EMERGING LEARNING TECHNOLOGIES VOL 2, NO 1, 10-23

Review Open Access

The effects of the P4C approach on the development of gifted students: A systematic review

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ABSTRACT

The aim of this study is to systematically examine the effects of the Philosophy for Children (P4C) approach on the development of gifted students. Within the scope of the research, open-access articles published in Turkish and English between 2015 and 2024 were reviewed, and six studies meeting the inclusion criteria were analyzed using content analysis. The findings revealed that the P4C approach has been primarily investigated in relation to its effects on academic skills such as language development, critical thinking, and problem-solving in gifted students. Furthermore, it was determined that P4C practices also support social-emotional competencies, including empathy, self-awareness, and social adaptation. Additionally, positive increases were observed in students' intrinsic motivation towards learning and in-class interactions. Based on the analyzed data, it was concluded that P4C is a strong pedagogical approach that contributes significantly to the holistic development of gifted individuals. Suggestions for future research are also presented.

ARTICLE HISTORY

Received 10 September 2025
Accepted 25 December 2025

KEYWORDS

Philosophy for children (P4C)
Gifted students
Systematic review

CORRESPONDENCE

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Introduction

In today's education system, the necessity of supporting individuals not only academically but also in their social, emotional, and cognitive development is now more clearly acknowledged. Gifted students, in particular, differ through characteristics such as high levels of cognitive capacity, early abstract thinking skills, intellectual curiosity, and creativity; this reveals their need for more flexible, meaningful, and participatory approaches that go beyond traditional curricula (Bahtiyar, 2019). At this point, the Philosophy for Children (P4C) approach, which has been attracting increasing attention in the field of education, stands out as a powerful pedagogical alternative that aims not merely at academic achievement but rather focuses on teaching thinking itself.

Developed under the leadership of Matthew Lipman, the Philosophy for Children (P4C) approach provides a framework that enables children to learn how to think through philosophical questions, express themselves, and engage in the exchange of ideas within meaningful communities. This structure, shaped around discussion, inquiry, and attentive listening, positions children not merely as individuals who access knowledge, but as reflective agents who collaboratively construct meaning (Lipman, 2003; Karadağ, 2023). An increasing body of research indicates that this approach is particularly effective in activating, enhancing, and structuring the intellectual potential of gifted individuals (Özcan, 2022; Acar & Arslan, 2023).

In recent years, a range of academic studies have been conducted in Türkiye focusing on the implementation of P4C with gifted students. These studies aim to examine the effects of P4C activities on students' thinking skills, philosophical sensitivity, communication competencies, and cognitive development (Balcı & Eryılmaz, 2024; Şentürk & Kefeli, 2019; Ergut, 2019). However, these implementations have been carried out across different grade levels, using diverse methodologies and varying content. Therefore, synthesizing this diversity within a coherent framework would address a significant gap in existing literature.

In this context, the present study aims to systematically review and evaluate P4C-based implementations conducted with gifted students in Türkiye between the years 2019 and 2024. The research process was structured around two main axes. First, in order to identify the methodological characteristics of the studies, answers were sought to the following questions:

1. In which years were studies on the implementation of P4C programs published?
2. Which research methods and designs were employed in studies examining the effects of the P4C program?
3. Which data collection instruments were used to measure the effects of P4C implementations?

To whom were the P4C programs applied?

4. Within the second axis, the following research questions were adopted in order to evaluate the content-related and pedagogical aspects of the implemented programs:
5. Which topics were examined with respect to the effects of P4C?
6. To what extent were the elements of objectives, content, methods, and evaluation taken into account during the curriculum development process when designing educational programs and plans used in P4C-based activities?
7. Which teaching methods and techniques were employed in P4C implementations?

Through this systematic review, the role of P4C pedagogy in educational processes for gifted students, its implementation trends, and its potential contributions will be presented within a holistic framework; furthermore, recommendations will be developed to provide a foundation for future research and practice in the field.

Method

Research design

This study was structured based on the systematic review method, which is one of the qualitative research designs. A systematic review is a scientific method that enables a comprehensive, systematic, transparent, and reproducible examination of the existing literature on a particular topic within predefined criteria (Booth, Sutton, & Papaioannou, 2016; Gough, Oliver, & Thomas, 2017). The primary aim of this method is to identify emerging trends across the reviewed studies, synthesize their findings, and evaluate the accumulated knowledge in the field through a holistic approach.

Unlike quantitative meta-analytic studies, the systematic review model allows not only for the calculation of statistical effect sizes but also for the comparative analysis of content-related and methodological components such as research designs, data collection instruments, sample characteristics, and instructional strategies employed (Tranfield, Denyer, & Smart, 2003). In this context, the present study aims to systematically review P4C-based research conducted in Türkiye between 2019 and 2024 that targeted gifted students.

