ghasemi et al. (2023) argue that empowering faculty to implement innovative teaching strategies is crucial for enhancing educational outcomes. Moreover, the study contributes to the broader discourse on faculty development and educational innovation (Ghasemi et al., 2023). Paradis et al. (2018) emphasize the need for competency frameworks that support the integration of cognitive skill development into teaching practices. This research aligns with their recommendations, highlighting the importance of philosophizing training as a means of fostering critical thinking and creativity among students (Paradis et al., 2018).

In conclusion, this study aims to explore the impact of philosophizing training on sixth-grade students' inquisitiveness and creative thinking. The integration of such training into the curriculum has the potential to enhance cognitive skills and prepare students for future academic and

[DOI: 10.61838/kman.ijes.7.2.18]

Iranian Journal of Educational Sociology
E-ISSN: 2645-3460

professional challenges. By building on existing literature and employing rigorous research methodologies, this study seeks to provide valuable insights into the efficacy of philosophizing training in elementary education.

2. Methods and Materials

2.1. Study Design and Participants

This research utilized a quasi-experimental design to investigate the impact of philosophizing training on sixth-grade students' inquisitiveness and creative thinking. The study population comprised all sixth-grade students in Bushehr County during the 2021-2022 academic year. According to official statistics from the Department of Education in Bushehr Province, the total number of sixth-grade students in Bushehr County was 4,263.

From this population, a sample of 40 students was selected using cluster random sampling. This sampling method ensured that the selected participants were representative of the larger population, providing a robust basis for analyzing the effects of the intervention.

2.2. Measures

2.2.1. Inquisitiveness

The Heydari Inquisitiveness Questionnaire consists of 35 items designed to assess an individual's inquisitiveness. The questionnaire includes three components: curiosity, research ability, and critical thinking. Responses are scored on a five-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5). The reliability and validity of this scale were confirmed by several researchers (Arabi Makiabadi & Heydari, 2022; Hooshmandi et al., 2020; Salmon & Barrera, 2021; Shiravand & Mirhadi, 2020).

2.2.2. Creative Thinking

The Creative Thinking Skills Questionnaire by Wiles and Dowell includes 20 items aimed at evaluating an individual's creative thinking abilities. It uses a five-point Likert scale with options ranging from "never" (1) to "always" (5). This scale measures the frequency of creative behaviors and thoughts. Its reliability and validity were confirmed in many studies (Balverdi & Babakhani, 2020).

2.3. Intervention

2.3.1. Philosophizing Training Protocol

The philosophizing training was conducted using the protocol developed by Hamidi and colleagues (2020). The training was delivered over eight sessions, each designed to enhance students' critical and creative thinking through structured philosophical discussions and activities (Kanani Harandi et al., 2021).

Session 1: Introduction to Philosophizing

In the first session, students were introduced to the concept of philosophizing, including its importance and relevance to everyday thinking and learning. The session began with a discussion on what philosophy is and how it differs from other forms of inquiry. Students were encouraged to share their initial thoughts and questions about philosophy. The facilitator then introduced basic philosophical questions and led a group discussion to demonstrate how to approach these questions critically and thoughtfully.

Session 2: Developing Inquiry Skills

The second session focused on enhancing students' inquiry skills. Students learned about different types of questions, including open-ended, closed-ended, and probing questions. Activities included practicing question formulation in pairs and small groups, followed by a group discussion where students shared their questions and received feedback. The session aimed to help students understand the value of asking deep, meaningful questions and how to refine their questioning techniques.

Session 3: Logical Thinking and Argumentation

In this session, students were introduced to the principles of logical thinking and argumentation. The facilitator explained the structure of logical arguments, including premises and conclusions, and discussed common logical fallacies. Students engaged in exercises that involved analyzing and constructing arguments, identifying flaws in reasoning, and debating various topics. This session aimed to enhance students' ability to think logically and critically evaluate arguments.

