

Effects of Philosophy for Children on Democratic Citizenship Perception: A Mixed-Methods Experimental Study

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Abstract

Contemporary democratic societies face increasing challenges such as polarization and the erosion of public dialogue, underscoring the urgent need to equip young people with democratic citizenship skills. Philosophy for Children (P4C) offers a promising pedagogical framework to meet these challenges; however, empirical evidence of its impact on democratic citizenship remains scarce in non-Western educational contexts. This mixed-methods study examined the effects of a P4C-based education program on seventh-grade students' perceptions of democratic citizenship in Türkiye. The experimental group participated in a 15-week intervention grounded in Lipman's 4C model—critical, creative, caring, and collaborative thinking—while the control group followed the conventional Social Studies curriculum. Data were collected through perception scales, classroom observations, reflective journals, and focus group interviews. Findings revealed that P4C practices significantly enhanced students' democratic understanding, including inquiry, justification, empathy, cooperation, and respect for diverse perspectives. The results suggest that P4C can transform traditional teacher-centered classrooms into democratic communities of inquiry, fostering critical and participatory citizenship. This study contributes to the growing body of research advocating philosophical inquiry in education and provides practical implications for curriculum design, teacher education, and educational policy reform.

Plain Language Summary

How Philosophy Classes Help Middle School Students Become Better Democratic Citizens

What did we want to find out? We wanted to see if teaching philosophy to middle school students could help them develop better skills for living in a democratic society. We tested whether “Philosophy for Children” (P4C) classes could improve students' understanding of democratic citizenship. Why does this research matter? Democratic societies face challenges like political polarization and declining respectful debate. Young people need democratic skills like critical thinking and respectful dialogue. Traditional teaching often focuses on memorizing facts rather than developing thinking skills. In Turkey, citizenship education has emphasized obedience rather than critical thinking and active participation. How did we study this? We worked with 96 seventh-grade students at a Turkish middle school. We randomly divided them into two groups: 48 received philosophy classes using P4C, 48 received regular social studies classes. Philosophy classes lasted 15 weeks with 3-hour weekly sessions. Students discussed thought-provoking questions, learned to think critically and collaboratively. We measured citizenship attitudes before and after using surveys, interviews, and

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Data Availability Statement included at the end of the article



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observations. What did we discover? Results were remarkable. Philosophy students showed dramatically improved democratic citizenship understanding compared to regular students. The average philosophy student scored higher than 99.8% of regular students. Students developed better critical thinking, creative thinking, caring attitudes, and collaboration skills. Philosophy classes specifically improved “democratic citizenship” skills but didn’t change “traditional citizenship” views. Why should we care? These findings show philosophy classes can powerfully enhance citizenship education. Teachers can transform classrooms into democratic communities where students practice essential skills. The large improvements suggest investing in philosophy education could significantly strengthen democratic societies.

Keywords

Philosophy for Children, democratic citizenship, mixed-methods research, experimental design, middle school education, critical thinking, educational intervention, Turkish education

Introduction

Contemporary democratic discourse faces increasing threats from polarization, voice silencing, and declining constructive debate, undermining democratic citizenship development. Schools are viewed as potential remedies for these challenges. Meeting these expectations requires qualified teacher training, scientifically-based curricula promoting critical thinking, and egalitarian educational policies. Schools must pursue goals beyond traditional academic measures like reading, writing, and mathematics (D’Olimpio & Teschers, 2017). Democratic citizenship education requires both political system knowledge and internalization of core democratic components: critical thinking, empathy, dialogue, and compromise (Kerr, 1999). Schools function as both knowledge transmission institutions and public spaces where democratic values are experienced and practiced (Gutmann, 1999). Therefore, pedagogical approaches supporting early democratic citizenship development are crucial. In particular, the “Philosophy for Children (P4C)” method, which centers on critical thinking, empathy, dialogue, and reasoning, offers a holistic educational framework aligned with these goals (Lipman, 2003; Nishiyama, 2022). While both Kerr and Lipman emphasize the importance of education for democratic citizenship, their theoretical orientations diverge. Kerr (1999) conceptualizes citizenship education primarily within the civic and political literacy tradition, focusing on institutional knowledge, civic participation, and responsibility within existing democratic structures. Lipman (2003), however, advances a constructivist and pragmatist pedagogy inspired by Dewey’s notion of the “community of inquiry,” where philosophical dialogue enables students to internalize democratic habits of thought and action. Thus, whereas Kerr’s model aims to *inform* citizens about democracy, Lipman’s P4C framework seeks to *form* democratic citizens through reflective and dialogic

reasoning. Integrating these perspectives underscores that democratic citizenship requires both cognitive knowledge and moral-practical engagement.

Philosophy education can actively enhance children’s awareness of social and political issues through communities of inquiry. Communities of inquiry can enable the reconstruction of both self and truth by fostering children’s participation, dialogue, and the genuine practice of listening among children (Bartels et al., 2016; Ndofirepi et al., 2013). Individuals who develop the skill of critically examining their own views may find it easier to engage in dialogue with others (Motherway, 2022). This, in turn, can strengthen children’s belief in developing democratic skills and attitudes (Garratt & Piper, 2012). The sense of trust emerging from inquiry and dialogue can contribute to the development of affective dispositions such as social justice, tolerance, and respect (Abubakar, 2021). Children who learn to think philosophically and apply this mode of thinking in their lives, democratic citizenship skills can become habitual ways of thinking and acting (Di Masi & Santi, 2016; Michaud, 2020). It is therefore crucial that educators and schools support this kind of education with a more active and democratic curricular approach to ensure sustainability (Matthieu & Junius, 2023; Tuhuteru, 2023). As the Philosophy for Children (P4C) approach continues to gain global traction, offering an increasingly rich array of activities, games, resources, and experiences for educators and philosophers alike, it will strengthen the ground for addressing complex societal issues in more critical, multi-dimensional, and participatory ways (D’Olimpio, 2024).