The systematic review process adopted in this study was conducted based on established guidelines in the literature (PRISMA, 2020). Within this framework, the following steps were followed:

1. Identification of the research questions,
2. Development of the literature search strategy,
3. Selection of publications based on predefined inclusion and exclusion criteria,
4. Data extraction and coding procedures,
5. Content evaluation through thematic analysis,
6. Classification and interpretation of the findings.

During the systematic review process, only national theses and peer-reviewed articles published between 2019 and 2024 in which the P4C approach was implemented with gifted students were considered. The contents of the studies were examined in depth using descriptive and content analysis methods; thematically, they were classified across dimensions such as research methods, participant characteristics, data collection instruments, instructional methods employed, materials used, and the reported effects.

This research model holds the potential both to evaluate the body of knowledge in the literature in a holistic manner and to provide a structural and theoretical foundation for future studies.

Selection of studies to be included in the review

In this study, in line with the systematic review method, a planned, transparent, and reproducible process was followed in selecting academic publications examining P4C (Philosophy for Children) implementations for gifted students. In determining the studies to be included in the review, both inclusive and focused approaches were adopted, and research presenting content-wise meaningful findings was selected.

Preparation process

In the first stage, a literature search protocol was developed to enable a comprehensive screening of all types of publications that could be directly related to the research questions. During this process, search strings, eligibility criteria, databases, and filtering strategies were determined in advance, and the search steps were systematically documented. In this way, the scientific reliability and validity of the findings obtained were ensured.

Eligibility criteria

The table below presents the eligibility criteria adopted for the selection of studies to be included in the review. Accordingly, articles as well as master's and doctoral theses published between 2019 and 2024 that focus on P4C implementations for gifted students were included in the study.

Table 1. Eligibility Criteria

Criterion Category	Criteria
Year of Publication	Published between the years 2019 and 2024
Publication Type	Article, master's thesis, and doctoral dissertation
Language	Turkish and English
Method	Quantitative, qualitative, and mixed methods
Main Findings	Data revealing the effects of P4C implementations on gifted students

Information sources

The following databases were used in the systematic review:

- Council of Higher Education (YÖK) National Thesis Center
- DergiPark Academic
- Google Scholar (for supplementary searching)
- When necessary, studies were accessed directly through author-name searches (e.g., Balcı & Eryılmaz, 2024; Acar & Arslan, 2023).

Search strategy

The literature search was conducted using structured keyword combinations across the selected databases. The keywords used included "P4C," "Philosophy for Children," "philosophy with children," "philosophical inquiry," "gifted students," and "gifted and talented students."

Table 2. Electronic Search Strategy

Database	Search String
DergiPark	Abstract: "P4C" OR "Philosophy for Children" OR "philosophy with children" Title: "Child" AND "Philosophy"
YÖK National Thesis Center	Abstract: "P4C" OR "Philosophy for Children" OR "philosophy with children"

During the screening process, simultaneous filtering was applied to the title, keyword, and abstract sections. In addition, accessibility to full texts, originality, and the inclusion of direct P4C implementations were decisive criteria in the selection of publications.

Screening of publications

Initially, approximately 30 sources were identified; following content screening, studies that did not meet the inclusion criteria were excluded, resulting in a final sample of nine original publications. These publications consist solely of high-quality studies conducted with gifted students that report the effects of P4C implementations.

Data Analysis

In this study, data obtained from the studies included in the systematic review were analyzed using descriptive analysis and content analysis techniques. The analysis process was structured based on the research questions formulated in the introduction section of the study; the data were systematically classified and interpreted. In this way, both quantitative trends and thematic content patterns were identified.

Descriptive analysis process

Descriptive analysis involves categorizing data in line with predetermined research questions, calculating their frequencies, and presenting the results through tables, figures, and numerical data. Within this framework;Yayınların yıllara göre dağılımı,

- Publication type (article, master's thesis, doctoral dissertation),
- Research methods and designs employed,
- Data collection instruments,
- Participant levels (primary school, secondary school, Science and Art Centers, BİLSEM)
- Implementation themes (thinking skills, social skills, cognitive outcomes, etc.),

The instructional methods, techniques, and materials employed

were quantitatively classified and reported through tables and figures.

This analysis provided a foundation particularly for quantitative comparisons and the visual presentation of trends.

Content analysis process

Within the scope of content analysis, the findings reported in each selected publication were elaborated by being categorized into qualitative themes. These themes were organized under the following headings in alignment with the research questions:

Application areas and topics

- Effects of P4C on gifted students
- Instructional approaches employed and the conceptual framework

Structuring of program components (objectives, content, methods, and evaluation)

At this stage, each study was divided into codable themes, and recurring findings were compiled into thematic patterns. During the coding process, qualitative data such as direct quotations, teacher and student perspectives, and implementation outcomes were also taken into consideration.

