

Effectiveness of Applying Philosophy for Children (P4C) Teaching Approach in a Media Literacy Course

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ABSTRACT

Background: Media literacy is one of the essential skills needed by learners in the twenty-first century. Teaching this skill requires adopting methods that stimulate thinking and reasoning among learners. This study aims to analyze the effect of P4C on students' philosophical mentality and learning in a school course entitled Thinking and Media Literacy.

Methods: This study used a quasi-experimental method employing the pretest-posttest control group design. The research population consisted of all male students studying in the tenth grade at a school in Arak, Iran, in 2018-19 academic year. The sample comprised 44 students, selected by cluster sampling, and assigned to two experimental and control groups. Data collection was performed using a philosophical mentality questionnaire and a researcher-made learning test. For data analysis, descriptive statistics, mean, frequency and standard deviation were used. Covariance analysis was applied for inferential statistics using SPSS version 23.

Results: The statistical results showed that in terms of learning outcomes, the mean score in the P4C group (M=18.06, SD=1.6) was higher than in the conventional group (M=15.7, SD=1.6). There was a significant difference between learning outcome scores in the experimental and control groups (P<0.001). In addition, the mean score of philosophical mentality in the experimental group (M=146.3, SD=8.7) was significantly higher than that in the control group (M=131.8, SD=11.7), (P<0.001).

Conclusion: Considering the findings of this study, it is suggested that the prominent principles in P4C programs be used in teaching the Thinking and Media Literacy course.

Keywords: Philosophical Mentality, Philosophy for Children, Thinking and Media Literacy, Learning

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Introduction

In recent years media literacy has drawn substantial attention because of the developments in information and communication technologies along with more extensive use of social media channels (1, 2). In the past, the audiences received content through traditional media like radio and television while today their role has changed from mere receivers to producers and disseminators (3).

Media literacy is defined as “the ability to access, analyzes, evaluate, create, and act using all forms of communication” (4). Considering the importance of media literacy, UNESCO has designated it as one of the basic skills required for learners in the twenty-first century and has required all countries’ educational systems to make the necessary preparations with regard to the growth and development of this skill among learners (5). Given the necessity of developing media literacy among learners, creating this skill has received considerable attention in the curricula of educational systems in different countries. Similarly, in Iran the subject of media literacy was officially introduced into the country’s educational system in a course entitled *Thinking and Media Literacy* as part of the senior high school program (tenth-grade) in all disciplines (6).

Numerous studies have been carried out on media literacy. Most of them, however, describe the nature of this skill rather than how it can be created or, in other words, how it can be taught (7-9). Considering that senior high schools in Iran have only recently started teaching media literacy, there is limited relevant literature on this topic. For instance, Abdollahi, Eslami and Afani (10) analyzed the textbook taught to tenth-grade students entitled *Thinking and Media Literacy*, and reported that despite the title of the course, thinking and reasoning are largely neglected.

Media literacy emphasizes thinking about the media content. New thoughts require proper methods of thinking, and thinking is linked to one’s mentality. Philosophical mentality is a trait of human mind and its

capability to help an individual to think logically and properly (11). It is considered a type of organization and ordering power in organized arrangements. In other words, it is having the power of self-discipline and the application of knowledge and abilities to put things in order by means of holistic thinking, contemplation and flexibility in all behaviors, plans, and programs (12). While examining the characteristics of individuals with philosophical mentality, Smith realized three dimensions, namely, comprehensiveness, contemplation, and flexibility, in their way of thinking (13). Comprehensive thinking or comprehensiveness is an organizational, comprehensive and general vision that enables an individual to realize the relations between parts, and between parts and the whole, and its extensive background. Contemplation means a deep attentive view on things and matters, paying attention to discovering and codifying principles and fundamentals in issues deemed evident and certain by others as well as judging things by means of deductive hypotheses. Finally, flexibility refers to breaking the psychological deadlock and examining thoughts without being influenced by their sources, and investigating matters perspectives as well as being patient in temporary and conditional judgments (14).