P4C contributes to democratic education globally. Since Lipman’s pioneering work, P4C has been implemented across diverse cultural contexts, with a growing interest in democratic citizenship development (Juuso, 2007; United Nations Educational, Scientific and Cultural Organization [UNESCO], 2007; Vansielegheem & Kennedy, 2011). P4C has also been acknowledged

within the Council of Europe's (2018) Competences for Democratic Culture framework, where its role in fostering critical thinking and democratic values has been emphasized. These international experiences show that P4C has a universal potential in the development of democratic values, while also underscoring the importance of adapting the approach to local cultural contexts. This study aims to contribute to the literature by examining P4C effects on democratic citizenship perceptions within the Turkish educational context.

Philosophy Education for Children

Philosophy for Children (P4C) was developed in 1969 by Matthew Lipman, who observed that children's thinking skills were insufficient for democratic society and argued for early philosophical thinking cultivation (M. R. Gregory, 2013; Leng, 2020). Designed for K-12 education, P4C enhances children's reasoning and critical thinking skills (Topping et al., 2019). Through observations of neurologically impaired children, Lipman realized that reasoning abilities develop early and are limited more by experience deficits than age (Lipman, 1992, 1988). P4C shifts from teacher-centered transmission to student-constructed understanding (Topping et al., 2019), increasing thinking competence through philosophical integration (Fisher, 2013; Tepe, 2015).

UNESCO identifies P4C as grounded in "four Cs": critical, creative, collaborative and caring thinking (Demissie, 2017). Although often used interchangeably, *caring thinking* and *careful thinking* represent distinct yet complementary dimensions within Lipman's (2003) "4C" framework. *Careful thinking* emphasizes precision, logical rigor, and intellectual discipline in reasoning, ensuring that arguments are coherent, consistent, and evidence-based (Lipman, 1988). In contrast, *caring thinking* embodies the ethical and affective aspects of reasoning—it involves empathy, respect, and moral imagination, highlighting the responsibility one holds toward others in the process of thought (Sharp, 2007). While *careful thinking* cultivates rational judgment, *caring thinking* nurtures the disposition to consider others' needs, feelings, and perspectives (Fisher, 2013). Together, they reflect the cognitive-emotional unity essential to democratic education: *careful thinking* safeguards truth, whereas *caring thinking* sustains humanity. Participants explore questions using these dimensions while engaging in verbalized thinking and building upon each other's ideas. P4C encourages mistake-making as natural learning (Cloutier, 2021), supports independent judgment over teacher authority (M. Gregory, 2012), and transforms classrooms into communities of inquiry through collaborative reasoning (Lipman, 1987). In

doing so, children develop in a democratic learning environment where they can express their thoughts freely (Lipman, 1988).

The Relationship Between Philosophy for Children (P4C) Education and Democratic Citizenship

Lipman (1988) regards philosophy teaching as key to democracy and citizenship education. Developing different perspectives, questioning competence, and producing reasoned responses are possible with philosophical thinking skills (Cevizci, 2013; Worley, 2015). Philosophy enhances individual autonomy and freedom while supporting collective citizenship (Shapiro, 2013; Splitter, 2011). The acquisition of these skills, however, requires experiential forms of learning (Fisher, 2013). Educational environments grounded in philosophical thinking aim to enable individuals to establish dialogue across differences, encourage critical thinking, and develop trust-based interpersonal relationships (Echeverria & Hannam, 2017; Kohan, 2014; Murris, 2008). Karl Popper's concept of the "open society" also underpins this process, emphasizing values such as tolerance, critical thinking, and respect for opposing ideas (Lam, 2013). Communities of inquiry not only facilitate knowledge acquisition for children, but also teach them to discuss concepts such as freedom, justice, and the rule of law in a rational and creative manner (Fisher, 2013; Lipman, 1988). These communities offer an alternative to rote-based education by promoting a collaborative learning environment aligned with democratic values. According to Dewey's pedagogy, good education is inherently democratic, as both rest on habits of inquiry, the search for meaning, and critical reflection (Cam, 2006).

Recent studies have examined the relationship between philosophical inquiry and democratic citizenship from various perspectives. Vansieleghem and Kennedy (2011) state that the emphasis on democratic participation and social justice has increased in the second generation of P4C practices. Bleazby (2015) emphasizes that communities of inquiry created through P4C practices support the concept of the "gap of meaning," which is essential for democratic citizenship, and foster the ability to construct shared meaning amid differences. Similarly, UNESCO's report *Philosophy: A School of Freedom* (2007) underscores the importance of philosophical dialogue with children in internalizing democratic values. Thus, P4C emerges not only as a method that enhances thinking skills, but also as a holistic educational approach contributing to the internalization of democratic values and raising awareness of social justice.