Coding and thematic classification

The coding process was conducted in two stages. First, data directly addressing the research questions were identified; subsequently, these data were transformed into themes based on commonalities, repetitions, and similarities. To ensure the rigor of the content analysis, the codes were cross-checked by two researchers.

Reliability and Validity

To enhance the scientific reliability of the analyses conducted in the study:

- A coding scheme was developed,
- The alignment between research questions and thematic categories was verified,
- The analyses were supported through tables and figures,
- Themes were substantiated with quotations and illustrative examples.

In this manner, the data were evaluated multidimensionally at both quantitative and interpretive levels.

Limitations of the study

This systematic review aims to comprehensively examine the Türkiye-focused literature on P4C (Philosophy for Children) implementations for gifted students. However, as with all scientific studies, this research has certain limitations. The scope of the study was restricted to articles, master's theses, and doctoral dissertations published between 2019 and 2024. Consequently, studies conducted prior to this period or outside the specified timeframe were not included in the analysis. In addition, only studies written in Turkish and English were considered; potentially high-quality publications in other languages were excluded. During the search process, the DergiPark, YÖK National Thesis Center, and Google Scholar databases were used, and it is possible that relevant studies available on other academic platforms were not accessed.

Moreover, among the publications included in the review, only studies that were directly grounded in the P4C approach and involved implementations with gifted students were selected. Accordingly, studies that addressed the topic indirectly or examined the concept of P4C within different contexts were excluded from the scope of the review. In addition, in some studies, the limited presentation of findings or the insufficient detailing of methodological information made in-depth interpretation during the analysis process more

challenging. Finally, the themes and coding schemes used in the content analysis inherently involve a certain degree of researcher interpretation due to the nature of qualitative research, which carries the potential to increase subjectivity in the results. Taken together, these limitations indicate that the findings of the study should be interpreted solely within the framework of the defined sample and context.

Findings

In this section, the findings of P4C-based academic studies conducted with gifted students between 2019 and 2024 are presented thematically in line with the aims and research questions of the systematic review. The findings are organized under the following headings based on both numerical trends derived from descriptive analysis and thematic patterns identified through content analysis.

Distribution of P4C-based academic studies by year of publication and type of publication

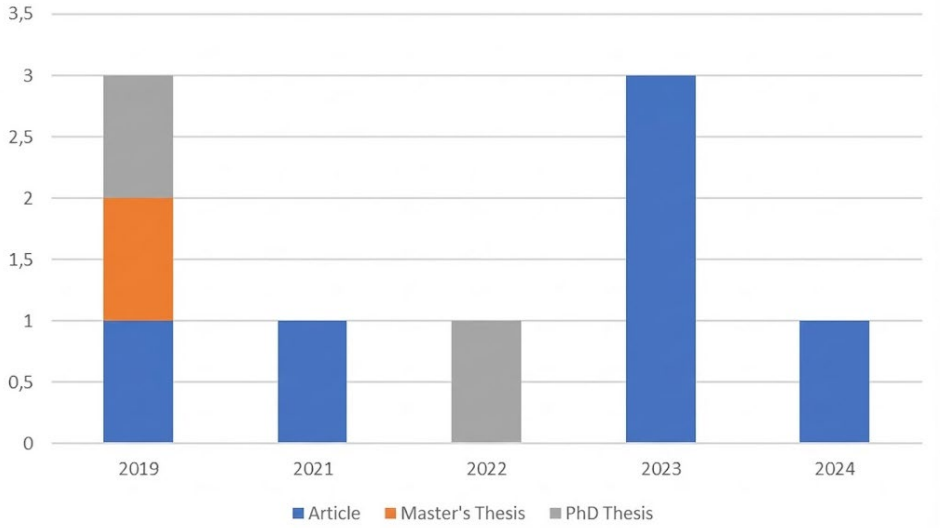

Figure 1. Distribution of P4C-Based Academic Studies by Year of Publication and Publication Type

When examining the distribution of the nine publications included in the systematic review by year of publication and type, as presented in Figure 1, it is observed that in 2019 there were three publications representing different types, namely an article, a master's thesis, and a doctoral dissertation. In 2021 and 2022, a partial decline in the number of publications is evident, with only one study published in each of these years. The year 2023 stands out with three articles, whereas as of 2024, one article has been published. When the studies are analyzed according to publication type, articles constitute the most prevalent category.

Research methods and designs used in P4C-based studies

Information regarding the research methods and publication types of the nine studies included in the review is presented in Figure 2 below, while the research designs of the quantitative studies are shown in Table 3 and those of the qualitative studies are presented in Table 4.