To achieve philosophical mentality and to promote media literacy, it is necessary to develop the relevant abilities in an individual. These abilities include reminding, comparing, grouping, induction, deduction, combining, analysis, interpretation and evaluation, and they are only formed by individuals themselves in a practical and objective process and through repetitive practice based on real experiences (14, 15). Humans are evidently not born with such abilities and need proper training in real situations. Teaching Philosophy for Children (P4C) can help with the development of children’s most salient trait, which is thinking (16).

P4C has been recognized as one of the main tools for training thinking skills (17). Lipman is known as the founder of Philosophy for Children and believes that philosophical

thinking can be taught at any age. He holds that P4C is an attempt to expand philosophy with the aims of using it as a kind of instruction. In this method of instruction philosophy is used to urge a child's mind to try and address its need and enthusiasm for meaning (18). The educational content of the programs using this philosophy comprises philosophical stories and the activities are based on communities of inquiry. Conversation is one of the main elements of P4C. In addition, learners deeply contemplate and evaluate different things in a community of inquiry. Class exploration circles create an environment for learners where along with their cognitive and political development, they achieve emotional and social growth (19). It is in such conditions that they can experience true conversation, respecting each other, ever-growing mutual trust, and the ability to communicate at different levels.

P4C aims at turning children into more thoughtful, flexible, considerable, and logical individuals. Shahini and Nouri (13) assert that P4C-based curriculum pays extensive attention to the nurturing of philosophical mentality. Thomas (20) believes that P4C provides learners with a secure environment for philosophical thinking, and contributes to the development of social interactions and a more in-depth understanding of novel ideas, organizing one's thoughts, better listening, and developing good relationships with classmates. Furthermore, Tian and Liao (21) studied the effect of P4C on students' experiences in an English course. Their study indicated that students in the P4C group experienced a slightly higher level of English learning anxiety, retained higher English learning motivation following the instruction, and improved their English reading comprehension. Houshmandi and Shamshiri (22) conducted a quasi-experimental research applying P4C to teach sciences. Their findings showed that the learners who were taught employing P4C obtained higher scores in science courses than their counterparts in the control group.

Considering the nature of media literacy

and the emphasis laid on the critical analyses of messages, it is necessary to employ special methods, including P4C, for the development of logical thinking. On the other hand, given the diversity and complexity of the media and their hidden and open messages, the learners of media literacy courses appear to enjoy an acceptable level of mental comprehensiveness and flexibility besides thinking and contemplation, or to put it briefly, they have a philosophical mentality. Accordingly, predicting the existence of a kind of cause and effect relation between teaching the book *Thinking and Media Literacy*, the application of the P4C and the philosophical mentality of students seems to be logical.

The problem reported by teachers concerning the teaching of media literacy is that students get relatively low scores in their final exams, which might be because of the low level of learners' cognition (often at the level of *knowledge*) and the high level of exam items (often *application* and *analysis*). It is expected that this problem can also be solved by applying P4C and taking the existing backgrounds into account. It seems that if the elements of P4C can be integrated into the existing Iranian curricula, especially in courses such as Thinking and Media Literacy which emphasize thinking skills, the objectives of such courses can be better fulfilled. Thus, the present study is important because a review of literature shows a lack of national or international research into the integration of P4C into the media literacy programs. so the findings of the current study can serve as a guide for the Thinking and Media Literacy course, and as a model for other courses.

Accordingly, this research aims to study the effect of using P4C in the Thinking and Media Literacy course on the philosophical mentality of tenth-grade students and their learning performance at a school in Arak, Iran, in 2018-2019 academic year. As a result, the following hypotheses were put forward:

1- Applying P4C as a method of instruction in the Thinking and Media Literacy course is effective in terms of enhancing students' philosophical mentality and its three elements

(comprehensiveness, contemplation and flexibly).

2- Applying P4C as a method of instruction in the Thinking and Media Literacy course is effective in improving student learning.