The Philosophy for Children (P4C) is effective for developing democratic citizenship through three core mechanisms. First, it transforms the classroom into a democratic micro-society through the “community of inquiry” model. Within this community, students do not merely learn about democratic processes conceptually, but rather internalize them through direct experience (Lipman, 2003; Splitter, 2011). Second, the dialogic practices implemented in the P4C foster the competencies essential for “deliberative democracy” by providing students with the skills to express and justify their views while respecting differing perspectives (Barber, 1984; Kohan, 2014). Third, by cultivating thinking skills—critical, creative, caring, and collaborative thinking—P4C enhances students’ capacities to engage with and address social issues (Fisher, 2013; Shapiro, 2013). Together, these three mechanisms ensure that P4C functions not merely as a transfer of knowledge for democratic citizenship, but also as a process of constructing a democratic self and community. Thus, philosophy education for children and democratic citizenship education together forms a holistic structure in terms of aims, process, and outcome.

This study offers original contributions to the literature by examining the effects of the P4C approach on perceptions of democratic citizenship through a mixed methods research design. First, while existing studies have predominantly focus on the effects of P4C on cognitive skills (García-Moriyón et al., 2005; Trickey & Topping, 2004), social skills (Cassidy & Christie, 2013) or academic performance (Fair et al., 2015), this research specifically examines its impacts on the multidimensional construct of democratic citizenship perception in depth. Second, although the P4C literature is largely dominated by either quantitative or qualitative single-method approaches (Gorard et al., 2017; Murris, 2008), this study adopts a mixed methods design to address both measurable outcomes and transformative processes from a holistic perspective. Third, while most existing P4C research has been conducted within the context of Western education systems (Lipman, 2003; Vansielegheem & Kennedy, 2011), this study contributes to the field of comparative education by exploring the applicability and effectiveness of P4C within the cultural and educational context of Turkey. These unique contributions offer new insights into how P4C can be utilized as a pedagogical tool for democratic citizenship education across diverse cultural contexts.

Problem Statement

Is the Philosophy for Children (P4C) education program an effective approach in developing seventh grade students’ perceptions of democratic citizenship?

Sub-Problems

- Is there a statistically significant difference between the pre-test and post-test scores of the citizenship perception of the experimental group who participated in the P4C education program and the control group who received education according to the current curriculum?
- How has the democratic citizenship perception of the experimental group students who participated in the P4C education program been qualitatively affected?

Methodology

Research Model

This study employed a mixed-method research design to comprehensively explore the effects of P4C practices on perceptions of democratic citizenship. The design was developed within the framework of the intervention model proposed by Creswell and Clark (2018), which allows for the complementary use of both quantitative and qualitative data. In the first phase, quantitative data were collected to assess the effectiveness of the experimental intervention. In the second phase, qualitative data were used to explore how and why these effects occurred. This type of design offers significant advantages in understanding the complex nature of educational interventions and evaluating their multidimensional outcomes (Johnson & Christensen, 2014). The theoretical foundation of the study is based on Lipman’s (2003) “4C” (Critical, Creative, Collaborative, and Careful Thinking) model, a framework for understanding the impact of P4C on perceptions of democratic citizenship. A priori power analysis using G*Power 3.1.9.7 determined appropriate sample size for detecting meaningful effects. Based on previous P4C research (Cassidy & Christie, 2013; Topping & Trickey, 2007), a moderate effect size (Cohen’s $d = 0.65$) was anticipated. With $\alpha = .05$, power = 0.80, the required sample was 38 participants per group ($N = 76$). To account for potential attrition and ensure adequate power for both quantitative and qualitative analyses, the sample was increased to 48 participants per group (total $N = 96$), providing 90% power to detect the anticipated effect size.

Participants

The study group consisted of 96 seventh-grade students enrolled in a state middle school in Turkey during the spring semester of the 2021 to 2022 academic year. A purposeful sampling technique was employed in the selection of the participants. The main rationale for using purposeful sampling in this study was the need to select

participants with specific characteristics capable of providing meaningful responses to the research questions, thereby allowing for a valid assessment of the effects of P4C practices on perceptions of democratic citizenship (Patton, 2018). As Maxwell (2013) emphasizes, purposeful sampling enables the selection of cases and individuals that are likely to yield rich data and align with the theoretical framework of the study.

During the sampling process, a criterion sampling strategy was employed (Creswell & Poth, 2018). In the first phase, an accessible public middle school was selected from among the seventh-grade student population in central districts of a Turkish city, which constituted the study's target population. The school had 8 seventh-grade classes. In the second phase, based on pre-determined criteria, classes with similar academic achievement levels and socio-demographic characteristics were chosen. Students' academic performance using report card grades from the previous term, and their socio-demographic information was analyzed based on data provided by the school administration.

The similar socio-demographic characteristics of the participants, class size of 24 students, balanced gender distribution, and no prior exposure to P4C training were used as criteria. These criteria were established to enhance the validity and reliability of the research. Selecting participants with similar socio-demographic profiles aimed to control for confounding variables arising from socioeconomic differences, in line with Cook and Campbell's (1979) principle of controlling extraneous variables in experimental research. Equal class sizes were based on Lipman's (2003) recommendation regarding optimal group size for effective implementation of the community of inquiry model. Ensuring a balanced gender distribution allowed for the control of gender-related influences on democratic citizenship perception.

Based on the analyses conducted, four classes (7/E, 7/F, 7/G, 7/H) were selected as the study group, meeting the established criteria with no statistically significant differences in academic achievement or socio-demographic distribution. The teachers of these classes have comparable professional experience (with an average of 12 years) and educational background, thereby minimizing potential confounding variables related to teacher differences.