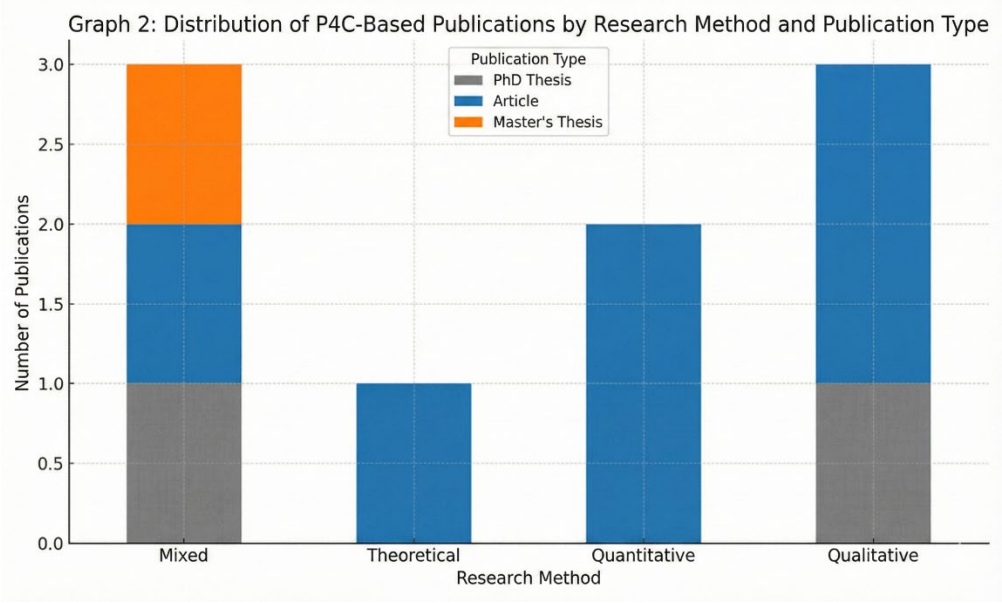

Figure 2. Distribution of P4C-Based Publications by Research Method and Publication Type

An examination of Figure 2 indicates that the most frequently preferred research method is the qualitative approach. Within qualitative studies, articles are particularly prominent, which suggests that the nature of P4C pedagogy is well suited to descriptive, observation-based, and process-oriented research approaches.

Studies employing mixed methods are observed in both doctoral and master's thesis formats. This finding indicates that researchers tend to combine quantitative and qualitative data types in academic theses that require more in-depth and multidimensional data analysis.

Although studies employing quantitative methods are limited in number, they appear exclusively in article form. The relatively small number of quantitatively designed articles suggests that working with measurable variables is more challenging within a pedagogy such as P4C, which is centered on thinking and communication.

In addition, the figure indicates the presence of a single article of a "theoretical" nature. This study discusses, at a theoretical level, why and how the P4C approach should be implemented with gifted students. The existence of theoretically oriented publications reflects the field's potential to contribute to its conceptual foundations and to guide educational policies.

Table 3. Types of Experimental Designs Used in the Publications

Experimental Design Category	Specific Design Type	f
Quasi-experimental	Pretest–posttest control group design	3
	Pretest–posttest matched control group design	1
	Pretest–posttest control group design with a retention test	1
Weak experimental design	Pretest–posttest single-group design	2
Total		7

As shown in Table 3, quasi-experimental designs were predominantly preferred in the publications. Within this context, the most frequently used design type was the pretest–posttest control group design (f = 3). This design is known to be widely preferred in educational research as it includes both experimental and control groups and allows for the monitoring of developmental changes before and after the intervention.

In addition, more detailed models—such as the pretest–posttest matched control group design (f = 1) and the factorial pretest–posttest control group design with a retention test (f = 1)—were also used, albeit to a limited extent. These types of designs provide more in-depth data by enabling the assessment of both the effectiveness and the sustainability of the intervention process.

Another design type employed in the studies was the weak experimental model, defined as the "pretest–posttest single-group design" (f = 2). While this design allows the effects to be evaluated solely over time due to the absence of a control group, it may pose certain limitations in terms of internal validity.

Table 4. Qualitative Research Designs and Data Collection Types Used in the Publications

Qualitative Research Designs	Data Collection Type	f
Case study	Interviews, observations, and document analysis	2

Action research	Interviews, observations, and student artifacts	1
Qualitative descriptive design	Interviews and open-ended questions	1

Table 4 presents the types of qualitative research designs and the data collection instruments used in the studies conducted with qualitative methods that were included in the systematic review. Accordingly, the case study design (f = 2) was employed, with interviews, observations, and document analysis used as data collection tools in these studies. In the study adopting an action research design (f = 1), interviews, observations, and student artifacts were utilized. In the study employing a qualitative descriptive design (f = 1), interviews and open-ended questions served as the data collection instruments. Across all qualitative designs, interviews emerged as the common data collection technique.