Materials and Methods

This study used a quasi-experimental method employing the pretest-posttest control group design. The research population consisted of all male students studying in tenth grade in the 1st Education District of Arak during 2018-19 academic year. A total of 44 students were selected by cluster random sampling (22 subjects in each group). It is generally recommended that the sample size in experimental studies be at least 20 in each group (23). In terms of sampling procedure, a high school in the 1st Education District of Arak was first selected by convenience sampling. Then, two tenth-grade Thinking and Media Literacy classes were selected as samples by means of cluster sampling, and the samples were randomly assigned to experimental and control groups. Only male and tenth-grade students with no experience of participation in the P4C programs were included in this study. Of these, those who had been absent for 3 sessions were excluded.

Since both control and experimental groups were taught by the same teacher, the class content was also common between the two classes, while they did not share any other courses. The only difference was the teaching method and there was little contact between the students of the two classes so that they did not know about the teaching process in the other class. Ethical considerations were observed in this study. All participants were fully aware of the nature and the confidentiality of the study and were told in advance that the information provided by them would remain confidential. Furthermore, the test scores were reported to the students confidentially and their performance in these tests had no effect on their final scores.

Tools

To measure philosophical mentality as a

variable, this study used the Questionnaire for Assessing Philosophical Mentality (24). This questionnaire includes 60 items and applies the 5-point Likert scale (from strongly agree to strongly disagree), measuring the following factors: comprehensiveness (20 items), contemplation (20 items), and flexibility (20 items). This questionnaire has been adapted for the Iranian society. It should be noted that this questionnaire has been administered to 80 university students studying in the State Administration Center, and its validity coefficient was measured at 89 via Cronbach's alpha. Its validity was also approved by ten experts in the field of education. The reliability of this questionnaire in this study was reported 0.76 using Cronbach's alpha.

In order to assess the students' learning in media literacy, a researcher-made test was used, which consisted of 12 items and covered three chapters of the book, namely, Knowing the Audience, Media and Lifestyle, and Media Diet. Four items of this test, each carrying 1 mark, measured students' memorization. And 8 items, each having 2 marks, measured comprehension, application and analysis skills. For the validity of the test, the CVR index was applied in which 0.99 was the minimum value of CVR. For an item this value needs to be at least 0.99 to be accepted (25). Initially there were 16 items, but 4 items were eliminated after considering the opinions of five teachers and experts. There remained 12 items, all of which showed acceptable values of CVR. The calculated CVI was greater than 0.82 which is also acceptable (26).

Research Stage

Before training, a pretest was conducted in the experimental and control groups. For that purpose, the principles important in P4C were first extracted based on the views of thinkers such as Lipman (18) and Fisher (16). These principles include creating an open atmosphere for giving comments, critiquing and analyzing others' and one's own opinions on the basis of logic and reason, respecting each other's views, promoting

questioning, thinking and discovery, being open to criticism, active listening, and using philosophical stories. Instead of philosophical stories, the present study designed enigmatic situations based on the concepts in the lessons. Then, a course plan was prepared for 12 sessions. It is necessary to maintain that only one session was held per week and the whole course lasted three months. The pretest was administered in the first session and the students were provided with some explanations of the aims of each session as well as the rules. Additionally, the students were put into groups of 4 or 5. Using P4C as the method of instruction, the chapters named Knowing the Audience, Media and Lifestyle, and Media Diet were taught during sessions 2-5, 6-9, and 10-12, respectively. The teacher in each session designed and provided students with enigmatic situations and the students in groups were tasked with an analysis of the given situation and responding to the teacher's questions. For example, one situation was that the students in a group imagined that they played the role of a movie production team who were supposed to produce a movie about a social topic. This group was asked about how to consider the role of the audience. Students discussed situations and questions raised by the teacher in groups. Afterwards, the groups were asked to sit in a circle and then the same situations and questions were proposed. The teacher as a guide in all sessions, tried to consider all the intended principles of P4C.