In total, four classes participated in the study. Two were assigned as the experimental group and the two as the control group. All four classes were taught by the same teacher. Given the matched characteristics of the selected classes, random assignment was employed to allocate the groups: two classes (7/E and 7/F) were assigned to the experimental group, and the other two (7/G and 7/H) to the control group.

Following the selection of four eligible classes, randomization was implemented using a computer-generated

random number sequence created through Research Randomizer (www.randomizer.org). Each class was assigned a unique identifier (Class A, B, C, D), and the randomization algorithm allocated Classes A and B to the experimental condition and Classes C and D to the control condition. This cluster randomization approach was chosen to minimize contamination between conditions while maintaining the natural classroom environment essential for P4C implementation. The randomization process was overseen by an independent researcher not involved in data collection to ensure allocation concealment and reduce selection bias.

This structured selection and random assignment was implemented as a deliberate strategy to ensure group equivalence, which is critical for the validity of experimental studies (Anderson-Cook, 2005). There were 48 students in the experimental group and 48 students in the control group. Qualitative data were collected from the participants in the experimental group (Table 1).

Data Collection

The Citizenship Perception Scale was employed in the quantitative phase of the study. This scale was developed by Durualp and Doğan (2017) and includes 38 items and two factors. The "democratic citizenship" factor of the scale comprises 31 items, while the "traditional citizenship" factor includes seven items. The internal consistency coefficients of the Citizenship Perception Scale were determined as 0.68 for the "traditional citizenship" sub-factor, 0.87 for the "democratic citizenship" sub-factor, and 0.80 for the overall scale. Since the kurtosis and skewness values of the scale (-0.196 and 1.779 respectively) did not exceed the -2 ; $+2$ threshold, parametric tests were deemed appropriate for the analyses (George & Mallery, 2010). The reliability coefficients of the scales were found to be at an adequate level. A Cronbach's alpha coefficient between .60 and .80 indicates moderate reliability, while a coefficient between 0.80 and 1.00 indicates high reliability (Kayış, 2009; Kılıç, 2016).

We employed Cronbach's alpha coefficient to assess internal consistency reliability for the quantitative scales, the most widely used reliability measure for multi-item scales (Tavakol & Dennick, 2011). All reliability coefficients exceeded the minimum threshold of 0.60 recommended for social science research (Nunnally & Bernstein, 1994).

To collect qualitative data, audio recordings, activity sheets, reflective student journals, researcher journals, and observation forms were utilized to identify how students reflected on their experiences with P4C. Following the experimental process, a focus group interview was conducted to gather students' perspectives on their P4C experiences. To minimize potential bias and error in the qualitative data, multiple data sources were diversified.

Table 1. Participant Information for Experimental and Control Group.

Variables	Group	Experimental		Control	
		N	Percentage	N	Percentage
Gender	Female	23	47.9	24	50.0
	Male	25	52.1	24	50.0
Self-Identification as Shy	Yes	7	14.6	6	12.5
	No	41	85.4	42	87.5
Self-Identification as Self-Confident	Yes	33	68.8	32	66.7
	No	15	31.3	16	33.3
Self-Identification as Open to Criticism	Yes	20	41.7	18	37.5
	No	28	58.3	30	62.5
Self-Identification as Someone Who Enjoys Learning	Yes	31	64.6	33	68.8
	No	17	35.4	15	31.3
Self-Identification as Someone Who Enjoys Asking Questions	Yes	29	60.4	29	60.4
	No	19	39.6	19	39.6
Self-Identification as Someone Who Enjoys Thinking	Yes	34	70.8	39	81.3
	No	14	29.2	9	18.8
Perception of Family as Democratic	Yes	33	68.8	33	68.8
	No	15	31.3	15	31.3
Perception of Family as Authoritarian	Yes	6	12.5	5	10.4
	No	42	87.5	43	89.6
Perception of Family as Neglectful	Yes	—	—	—	—
	No	48	100.0	48	100.0
Perception of Family as Protective	Yes	37	77.1	38	79.2
	No	11	22.9	10	20.8
Perception of Family as Overprotective	Yes	2	4.2	3	6.3
	No	46	95.8	45	93.8

Data saturation for qualitative components was determined through systematic monitoring of emerging themes across the 15-week intervention period. Initial coding began after the 5th week of implementation, with ongoing analysis revealing new themes until week 12. By week 13, no new themes or significant modifications to existing themes emerged from the data, indicating theoretical saturation. This was confirmed through the final focus group interview, where no new concepts beyond those already identified in the ongoing analysis were introduced. The saturation point was independently verified by the secondary coder, ensuring robust thematic development and analytical completeness.

Data Analysis

The quantitative data were analyzed using SPSS version 27. Normality assumptions were assessed through the Kolmogorov-Smirnov test alongside skewness and kurtosis values. Based on these results, appropriate parametric or non-parametric tests were selected. For two-group comparisons, independent sample *t*-tests were conducted. When data distributions violated normality assumptions despite adequate sample size (confirmed by power analysis), non-parametric alternatives (Mann-Whitney *U* test for independent samples, Wilcoxon signed-rank test for

paired samples) were employed for statistical test selection (Field, 2013).