Data collection instruments used in P4C-based research

Table 5. Data Collection Instruments Used in the Publications

Publication	Instruments Used
Asiye Bahtiyar (2019)	Semi-structured interview form, rubric
Emine Balcı & R. Eryılmaz (2023)	Pretest–posttest scale, questionnaire
Feride Acar & R.Ş. Arslan (2021)	Pretest–posttest scale, semi-structured interview form
Filiz Karadağ (2022)	Semi-structured interview form, expert evaluation form
Gülünay Ergut (2022)	Open-ended interview form, rubric
İdil Kefeli et al. (2019)	Semi-structured interview form, pretest–posttest scale
Suna Özcan (2022, Thesis)	Semi-structured interview form
Suna Özcan (2023, Article	Pretest–posttest scale
Şener Şentürk & İdil Kefeli (2019)	Semi-structured interview form

As shown in Table 5, a variety of data collection instruments were employed across the nine studies included in the systematic review to measure the effects of P4C implementations. In the study conducted by Bahtiyar (2019), a semi-structured interview form and a rubric were used. The study by Balcı and Eryılmaz (2023) employed a pretest–posttest scale and a questionnaire, whereas in the study by Acar and Arslan (2021), a pretest–posttest scale was used in combination with a semi-structured interview form.

In the study conducted by Karadağ (2022), a semi-structured interview form was used alongside an expert evaluation form. Ergut (2022) employed an open-ended interview form and a rubric, while the study by Kefeli, Üçüncü, and Yaman (2019) combined a semi-structured interview form with a pretest–posttest scale for data collection.

In the doctoral dissertation by Özcan (2022), a semi-structured interview form was utilized; whereas in the article published by Özcan (2023), a pretest–posttest scale was employed. Finally, the study conducted by Şentürk and Kefeli (2019) relied solely on a semi-structured interview form as the data collection instrument.

As a result of this analysis, it is evident that the most frequently used data collection instrument was the semi-structured interview form, and that many studies employed quantitative and qualitative data collection tools in combination.

Participant levels in P4C-based research

Table 6. Educational Levels of Participants in the Publications

Educational Level	Grade Level	Science and Art Center (BİLSEM) Student
Middle School	5. Grade Level	Yes
	6. Grade Level	Yes
	7. Grade Level	Yes
Primary School		Yes

Effects of activities in P4C-based research on participants

Table 7. Effects of P4C-Based Activities on Participants

Domain	**Subdomain**	**f**	**∑ f**
Thinking Skills	Critical thinking	6	16
	Reflective thinking	3	
	Creative thinking	4	
	Reasoning	2	
	Higher-order thinking skills	1	
Social Skills	Empathy	2	6
	Communication	2	
	Social awareness	1	
	Collaboration	1	
	Philosophical inquiry	3	

Philosophical Thinking Skills	Justification (reason-giving)	2	6
	Philosophical disposition	1	
Cognitive Outcomes	Academic achievement	3	5
	Problem solving	2	
Creativity	Creativity skills	1	2
	Imagination	1	

As shown in Table 7, the effects of P4C activities on participants across the nine studies included in the systematic review were categorized under five main themes: thinking skills, social skills, philosophical thinking skills, cognitive outcomes, and creativity.

Within the domain of thinking skills, critical thinking emerged as the most frequently emphasized subdomain (f = 6), followed by reflective thinking (f = 3), creative thinking (f = 4), reasoning (f = 2), and higher-order thinking (f = 1). The total frequency value for this domain was 16.

In the domain of social skills, the most commonly identified subdomains were empathy (f = 2) and communication (f = 2). In addition, social awareness (f = 1) and collaboration (f = 1) were also reported. The total frequency value under the social skills category was 6.

Within the category of philosophical thinking skills, three subdomains were identified: philosophical inquiry (f = 3), justification (reason-giving) (f = 2), and philosophical disposition (f = 1), yielding a total frequency value of 6.

Under the theme of cognitive outcomes, the effects of academic achievement (f = 3) and problem solving (f = 2) were reported, resulting in a total frequency of 5.

Finally, within the creativity theme, two subdomains were identified: creativity skills (f = 1) and imagination (f = 1). The total frequency value for this domain was 2.

These findings indicate that the studies primarily focused on examining the effects of the P4C approach across various cognitive, social, and philosophical development domains.

Program Components in the Design of P4C-Based Curricula/Lesson Plans

Table 8. Analysis of Program Components in P4C Curricula/Lesson Plans

Program Component	Description	f
Objective	In most studies, clear objectives were defined, and in some publications, the intended learning outcomes were explicitly stated.	7
Content	While content was included, it was observed that the themes, texts, or activities were not provided in detail.	6
Method	Methods and techniques were specified in most studies, with the most frequently employed approaches being question-and-answer, discussion, and Socratic inquiry.	8
Assessment / Evaluation	Information regarding assessment processes is limited, with instruments such as rubrics or open-ended questions being utilized.	4

In the nine studies examined within the scope of this systematic review, the utilization of program components during the development of P4C-based curricula was analyzed. The analysis revealed that clear and explicit objectives were established in most studies. These objectives were generally structured to enhance individuals' thinking skills, social interactions, or capacities for philosophical inquiry (f = 7). In some publications, the intended learning outcomes were explicitly articulated.