In the control group, the conventional teaching method was used in the following way. In each session the teacher presented content based on the determined topic, then assigned students with some homework. At the beginning of each session and before presenting new content, the teacher reviewed assignments and asked questions related to the previous session. At the end of treatment (after 12 sessions) posttests were administered.

This study used descriptive and inferential statistic methods to analyze data. The analysis of covariance was used to test the research

hypotheses. It must be noted that all analyses were performed by SPSS v23.

Results

The participants included all the male tenth-grade students with an average age of 16.62. The results of pre- and posttests for the learning outcomes and philosophical mentality and its three dimensions are presented in Table 1.

As Table 1 shows, the mean of pre-test scores in experimental and control groups in terms of learning outcomes and philosophical mentality and its dimensions (comprehensiveness, contemplation, and flexibility) in the Thinking and Media Literacy course are almost identical. However, the mean of the two groups after the implementation of the training program is different in all cases. In fact, students in the P4C group attained higher scores than in the conventional group.

In this study, the analysis of covariance (ANCOVA) was used to examine the hypotheses of the study. Employing the analysis of covariance requires presuppositions such as a normal data distribution, the homogeneity of the variances, and slope of regression about which we became certain prior to the test administration. ANCOVA test results regarding scores of learning outcomes in Thinking and Media Literacy course are presented in Table 2.

With respect to Table 2, the data show that the experimental and the control groups are statistically different in terms of learning the concepts in Thinking and Media Literacy ($p < 0.001$).

The data in Table 3 show that there is a significant difference between P4C and conventional groups in terms of philosophical mentality ($p < 0.001$), comprehension ($p < 0.001$), contemplation ($p < 0.006$), and flexibility ($p < 0.001$).

Therefore, the data provided strong evidence to suggest that the students learning performance as well as their philosophical mentality and its dimensions in Thinking and Media Literacy course are significantly

Table 1: Mean and standard deviation of pre- and post-tests in experimental and control groups

Variable	Groups	Measurement	Number	Mean	
Learning outcomes	Pre-test	Experimental	22	3.98	1.3
		Control	22	4.07	1.2
	Post-test	Experimental	22	18.06	1.6
		Control	22	15.7	1.6
Philosophical mentality	Pre-test	Experimental	22	128.8	6.8
		Control	22	129.4	11.8
	Post-test	Experimental	22	146.3	8.7
		Control	22	131.8	11.7
Comprehensiveness	Pre-test	Experimental	22	46.09	2.06
		Control	22	46.8	4.48
	Post-test	Experimental	22	51.9	4.41
		Control	22	47.4	4.99
Contemplation	Pre-test	Experimental	22	42.8	2.60
		Control	22	41.9	5.01
	Post-test	Experimental	22	48	3.7
		Control	22	42.9	6.9
Flexibility	Pre-test	Experimental	22	39.9	3.7
		Control	22	40.6	5.1
	Post-test	Experimental	22	46.3	4.8
		Control	22	41.5	4.1

Table 2: ANCOVA analysis of learning outcomes in Thinking and Media Literacy course in the two groups

Change sources	Sum of Squares	df	Mean square	F	sig	Eta
Pre-test	0.668	1	0.668	0.248	0.62	0.006
Group	57.198	1	57.198	20.60	0.001	0.335
Error	113.79	41	2.77			

Table 3: ANCOVA analysis of philosophical mentality and its dimensions in the two groups

Variable	Change sources	Sum of Squares	df	Mean square	F	sig	Eta
Philosophical mentality	Pre-test	1000	1	1000	11.75	0.001	0.223
	Group	2399.32	1	2399.322	28.18	0.001	0.407
	Error	3489.8	41	85.11			
Comprehension	Pre-test	134.52	1	134.52	6.91	0.012	0.144
	Group	263.055	1	263.055	13.52	0.001	0.248
	Error	797.74	41				
Contemplation	Pre-test	91.51	1	91.51	3.09	0.086	0.07
	Group	245.42	1	245.42	8.28	0.006	0.168
	Error	1214.3	41				
Flexibility	Pre-test	4.38	1	4.38	0.212	0.647	0.005
	Group	264.02	1	264.02	12.7	0.001	0.238
	Error	846.2	41				

greater in the P4C group than in the conventional group.