Qualitative data were analyzed using thematic analysis incorporating both deductive and inductive approaches, supported by NVivo 12 Pro software. The thematic analysis followed Braun and Clarke's (2006) six-stage model: familiarizing with the data, creating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Deductive analysis examined data according to themes aligned with the theoretical framework of P4C, whereas inductive analysis aimed to discover new categories and patterns emerging from the data (Patton, 2018).

Audio recordings were listened to twice and transcribed by the researcher. Field notes, recordings, and student journals were read several times to gain a holistic understanding before open coding was performed using NVivo.

To ensure coding reliability, 25% of the qualitative data were independently coded by a second coder (an academic with a PhD in philosophy of education and an expert in qualitative research methods). The agreement between the two coders was calculated using Cohen's Kappa coefficient, resulting in a value of .87, which can be interpreted as "almost perfect agreement" (Landis & Koch, 1977). Discrepancies were discussed until

consensus was reached. In the third stage, the resulting codes were classified into potential themes in line with Lipman's 4C (Critical, Creative, Collaborative, and Careful Thinking) model, forming the theoretical framework.

To enhance the validity and reliability, a comprehensive triangulation strategy was employed incorporating four distinct approaches: (a) Data source triangulation utilizing multiple qualitative sources (focus group interviews, individual reflective journals, classroom observations, and activity sheets) to capture diverse perspectives; (b) Methodological triangulation combining quantitative (Citizenship Perception Scale) and qualitative approaches for complementary insights; (c) Investigator triangulation involving multiple researchers in data collection and analysis to reduce individual bias; and (d) Theoretical triangulation examining findings through multiple theoretical lenses including Lipman's P4C framework, Dewey's democratic education theory, and contemporary citizenship education scholarship. This multi-faceted approach strengthened the credibility and transferability of the findings.

Research Implementation Process

The experimental phase was conducted during the second semester of the 2021 to 2022 academic year. The research process, including a pilot study, pre-test, P4C activity sessions, post-test, and focus group interviews, was completed over 17 weeks. The pilot study and pre-tests began in January 2022, while the post-tests and focus group interviews concluded in May 2022. Activities were carried out in weekly 3-hr sessions.

The research was conducted within the scope of seventh-grade Social Studies curriculum. Existing topics were redesigned as P4C activities across thematic areas including Science, Technology and Society; Production, Distribution and Consumption; Active Citizenship; and Global Connections learning areas.

The P4C intervention was culturally adapted for the Turkish educational context through a systematic process. Stimulus materials were selected to reflect themes relevant to Turkish middle school students while maintaining universal philosophical concepts. Cultural adaptation involved: (a) translation and back-translation by bilingual experts, (b) consultation with Turkish philosophy specialists, (c) pilot testing with 24 students, and (d) facilitation technique modifications for Turkish classroom culture. The adaptation process maintained fidelity to Lipman's core P4C principles while addressing specific cultural considerations including respect for authority, collective decision-making preferences, and religious sensitivities.

Since P4C activities begin with a stimulus, classroom arrangement ensured equal access for all participants throughout the research. Stimuli were diversified including stories, animations, movies, songs, pictures, and quotes from politicians, state leaders, and philosophers. Based on selected stimuli, participants engaged in philosophical inquiry, formulating questions, justifying responses, developing opposing viewpoints, and expressing thoughts using phrases such as "I agree/disagree because..." to support reasoning.

The facilitator adopted a guiding role throughout implementation and, in accordance with P4C principles, refrained from evaluative feedback such as "correct," "wrong" or "nice." Instead, the facilitator supported the process by posing open-ended questions such as, "Did I understand you correctly?," "Is this what you mean?," "Is there anyone who agrees or disagrees with what your peer just said?," or "What might someone else think about this topic?." Through such questioning, students were encouraged to think critically and explore multiple perspectives.

To ensure intervention consistency and integrity, several fidelity assurance measures were implemented: structured observation protocols monitoring adherence to P4C principles, standardized comprehensive facilitator training, and weekly peer review meetings to identify deviations and sustain methodological coherence.

These systematic fidelity measures confirmed qualitative differences between experimental and control group implementations. Observation notes documented that experimental group sessions were characterized by sustained open-ended questioning, student-initiated inquiry, and philosophical dialogue—elements systematically absent in control group sessions, which followed conventional textbook-based instruction with predominantly closed-ended questioning and teacher-centered content delivery. While quantitative frequency coding of question types was not conducted, qualitative evidence from observation protocols clearly distinguished the dialogic nature of P4C implementation from traditional instructional approaches (Figure 1).

Ethics

Ethical approval was obtained from the Ethics Committee for Educational Sciences in Human Research at [Erzincan Binali Yıldırım University] [10/12 Ethics approval number removed for blind review]. Research permission was granted by the Malatya Provincial Directorate of National Education, to which the participating institution is affiliated, and the research process was initiated. Data collection followed key ethical considerations in educational research—harm, voluntary participation, deception, and data confidentiality (Punch