When examining the content component, it was observed that although activities and texts were included in most studies, the thematic structure of the content, the texts used, and the details of the activities were not presented in sufficient depth (f = 6). This suggests that while content planning was implemented in practice, it was not thoroughly elaborated in the academic reporting.

Examinations of the method component indicate that the most frequently employed instructional techniques in P4C programs are question-and-answer, discussion, and Socratic inquiry. It was observed that nearly all studies incorporated these instructional methods and techniques, supporting participants' thinking processes through their application (f = 8).

The assessment component, in contrast to other elements, received relatively less emphasis. Although some studies employed instruments such as rubrics, open-ended questions, or expert evaluations, it was generally observed that the assessment process was addressed to a limited extent and primarily relied on qualitative data (f = 4). This finding indicates the need to further develop the assessment dimension in evaluating the effectiveness of P4C implementations.

In conclusion, it can be stated that during the development of P4C-based programs, the objective and method components were utilized more prominently, whereas the content and assessment dimensions exhibited certain deficiencies in terms of clarity and systematicity. This underscores the importance of reporting program development processes in a more comprehensive and transparent manner in future studies.

Table 9. Expert Consultation Areas by Publication Type

Publication Type	Needs Analysis	Program Components	Book Selection	Activity Appropriateness	Learning Materials	Question
Master's Thesis (n=3)		2	2	1	0	0
Doctoral Dissertation (n=2)	1	2	1	1	1	0
Article (n=4)	0	3	2	2	1	1
Total	2	7	5	4	2	1

In the nine publications included in the systematic review, data regarding the areas in which expert consultation was sought during the development of P4C-based educational programs were analyzed. The findings obtained according to publication type are presented in tabular form.

When examining the master's theses (n = 3), it was observed that a needs analysis was conducted in one study, program components were included in two studies, book selection was carried out in two studies, and expert consultation was sought for the appropriateness of activities in one study. No expert consultation was utilized for the development of instructional materials or questions.

Within the doctoral dissertations (n = 2), it was found that a needs analysis was conducted in one study, expert consultation regarding program components was sought in two studies, book selection and the appropriateness of activities were evaluated in one study, and expert input was utilized in the development of instructional materials in one study. None of these publications involved expert consultation for question development.

When examining the articles (n = 4), it was observed that expert consultation based on a needs analysis was not sought. Expert input was obtained for program components in three studies, for book selection in two studies, for the appropriateness of activities in two studies, and for both instructional material development and question preparation in one study each.

Across all publication types, the area most frequently consulted with experts was program components (f = 7), followed by book selection (f = 5) and activity appropriateness (f = 4). Expert consultation was more limited in the areas of needs analysis and instructional materials (f = 2 each), and for question preparation, expert input was sought in only one study.

Instructional methods, techniques, and materials used in P4C-based implementations

Table 10. Philosophical Methods and Techniques Used in P4C Implementations

Methods and Techniques	f	Methods and Techniques	f
Question-and-answer	18	Community of Inquiry	1
Discussion	13	Philosophical Court	1
Philosophical inquiry	5	Inquiry Circle	1
Socratic inquiry	5	Perspective Development	1
Group discussion	3	Debate	1
ommunity of Philosophical Inquiry (CoPI)	3	Fishbone Technique	1
Brainstorming	2	SCAMPER	1
Six Thinking Hats technique	2	Think-Pair-Share	1

In the nine publications included in the systematic review, the instructional methods and techniques preferred in P4C-based implementations were analyzed. The analysis revealed that the studies predominantly employed various inquiry- and discussion-based methods.

The most frequently used method was the question-and-answer approach (f = 18). This was followed by discussion (f = 13), philosophical inquiry (f = 5), Socratic inquiry (f = 5), group discussion (f = 3), and Community of Philosophical Inquiry (CoPI) (f = 3). Additionally, techniques that support creative thinking, such as brainstorming (f = 2) and the Six Thinking Hats technique (f = 2), were also employed.

Furthermore, it is noteworthy that a variety of techniques were employed in P4C implementations. Although each of these techniques appeared in only one study, they highlight the diversity of application methods and the emphasis on fostering creativity. These techniques include Community of Inquiry,

Philosophical Court, Inquiry Circle, Perspective Development, Debate, Fishbone Technique, SCAMPER, and Think-Pair-Share (f = 1 for each).

These findings indicate that the P4C approach is enriched with both traditional and innovative methods and techniques, supporting critical, creative, and collaborative thinking processes.