Discussion

This study aimed to analyze the effect of P4C on philosophical mentality and its dimensions

as well as student learning in the Thinking and Media Literacy course. The results indicated that using P4C in the Thinking and Media Literacy course had a generally significant impact on the philosophical mentality and particularly on comprehensiveness,

contemplation and flexibility of the students and their learning progress.

Regarding the effect of P4C on the philosophical mentality of children and its dimensions, despite the fact that we found no research report directly relevant to the present study, Thomas (20) and Shahini and Nouri (13) can be cited for having findings in line with our results. These findings would theoretically confirm the studies conducted by Haynes (19), Fisher (16), and Smith (12). In philosophical mentality, one tries to review all elements that constitute a problem and to question what others take for granted, and in so doing, one avoids partiality, personal bias, and stereotypical notions while enjoying the required flexibility in accepting new ways and methods. Furthermore, because the Thinking and Media Literacy course emphasizes analytical and critical thinking about media content, it appears that the elements of P4C can provide some adequate means of developing such features. In P4C, learners encounter an enigmatic situation, are given the chance to think about it, can discuss their own thoughts and views with others, and reach a logical conclusion. In this process they are active learners who learn to carefully listen to all viewpoints, respect others' opinions, and make conclusions based on logical reasons. The atmosphere P4C creates in class would gradually transform thinking into a mental habit.

Concerning our second hypothesis on the effect of P4C on student learning in the Thinking and Media Literacy course, we found no similar research. Nonetheless, the findings were in line with Houshmandi and Shamshiri's (22) quasi-experimental research that applied P4C to teach sciences. When the learners are involved in situations where their thinking is provoked, one can argue that learning proceeds from mere knowledge and memorization of information to the level of analysis and practical application. In P4C, students are pictured as researchers who should always maintain their consciousness and readiness for comparison, contrast, analysis, hypothesis presentation, experience,

observation, and evaluation. This process can create in them a more in-depth learning experience. Considering the practical objectives of the Thinking and Media Literacy course, it is expected that students reach higher achievements set by educational objectives. Nevertheless, unfortunately the instructional methods used by teachers are chiefly teacher-centered and evolve around giving assignments. In the teaching that relies on P4C, enigmatic scenarios are designed and prepared based on the course topics which in themselves lay the groundwork for reaching high cognition levels.

Given the positive effects of P4C, curriculum planners and executors in the domain of media literacy in Iran can use the principles important in P4C as a framework for the promotion of students' media literacy. In this regard, in addition to redesigning Thinking and Media Literacy textbooks as well as compiling teachers' books on the basis of the P4C principles, it is necessary to hold workshops for teachers. Integrating the P4C principles into the curriculum requires strengthening research support. Due to the limitations of the current study, only three topics of a textbook entitled Thinking and Media Literacy were investigated. Other studies on applying P4C can examine all the topics of the textbook during a given academic year. In addition, the present research was conducted only on male students. Similar studies can also include female students as research participants. Finally, in view of the positive effects of P4C found in this study, it is recommended to investigate its possible contributions to other courses.

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Ethical considerations

The proposal, the questionnaire, and the participant consent form were submitted to and endorsed by the Research Committee of

the Department of Education at Islamic Azad University, Arak branch. All participants were fully aware of the nature and the confidentiality of the study and were told in advance that the information provided by them would remain confidential.

Availability of Data and Materials

The data that support the findings of this study are available from the corresponding author on request.

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Authors' Contributions

This paper is extracted from M.Kh's Ph.D. thesis. All processes consisted of preparing the research design, performing the experiment, data collection and data analysis, writing and revising the manuscript have been done by M.Kh as a Ph.D. student. M.S as a supervisor and F.N as an adviser supervised all the mentioned processes.

Conflict of interests

The authors declare that they have no conflict of interests.

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