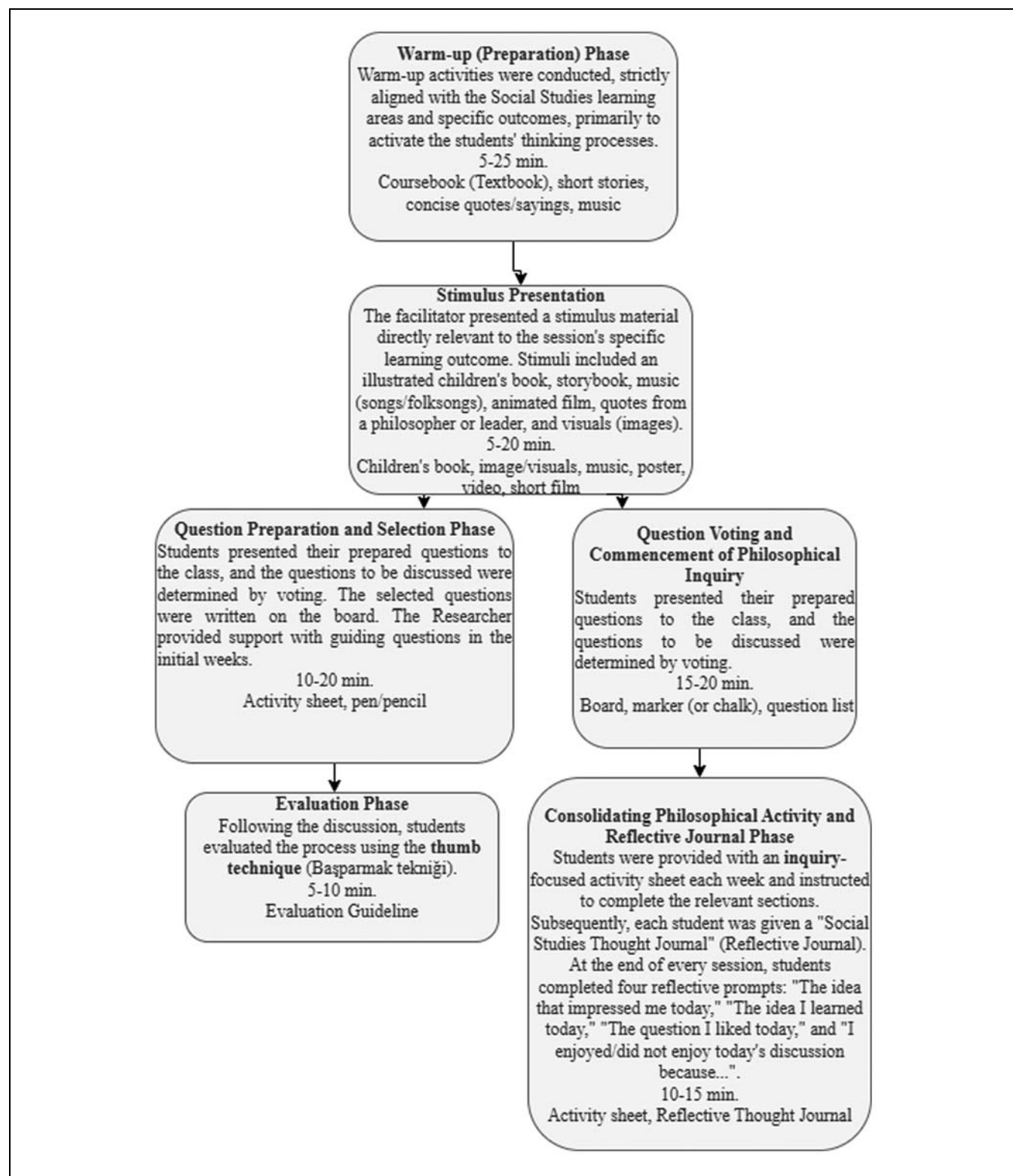


Figure 1. Cyclic model of the P4C implementation process.

Table 2. Paired Samples *t*-Test Results for the Experimental Group's Pre-Test and Post-Test Scores on the Citizenship Perception Scale.

Scale	Group	<i>n</i>	Mean	<i>SD</i>	Mean diff.	<i>t</i>	<i>DF</i>	<i>p</i>
Democratic Citizenship	Post Test	48	121.23	2.611	12.833	10.698	47	.000
	Pre Test	48	108.40	9.662				
Conventional Citizenship	Post Test	48	15.17	1.616	.688	1.331	47	.190
	Pre Test	48	14.48	3.176				
Citizenship Perception Scale	Post Test	48	136.40	2.834	13.521	10.975	47	.000
	Pre Test	48	122.88	9.477				

& Oancea, 2014). Parents were informed that their children could withdraw from the study at any time without any consequence, and consent forms were obtained accordingly. Participants were informed that they could withdraw from the study at any stage. To ensure confidentiality, data were anonymized using codes such as KÖ1, EÖ2, etc.

Findings

This section presents results of the mixed-methods experimental study examining the effects of Philosophy for Children (P4C) practices on seventh-grade students' democratic citizenship perceptions. Findings are organized into two sections: quantitative results from the Citizenship Perception Scale analysis, including statistical comparisons and effect size interpretations, followed by qualitative findings from thematic analysis of focus group interviews, student journals, classroom observations, and activity sheets.

Findings Related to the Citizenship Perception Scale

The quantitative analysis examined P4C intervention through pre-test and post-test comparisons using the Citizenship Perception Scale. Statistical analyses included paired samples *t*-tests for within-group comparisons and independent samples *t*-tests for between-group comparisons, supplemented by effect size calculations using Cohen's *d*. The scale comprises two subscales: democratic citizenship (31 items) and conventional citizenship (7 items), allowing examination of P4C effects on citizenship perception dimensions. Tables 2 to 4 present the detailed statistical results for experimental group changes, control group changes, and between-group comparisons, respectively.