Table 10. Distribution of P4C Activities by Type

Activity Type	f
Turkish language activities	5
Art activities	3
Warm-up activities	4
Research and investigation activities	2
Family-involved home activities	2

In the nine publications included in the systematic review, the types of activities included in P4C-based educational programs were analyzed. The most frequently used activity type was Turkish language activities (f = 5). These activities focused on enhancing language skills through practices such as reading comprehension, text analysis, and conceptual association. Philosophical dialogues conducted using storybooks were particularly categorized within this type of activity.

Warm-up activities (f = 4) were generally employed to facilitate the transition to philosophical thinking. These activities included brainstorming sessions, short questions, and metaphor-based games.

Art activities (f = 3), particularly in areas such as drawing, painting, and creative drama, aimed to enhance students' aesthetic sensitivity. These activities were found to support the creative thinking dimension of P4C.

Research and investigation activities (f = 2) enabled students to conduct in-depth exploration of specific concepts or questions. These activities were carried out both individually and in group settings.

Finally, family-involved home activities (f = 2) aimed to extend the P4C process into the home environment. These activities were generally structured as philosophical discussions with parents, joint reading sessions, or short activity forms.

These findings indicate that the P4C approach is designed not only for the classroom but also to engage students across their entire life context, and it is supported through a variety of multidimensional activities.

Table 11. List of Storybooks Used

Author(s)	Book Title	Publication Used In
Bruno Heitz	Bu Kitabın Ortasında Duvar Var	Filiz Karadağ (2022)
Leo Lionni	Frederik	Gülünay Ergut (2022)
Leo Lionni	Pezzettino	Gülünay Ergut (2022)
Peter H. Reynolds	Nokta	Gülünay Ergut (2022)
Oscar Brenifier	Çıtır Çıtır Felsefe Serisi	Emine Balcı & Ramazan Eryılmaz (2023), Filiz Karadağ (2022)
Rana Tezcan	Filozof Çocuk	Feride Acar & Recep Şahin Arslan (2021)
İsmet Bertan	Theseus'un Gemisi	Asiye Bahtiyar (2019)
Özge Altınok	İyi Yürekli Dev Memo	Suna Özcan (2023)
Can Göknil	Mış Gibi	Suna Özcan (2022)
Leo Lionni	Kafası Karışık Bukalemun	Şener Şentürk & İdil Kefeli (2019)

In the nine studies included in the systematic review, the storybooks used in P4C-based activities were analyzed. The analysis revealed that high-quality storybooks were selected to support children's philosophical inquiry skills. These books were structured to promote children's cognitive development, both in terms of their content and their thematic organization.

One of the most frequently encountered books is the Çıtır Çıtır Felsefe series. This series consists of short texts that explain philosophical concepts at a level appropriate for children and has been used in multiple studies to provide a basis for philosophical discussions.

Books such as Bu Kitabın Ortasında Duvar Var, Frederik, Pezzettino, and Nokta are designed to enable children to develop different perspectives, engage their imagination, and enhance empathic thinking skills. In particular, Nokta was chosen for its potential to support the development of self-confidence in children.

Books like Filozof Çocuk and Theseus'un Gemisi contain direct philosophical questions and are among the texts most frequently used in classical P4C applications.

Additionally, books addressing emotional awareness, identity, and self-development, such as İyi Yürekli Dev Memo, Mış Gibi, and Kafası Karışık Bukalemun, have been utilized in various activities to enhance students' self-perception and socio-emotional awareness.

These findings indicate that the books used in P4C implementations are carefully selected not only to convey knowledge but also to contribute to children's philosophical, social, and cognitive development. Furthermore, the alignment of the book content with the objectives of P4C activities can be considered a factor that enhances the effectiveness of the interventions.

Table 12. Sources of Sample Lesson Plans

Sources	Educators Developing Lesson Plans and Activities
International	Mathew Lipman Ann Sharp Vanya Kovach Thomas Wartenberg Jana Mohr Lone David Shapiro Peter Worley Kathy Williams Thomas Jackson
National	Nihan Akkocaoğlu Çayır Murat Bilican ve Nursah Yılmaz Özge Özdemir Alev Önder

In the nine publications included in the systematic review, it was observed that some influential national and international figures in the literature were utilized as references in the development of P4C-based educational programs and lesson plans. These sources served as references in structuring activities based on philosophical inquiry and in making philosophical content pedagogically applicable.

Among the most frequently cited figures at the international level are Matthew Lipman, the founder of the P4C approach, and his colleagues Ann Sharp, Thomas Wartenberg, and Peter Worley. The theoretical frameworks and sample activities developed by these individuals form the basis of the lesson plans presented in the reviewed publications.