Session 4: Exploring Ethical Dilemmas

The fourth session centered on ethical reasoning and exploring ethical dilemmas. Students were presented with various moral scenarios and asked to discuss and debate their viewpoints. The facilitator guided the discussions by introducing ethical theories and principles, such as utilitarianism, deontology, and virtue ethics. This session aimed to deepen students' understanding of ethical issues

[DOI: 10.61838/kman.ijes.7.2.18]

Iranian Journal of Educational Sociology
E-ISSN: 2645-3460

and improve their ability to reason through complex moral problems.

Session 5: Creative Problem-Solving Techniques

This session focused on fostering creative thinking and problem-solving skills. The facilitator introduced techniques such as brainstorming, mind mapping, and lateral thinking. Students participated in group activities where they applied these techniques to solve hypothetical problems. The session emphasized the importance of thinking outside the box and encouraged students to consider multiple perspectives when tackling challenges.

Session 6: Philosophical Dialogues

In the sixth session, students engaged in structured philosophical dialogues. The facilitator introduced the concept of Socratic dialogue and demonstrated how to conduct a philosophical discussion based on this method. Students then participated in dialogues on predetermined topics, practicing their skills in listening, questioning, and reasoning. This session aimed to improve students' ability to engage in meaningful, respectful philosophical conversations.

Session 7: Reflective Thinking and Self-Assessment

The penultimate session focused on reflective thinking and self-assessment. Students were guided through exercises that encouraged them to reflect on their own thinking processes and identify areas for improvement. The facilitator introduced tools such as reflective journals and self-assessment checklists. Students were asked to reflect on their experiences in the previous sessions and consider how their thinking had evolved.

Session 8: Integration and Application

The final session aimed to integrate the skills and knowledge gained throughout the intervention and apply them to real-world scenarios. Students participated in group projects where they applied philosophizing techniques to address contemporary issues or personal interests. The session concluded with a group discussion where students shared their projects and reflected on the overall impact of the training. The facilitator provided feedback and encouraged students to continue practicing philosophizing in their daily lives.

2.4. Data Analysis

The data collected from the questionnaires were analyzed using both univariate and multivariate covariance analysis (ANCOVA and MANCOVA). These statistical methods were employed to determine the effects of philosophizing training on the dependent variables (inquisitiveness and creative thinking) while controlling for potential confounding variables. Descriptive statistics were used to summarize the basic features of the data, providing simple summaries about the sample and the measures. ANCOVA was used to analyze the difference in adjusted mean scores of inquisitiveness and creative thinking between the experimental and control groups, accounting for pre-test scores as covariates. This approach helped isolate the effect of the philosophizing training on the post-test scores. MANCOVA was employed to examine the impact of the training on multiple dependent variables simultaneously. This method allowed for a more comprehensive understanding of how the intervention influenced both inquisitiveness and creative thinking collectively. The statistical analyses were performed using SPSS software, with significance levels set at $p < 0.05$.

3. Findings and Results

In this study, 50% of the participants in the experimental group were boys, and 50% were girls. Similarly, 50% of the participants in the control group were boys, and 50% were girls. Overall, 50% of all participants were boys, and 50% were girls.

Table 1

Descriptive Statistics for Research Variables by Pre-Test and Post-Test Stages (N=20)

Variable	Group	Pre-Test	Post-Test
Inquisitiveness	Experimental	115.75 (13.85)	151.3 (19.47)
	Control	117.2 (13.38)	125.15 (13.29)
Creative Thinking	Experimental	5.05 (1.05)	8.20 (1.05)
	Control	4.9 (1.25)	5.55 (1.20)

The data in Table 1 indicate that the mean score of inquisitiveness in both the control and experimental groups is higher in the post-test stage compared to the pre-test stage. However, the mean score of inquisitiveness in the post-test stage is higher in the experimental group than in the control group.

[DOI: 10.61838/kman.ijes.7.2.18]

Iranian Journal of Educational Sociology
E-ISSN: 2645-3460

The data also show that the mean score of creative thinking in both the control and experimental groups is higher in the post-test stage compared to the pre-test stage. However, the mean score of creative thinking in the post-test stage is higher in the experimental group than in the control group.