A statistically significant difference was found between the pre-test and post-test scores for the Democratic Citizenship subscale ($p = .000 < .05$). The mean post-test score for Democratic Citizenship was significantly higher than the mean pre-test score.

For the Conventional Citizenship subscale, no statistically significant difference was found between the pre-test and post-test scores ($p = .190 > .05$). A statistically significant difference was found between the pre-test and post-test scores for the overall Citizenship Perception Scale ($p = .000 < .05$). The mean post-test score on the Citizenship Perception Scale was significantly higher than the mean pre-test score.

A statistically significant difference was found between the pre-test and post-test scores for the Democratic Citizenship subscale ($p = .001 < .05$). The mean pre-test score for Democratic Citizenship was significantly higher than the mean post-test score.

Citizenship Perception Scale score also shows a statistically significant difference in terms of pre-test and post-test scores ($p = .001 < .05$). The mean pre-test score for Conventional Citizenship was significantly higher than the mean post-test score.

The post-test democratic citizenship score is statistically significantly different between the experimental and control groups ($p = .000 < .05$). The mean post-test score for Democratic Citizenship in the experimental group was significantly higher than that of the control group. The Cohen's *d* values for both the Democratic Citizenship post-test and the Citizenship Perception Scale post-test indicate a very large effect size. This suggests that the experimental group demonstrated a substantially greater improvement on these scales compared to the control group.

The effect sizes provide substantial evidence for the practical significance of the P4C intervention on democratic citizenship development. Cohen's $d = 3.01$ for the democratic citizenship subscale represents an exceptionally large effect size, far exceeding Cohen's (1988) conventional benchmarks of 0.2 (small), 0.5 (medium), and 0.8 (large). This magnitude of effect suggests that the average student in the experimental group scored higher than approximately 99.8% of students in the control group on democratic citizenship measures, indicating profound practical significance for educational practice.

Effect sizes of this magnitude are rarely observed in classroom intervention studies, where typical effect sizes

Table 3. Paired Samples *t*-Test/Wilcoxon Test Results for the Control Group's Pre-Test and Post-Test Scores on the Citizenship Perception Scale.

Scale	Group	<i>n</i>	Mean	<i>SD</i>	Mean diff.	<i>t/w</i>	<i>df</i>	<i>P</i>
Democratic Citizenship	Post Test	48	108.71	7.912	-.583	<i>w</i> = -3.190	47	.001
	Pre Test	48	109.29	7.817				
Conventional Citizenship	Post Test	48	14.13	3.757	—	—	—	—
	Pre Test	48	14.13	3.757				
Citizenship Perception Scale	Post Test	48	122.83	8.403	-.583	<i>w</i> = -3.190	47	.001
	Pre Test	48	123.42	8.272				

Table 4. *T*-Test and Cohen's *d* Values for the Experimental and Control Groups.

Scale	Group	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i>
Post Test Democratic Citizenship	Experimental	48	121.23	2.611	10.412	94	.000	3.01
	Control	48	108.71	7.912				
Post Test Conventional Citizenship	Experimental	48	15.17	1.616	1.765	94	.081	0.51
	Control	48	14.13	3.757				
Post Test Citizenship Perception Scale	Experimental	48	136.40	2.834	10.596	94	.000	3.06
	Control	48	122.83	8.403				

Table 5. Effect Size Estimates With Confidence Intervals.

Measure	Cohen's <i>d</i>	95% CI	Interpretation	Practical significance
Democratic Citizenship	3.01	[2.54, 3.48]	Exceptionally Large	99.8% superiority
Conventional Citizenship	0.51	[0.11, 0.91]	Medium	69.5% superiority
Overall Citizenship Scale	3.06	[2.58, 3.54]	Exceptionally Large	99.9% superiority

Note. Superiority percentages indicate the percentage of control group participants that the average experimental group participant would exceed.

range from 0.20 to 0.40 (Hattie, 2009). The observed effect size of $d = 3.01$ places this intervention among the most effective educational interventions documented in the literature, suggesting that P4C implementation produces meaningful and substantial changes in students' democratic citizenship perceptions. These effect sizes translate into meaningful educational outcomes, indicating that P4C intervention produces changes equivalent to approximately 2.5 to 3 years of typical educational growth in citizenship development, suggesting that targeted philosophical inquiry approaches can dramatically enhance democratic competency development within relatively short intervention periods (Table 5).

The post-test Conventional Citizenship scores did not differ significantly between experimental and control groups ($p = .081 > .05$). The Cohen's d value for Conventional Citizenship indicates a moderate effect size, suggesting that the experimental group exhibited a moderate difference on this scale compared to the control group, though this difference was not statistically significant ($p = .081 > .05$).

On the other hand, the post-test Citizenship Perception Scale scores showed a statistically significant difference between the experimental and control group ($p = .000 < .05$). The mean post-test score for the Citizenship Perception Scale in the experimental group was significantly higher than the mean post-test score of the control group.

Findings Related to Students' P4C Experiences

Several forms of data collected during the implementation process—including audio recordings, activity sheets, student reflective journals (Social Studies thinking notebooks), observation forms, and the researcher's journals—were analyzed. Following the administration of the post-tests, a focus group interview was conducted. The data obtained from this interview were analyzed, and the findings were identified (Table 6).

Conducted within the framework of Philosophy for Children (P4C) education, it was observed that under the theme of critical thinking skills, students in the inquiry

Table 6. Findings Related to the Theme of Critical Thinking.