At the national level, the works of academics and educators such as Nihan Akkocaoğlu Çayır, Murat Bilican, Nursah Yılmaz, Özge Özdemir, and Alev Önder—particularly known for their sample applications focused on philosophical inquiry and creative thinking—were taken into account. It is evident that the activity examples developed by these educators were integrated either directly or indirectly into the lesson plans.

This finding indicates that, in most of the reviewed publications, there was an effort to establish an academic foundation at both theoretical and practical levels, and that reliable sources were utilized in the planning of P4C activities.

Conclusion and discussion

This study compiled P4C (Philosophy for Children)-based academic research conducted in Türkiye between 2019 and 2024 with gifted students. The study comprehensively examined the effects of the P4C approach on the cognitive, social, and affective development of gifted students. The findings indicate that the P4C approach serves as an effective learning tool for enhancing both the academic achievement and socio-emotional skills of gifted students.

According to the results obtained in this study, P4C implementations have a particularly significant impact on the development of critical, creative, and reflective thinking skills. This finding aligns with the theoretical framework proposed by Lipman (2003) and Fisher (2013), which emphasizes that the primary aim of P4C is to "teach thinking." Similarly, a meta-analytic study conducted by Trickey and Topping (2004) demonstrated that P4C applications significantly enhance students' cognitive development and non-IQ-based thinking skills. Research conducted in Türkiye (Bahtiyar, 2019; Acar & Arslan, 2021; Karadağ, 2022; Balcı & Eryılmaz, 2023) has reported comparable results, indicating notable improvements in students' abstract thinking, reasoning, and justification abilities. The findings also parallel those of Lafcı-Tor (2023), whose review of P4C applications in Türkiye highlights that P4C deepens students' thinking processes, fosters a democratic learning environment in the classroom, and supports individuals' cognitive development.

The contribution of P4C to socio-emotional skills is another prominent finding of this study. Skills such as empathy, communication, social awareness, and collaboration are considered natural outcomes of P4C inquiries in many studies (Okur, 2008; Kefeli & Şentürk, 2019). Moreover, in the child literature-based P4C analysis conducted by Çiner and Erginer (2023), themes such as concretizing abstract concepts, fostering empathy, justice, and wisdom align with the socio-emotional findings of the present research. Indeed, the

publications examined in this study observed significant increases in students' empathy, social adjustment, and self-awareness levels. Participation in philosophical inquiry communities, including active listening, respect for differing viewpoints, and collaborative meaning-making processes, strengthens students' emotional awareness and supports a culture of democratic discussion. This directly corresponds to Lipman's (2003) concept of the community of inquiry. These findings indicate that P4C not only supports cognitive development but also fosters students' emotional and ethical growth.

The study also indicates that P4C positively contributes to cognitive outcomes such as academic achievement and problem-solving skills. Specifically, quantitative studies employing a pretest–posttest design reported significant increases in students' academic performance scores (Özcan, 2022; Balcı & Eryılmaz, 2023). This finding aligns with international research conducted by Topping and Trickey (2007) and Gregory, Haynes, & Murris (2017), demonstrating that P4C not only enhances thinking skills but also fosters intrinsic motivation for learning and academic self-efficacy.

The studies examined in this review indicate that P4C-based programs are generally well-structured in terms of objectives and methods; however, a systematic approach is lacking in the content and assessment components. This finding aligns with Özkılıç and Bektaş (2023), who emphasized the need to diversify assessment tools in P4C implementations. Furthermore, the frequent use of semi-structured interview forms, rubrics, and pretest–posttest scales suggests that the assessment process predominantly relies on qualitative data.

An examination of the instructional methods used in P4C implementations reveals that question-and-answer, discussion, Socratic inquiry, and philosophical dialogue techniques are particularly prominent. This finding aligns with the Socratic inquiry approach, which forms the core of P4C, as emphasized by Lipman (2003) and Wartenberg (2015). Additionally, the selection of storybooks (Çıtır Çıtır Felsefe, Nokta, Frederik, etc.) appropriate to children's age and developmental level exemplifies the "text-based philosophical inquiry" model highlighted in the literature (Wartenberg, 2022; Worley, 2019).

Based on these results, the P4C approach can be regarded as a model that fosters holistic development in gifted students. By promoting growth at cognitive, emotional, and social levels, this approach helps gifted individuals transform their potential into meaningful learning experiences. However, the limited number of existing studies and their reliance primarily on short-term implementations make it difficult to assess long-term effects. Therefore, it is recommended that future research employ mixed-method analyses to examine the effects of P4C across different age groups and disciplines, enhance the instructional and assessment components of programs, and diversify literary, visual, and experiential materials that support children's philosophical thinking processes.

In conclusion, the findings indicate that P4C is an educational approach that not only enhances academic achievement but also cultivates a culture of thinking and human values. In this regard, P4C can be considered a sustainable educational approach that supports the intellectual depth, social sensitivity, and learning motivation of gifted students.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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