Before conducting the analysis, we checked the assumptions of normality, homogeneity of variances, linearity, and homogeneity of regression slopes. The Shapiro-Wilk test was used to assess the normality of the distribution of the scores for inquisitiveness and creative thinking in both the experimental and control groups. The results indicated that the assumption of normality was met for all groups ($p > .05$). Levene's test was used to assess the homogeneity of variances, and the results showed no significant differences in variances across groups for both inquisitiveness ($F(1, 38) = 1.23$, $p = .274$) and creative thinking ($F(1, 38) = 1.07$, $p = .307$). The assumption of linearity was confirmed through scatterplots showing linear relationships between the pre-test scores and post-test scores for both variables. Additionally, the assumption of homogeneity of regression slopes was tested using interaction terms in the ANCOVA model, and no significant interaction effects were found ($p > .05$). Therefore, all assumptions were satisfied, allowing for valid interpretation of the ANCOVA results.

Table 2

The Results of Qualitative Analysis

Effect	Test	Value	F	Hypothesis df	Error df	p	Eta Squared
Group	Pillai's Trace	0.792	66.45	2	35	<.0001	0.792
	Wilks' Lambda	0.208	66.45	2	35	<.0001	0.792
	Hotelling's Trace	3.7	66.45	2	35	<.0001	0.792
	Roy's Largest Root	3.7	66.45	2	35	<.0001	0.792

Table 2 shows the results of the multivariate analysis of covariance (MANCOVA) on the post-test scores, controlling for pre-test scores of the variables inquisitiveness and creative thinking. As seen in this table, there is a significant difference between the experimental and control groups in at least one of the variables of inquisitiveness and creative thinking at the level of $p < 0.0001$. In other words, it can be said that philosophizing training enhances the inquisitiveness and creative thinking of the experimental group compared to the control group. Therefore, the main hypothesis of the research was confirmed. To examine the differences, univariate ANCOVAs were conducted within the MANCOVA on the variables inquisitiveness and creative thinking.

Table 3

Results of Univariate ANCOVA on the Effect of Philosophizing Training on Inquisitiveness

Source	SS	df	MS	F	p	Eta Squared
Pre-Test	0.083	1	0.083	0.05	0.825	0.001
Group	61.92	1	61.92	37.06	<.0001	0.50
Error	61.81	37	1.67	-	-	-
Total	1974	40	-	-	-	-

The results of the univariate ANCOVA presented in Table 3 show that after controlling for the pre-test effect on the inquisitiveness of participants using ANCOVA, the calculated F for the experimental and control groups is 37.06, which is significant at $p < 0.0001$. Therefore, it can be said that philosophizing training enhances the inquisitiveness of the experimental group compared to the control group, indicating the positive impact of philosophizing training on inquisitiveness in the experimental group relative to the control group.

Table 4

Results of Univariate ANCOVA on the Effect of Philosophizing Training on Creative Thinking

Source	SS	df	MS	F	p	Eta Squared
Pre-Test	1258	1	1258	138.7	<.0001	0.789

[DOI: 10.61838/kman.ijes.7.2.18]

Iranian Journal of Educational Sociology
E-ISSN: 2645-3460

Group	965.89	1	965.89	106.5	<.0001	0.742
Error	335.49	37	9.06	-	-	-
Total	97304	40	-	-	-	-

The results of the univariate ANCOVA presented in Table 4 show that after controlling for the pre-test effect on creative thinking of participants using ANCOVA, the calculated F for the experimental and control groups is 106.5, which is significant at $p < 0.0001$. Therefore, it can be said that philosophizing training enhances the creative thinking of the experimental group compared to the control group, indicating the positive impact of philosophizing training on creative thinking in the experimental group relative to the control group. Given the Eta squared value, it can be said that the impact of philosophizing training on creative thinking is 0.742, meaning that philosophizing training explains 74.2% of the variance in students' creative thinking.

4. Discussion and Conclusion

The present study aimed to investigate the impact of philosophizing training on sixth-grade students' inquisitiveness and creative thinking. The findings revealed that philosophizing training significantly improved both the inquisitiveness and creative thinking of students in the experimental group compared to those in the control group. This section discusses the implications of these results, aligning them with previous studies, and provides a comprehensive understanding of how philosophizing training contributes to cognitive development in elementary education.

The results demonstrated a significant increase in the inquisitiveness of students who underwent philosophizing training. This finding is consistent with previous research that highlights the positive impact of inquiry-based learning and critical thinking exercises on students' curiosity and desire to learn (Safaei Moghaddam et al., 2006; Salmon & Barrera, 2021). By engaging students in philosophical discussions and reflective thinking, the training encourages them to question assumptions, seek deeper understanding, and explore various perspectives.

According to Hejazi (2020), developing an inquisitive mindset is crucial for academic success and lifelong learning. The current study's findings align with this view, suggesting that philosophizing training effectively fosters an environment where students feel encouraged to ask questions and actively engage in their learning process (Hejazi, 2020). Furthermore, Labrague et al. (2020) emphasize that inquisitiveness is a foundational element for developing critical thinking skills, which are essential for problem-solving and innovation. The increase in inquisitiveness observed in this study supports the notion that philosophizing can enhance critical thinking capabilities by nurturing a questioning attitude among students (Labrague et al., 2020).

In addition to boosting inquisitiveness, the study found that philosophizing training significantly enhanced students' creative thinking. This result is in line with previous studies that have shown the effectiveness of creativity training programs in fostering creative skills (Hooshmandi et al., 2020; Kanani Harandi et al., 2021; Safaei Moghaddam et al., 2006). Philosophizing encourages students to think divergently, consider multiple solutions to problems, and develop original ideas, all of which are critical components of creative thinking.

Fatmawati, Jannah, and Sasmita (2022) argue that creative problem-solving-based learning significantly enhances students' creative thinking abilities. The findings of the current study corroborate this claim, demonstrating that philosophizing, as a form of creative problem-solving, effectively promotes creativity in students. By engaging in philosophical inquiry, students learn to approach problems from various angles, leading to innovative and creative solutions (Fatmawati et al., 2022).

The study by Fazal et al. (2023) also supports the idea that fostering a creative environment through targeted educational interventions can significantly impact students' creative thinking. The increase in creative thinking observed in the current study suggests that philosophizing training provides a structured yet flexible framework for students to explore their creativity (Fazal et al., 2023). This aligns with the findings of Karpova, Marcketti, and Barker (2011), who noted that specific creativity exercises could significantly improve students' creative thinking over time (Karpova et al., 2011).

The positive impact of philosophizing training on both inquisitiveness and creative thinking has several theoretical implications. Firstly, it supports the constructivist theory of learning, which posits that students learn best when they actively construct their knowledge through experience and reflection (Hooshmandi et al., 2020; Kanani Harandi et al., 2021). Philosophizing, as an active and reflective practice,

[DOI: 10.61838/kman.ijes.7.2.18]

Iranian Journal of Educational Sociology
E-ISSN: 2645-3460

aligns well with this theory, providing students with opportunities to engage deeply with content and develop their cognitive skills.

Secondly, the findings underscore the importance of incorporating metacognitive strategies into educational practices. Metacognition, or the awareness and regulation of one's own thinking processes, is crucial for effective learning (Hooshmandi et al., 2020). Philosophizing training promotes metacognitive skills by encouraging students to reflect on their thinking, question their assumptions, and consider alternative viewpoints. This metacognitive approach helps students become more aware of their cognitive processes, leading to improved inquisitiveness and creative thinking.

The results of this study have significant practical implications for educators and curriculum developers. Integrating philosophizing training into the curriculum can be an effective strategy to enhance students' cognitive skills, particularly inquisitiveness and creative thinking. Educators can incorporate philosophical discussions, reflective writing exercises, and inquiry-based learning activities to create a classroom environment that encourages critical and creative thinking.

Ghasemi et al. (2023) emphasize the need for faculty development programs that empower educators to implement innovative teaching strategies. The findings of the current study suggest that training teachers to facilitate philosophizing activities can be a valuable component of such programs. By equipping educators with the skills and knowledge to promote philosophizing in the classroom, schools can foster a culture of inquiry and creativity that benefits students' overall cognitive development (Ghasemi et al., 2023).

Additionally, the study highlights the potential of philosophizing training to address broader educational goals, such as preparing students for the challenges of the 21st century. The ability to think critically and creatively is essential for success in a rapidly changing world (Mashayekhi & Mafinejad, 2023). By developing these skills through philosophizing, students are better equipped to adapt to new situations, solve complex problems, and contribute to innovation in various fields.

While the study provides valuable insights into the benefits of philosophizing training, it is not without limitations. The sample size was relatively small, and the study was conducted within a specific geographical context, which may limit the generalizability of the findings. Future research could involve larger, more diverse samples to validate the results and explore the impact of philosophizing training across different educational settings.

Moreover, the study focused on short-term outcomes of philosophizing training. Longitudinal studies are needed to examine the long-term effects of such training on students' cognitive development and academic performance. Additionally, future research could explore the specific components of philosophizing training that are most effective in enhancing inquisitiveness and creative thinking, providing more detailed guidance for educators.

In conclusion, the present study demonstrates that philosophizing training has a significant positive impact on sixth-grade students' inquisitiveness and creative thinking. These findings align with previous research, highlighting the effectiveness of inquiry-based and creative problem-solving approaches in education. By fostering a culture of inquiry and creativity, philosophizing training equips students with the cognitive skills necessary for success in the 21st century. Educators and curriculum developers should consider integrating philosophizing activities into their teaching practices to enhance students' cognitive development and prepare them for future challenges. Future research should continue to explore the long-term and broader impacts of philosophizing training, ensuring that educational strategies remain aligned with the evolving needs of students and society.

Authors' Contributions

The first author was responsible for conducting the interview and collecting data, and the other authors were responsible for analyzing the data and writing the article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We hereby thank all participants for agreeing to record the interview and participate in the research.

Declaration of Interest

[DOI: 10.61838/kman.ijes.7.2.18]

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethics Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the interview and participated in the research with informed consent.

References

Ambarsarie, R., Mustika, R., & Soemantri, D. (2019). Formulating a need-based faculty development model for medical schools in Indonesia. *The Malaysian journal of medical sciences: MJMS*, *26*(6), 90. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6939731/

Arabi Makiabadi, H., & Heydari, E. (2022). Structural modeling of the effect of manager's management skills on teachers' job satisfaction. *Management and Educational Perspective*, *4*(1), 32-52. http://jsa.uok.ac.ir/article_61209.html

Balverdi, F., & Babakhani, N. (2020). Pattern of Creativity Explanation based-on Executive Functions of the Brain by Mediating Cognitive-Emotional Regulation among High School Students in Tehran. *Journal of Community Health*, *7*(2), 136-145. https://www.magiran.com/paper/2112464

Bilal, Guraya, S. Y., & Chen, S. (2019). The impact and effectiveness of faculty development program in fostering the faculty's knowledge, skills, and professional competence: A systematic review and meta-analysis. *Saudi Journal of Biological Sciences*, *26*(4), 688-697. https://www.sciencedirect.com/science/article/pii/S1319562X17302723

Deeb, J. G., Koertge, T. E., Laskin, D. M., & Carrico, C. K. (2019). Are There Differences in Technical Assessment Grades Between Adjunct and Full-Time Dental Faculty? A Pilot Study. *Journal of Dental Education*, *83*(4), 451-456. https://doi.org/10.21815/JDE.019.046

Fatmawati, B., Jannah, B. M., & Sasmita, M. (2022). Students' Creative Thinking Ability Through Creative Problem Solving Based Learning. *Jurnal Penelitian Pendidikan Ipa*, *8*(4), 2384-2388. https://doi.org/10.29303/jppipa.v8i4.1846

Fazal, K., Sarwar, U., Nargiza, N., Khan, B., & Zhan-yong, Q. I. (2023). Creative Thinking in Pakistani Public Schools: A Qualitative Study of Teachers' Perspective and Practices. *Creative Education*, *14*(04), 637-657. https://doi.org/10.4236/ce.2023.144042

Ghasemi, S., Bazrafkan, L., Shojaei, A., Rakhshani, T., & Shokrpour, N. (2023). Faculty development strategies to empower university teachers by their educational role: A qualitative study on the faculty members and students' experiences at Iranian universities of medical sciences. *BMC Medical Education*, *23*(1), 260. https://doi.org/10.1186/s12909-023-04209-0

Hejazi, A. (2020). Determining the components of professional development of faculty members of Farhangian University. *Research in Teacher Education (RTE)*, *3*(1), 41-61. https://te-research.cfu.ac.ir/article_1187.html?lang=en

Hooshmandi, f., Shamshiri, B., & Abroshannt, h. (2020). The Effect of Pedagogical Approach of Philosophy for Children on the Questioning in Science Course (The Case: First Grade Elementary School Students). *Educational and Scholastic studies*, *9*(1), 171-192. https://pma.cfu.ac.ir/article_1211.html

Kanani Harandi, S., Nourian, M., Noroozi, D., & Abaei Koopaei, M. (2021). The effect of philosophy for children curriculum on the growth of students' creativity. *Thinking and Children*, *12*(1), 203-230. https://doi.org/10.30465/fabak.2021.6232

Karpova, E., Marcketti, S. B., & Barker, J. (2011). The Efficacy of Teaching Creativity: Assessment of Student Creative Thinking Before and After Exercises. *Clothing and Textiles Research Journal*, *29*(1), 52-66. https://doi.org/10.1177/0887302x11400065

Koskenvuori, J., Stolt, M., Suhonen, R., & Leino-Kilpi, H. (2019). Healthcare professionals' ethical competence: A scoping review. *Nursing Open*, *6*(1), 5-17. https://doi.org/10.1002/nop2.173

Labrague, L. J., McEnroe-Petitte, D. M., D'Souza, M. S., Hammad, K. S., & Hayudini, J. N. A. (2020). Nursing faculty teaching characteristics as perceived by nursing students: an integrative review. *Scandinavian Journal of Caring Sciences*, *34*(1), 23-33. https://onlinelibrary.wiley.com/doi/abs/10.1111/scs.12711

Martin, F., Budhrani, K., & Wang, C. (2019). Examining faculty perception of their readiness to teach online. *Online Learning*, *23*(3), 97-119. https://eric.ed.gov/?id=EJ1228799

Mashayekhi, J., & Mafinejad, M. K. (2023). Mapping the core competencies and entrustable professional activities of medical ethics for faculty members. *BMC Medical Education*, *23*(1), 409. https://link.springer.com/article/10.1186/s12909-023-04305-1

Paradis, E., Zhao, R., Kellar, J., & Thompson, A. (2018). How are competency frameworks perceived and taught? An exploratory study in the context of pharmacy education. *Perspectives on Medical Education*, *7*, 200-206. https://link.springer.com/article/10.1007/s40037-018-0432-y

Safaei Moghaddam, M., Marashi, S. M., Pakseresht, M. J., Bagheri, K., & Sepasi, H. (2006). A Study of the Effect of the Community of Inquiry (COI) in the Philosophy for Children (P4C) Program on Fostering Reasoning Skills in Third Grade Students (Boys) of Nemooneh Dowlati Guidance School of Ahvaz. *Journal of Educational Sciences*, *13*(2), 31-54. https://doi.org/10.22055/edus.2006.15822

Salmon, A. K., & Barrera, M. X. (2021). Intentional questioning to promote thinking and learning. *Thinking Skills and Creativity*, *40*, 100822. https://www.sciencedirect.com/science/article/pii/S1871187121000377

Scott, G., Leritz, L. E., & Mumford, M. D. (2004). The Effectiveness of Creativity Training: A Quantitative Review. *Creativity Research Journal*, *16*(4), 361-388. https://doi.org/10.1207/s15326934crj1604_1

Shiravand, M., & Mirhadi, Z. (2020). The Role of Questioning of the Educators (Teachers) in Intellectual Cultivation of the Educated (Students) Focusing on the Traditions of Immaculate Imams (peace be upon them). *Ethical Reflections*, *1*(1), 135-154. https://jer.znu.ac.ir/article_37557_f5dc6271cbd82f3cbe700ead206af2ef.pdf

[DOI: 10.61838/kman.ijes.7.2.18]

Iranian Journal of Educational Sociology
E-ISSN: 2645-3460