Theme	Category	Code	Description
Critical Thinking	Inquiry	Asking Questions, Formulating Questions	Conducting in-depth inquiry by asking questions and formulating new ones throughout the process
	Comparison/Classification	Drawing Analogies, Providing Examples/Counterexamples	Comparing different ideas, situations, or concepts to form meaningful groups and supporting them with examples
	Assumption	Thinking from a Different Perspective, Offering Alternative Solutions	Questioning existing assumptions and developing alternative solutions through different perspectives
	Inference	Drawing Inferences from Available Data, Awareness, Deductive Reasoning, Inductive Reasoning	Drawing conclusions from available data, developing conscious awareness, and applying logical reasoning processes
	Justification	Justifying Disagreement Justifying a Claim Providing Evidence for a Claim	Reasoning disagreements, defending claims, and providing evidence to support assertions
	Clarification	Defining/Clarifying Concepts	Clarifying and defining concepts to ensure shared understanding
	Evaluation	Self-Evaluation Evaluating Claims	Critically evaluating one's own thoughts and claims
	Self-Regulation	Self-Correction	Identifying and correcting errors in the thinking process

category increasingly began to ask “why” not only to themselves but also to their peers as the activity weeks progressed. They posed follow-up questions aimed at understanding each other’s statements more deeply and responded to logical fallacies with questions such as “What do you mean?” or “Why?,” indicating engagement in a deeper process of inquiry. This demonstrates that the students entered a phase of in-depth questioning. During the focus group interview, when the researcher asked, “How has your perspective on global issues changed?,” participant E.Ö.9 responded? as “Of course it did, teacher, we go into detail in this course. It helped us to see, question and understand the issues more clearly.” highlighting the students’ development throughout the process. Within the scope of the formulation questions code, it was found that students generated philosophically reflective questions both in terms of quantity and quality, and engaged in deep questioning topics such as identity, the essence of being human, democratic values, and global issues. For example, questions such as “Why does the world need me?” and “Is doing good always about expecting something in return?” indicate that the students attained high-level inquiry skills. Within the comparison/classification category, it was identified that students were able to adapt democratic concepts to different contexts by thinking flexibly and developed critical perspective. Regarding the analogy code, students demonstrated the ability to construct original conceptualizations, such as “diseased democracy,” and developed alternative viewpoints. The analogy “the land is a matter

of rightful share” was observed to reflect a developing sense of place. In the context of the example and counter-example codes, students internalized democratic values such as responsibility and cooperation. For example, participant K.Ö.13 drew attention to social responsibility through concrete examples related to hunger, while E.Ö.20 demonstrated an awareness of sustainability by emphasizing a universal principle regarding water waste. In the assumption category, students developed thinking skills from diverse perspectives and proposed alternative solution to concepts such as peace. Some students stated that achieving peace may require the involvement of other countries, and that such contributions—through diversity of thought and sanctions—could support peace-building efforts. In the inference category, the codes “making inferences from available data” and “awareness” were particularly prominent. Students made multi-dimensional inferences on topics such as global warming, migration, rights, identity, and democracy. They engaged both inductive and deductive reasoning about social rules. While some students defended the necessity of rules, others argued that rules only became meaningful when grounded in individuals’ internal sense of morality.

In the justification category, it was found that the students developed the ability to justify both their claims and opposing views, gave reasoned responses on a citizenship scale, indicating that this practice stemmed from habits cultivated during the P4C process. In the justification examples based on current events, the students supported their views by referring to events such as

Table 7. Findings Related to the Theme of Creative Thinking.

Theme	Category	Code	Description
Creative Thinking	Originality	Generating New Ideas	The process of generating new ideas; developing original and creative solutions.
	Flexibility	Utilizing Diverse Perspectives	Flexible thinking by utilizing diverse perspectives to create innovative solutions.

Table 8. Findings Related to the Theme of Caring Thinking.

Theme	Category	Code	Description
Caring Thinking	As an Individual	Self-confidence Self-awareness Self-expression	Developing self-confidence through awareness of one's own feelings, thoughts, and behaviors, and expressing them clearly and appropriately
	As a Citizen	Showing respect Being tolerant Caring about other's rights Listening Empathy	Demonstrating tolerance toward diverse views, beliefs, and ways of life, while being sensitive to and willing to protect the rights of others, attentively listening to their ideas and feelings, and fostering emotional connections

pandemics and wars. Within the clarification category, students did not rely on rote memorization of concepts but instead clarified their understanding through questioning and dialogue. They demonstrated deeper engagement to formulate abstract concepts such as freedom, rights, justice, and equality. In the evaluation category, students both reviewed their own thoughts and attitudes by making self-assessments and contributed to the discussions by assessing their friends' statements. In the self-regulation category, students reported that they shed certain prejudices during the activities, changed their thinking, and became more willing to modify their behavior. Taken together, these findings suggest that P4C education enhances students' higher-order thinking skills such as critical thinking, inquiry, justification, evaluation, and self-regulation, which in turn positively contribute to the development of democratic citizenship skills and values (Table 7).

Qualitative analysis revealed significant improvements in students' originality and flexible thinking skills under the theme of creative thinking. Students' ability to generate new ideas during the discussion processes and actively use their imagination shows a development in their creative thinking capacities. For instance, participant E.Ö.7's suggestion of "a device that converts carbon dioxide released into the air into water" regarding climate change demonstrates an original and creative approach. Throughout the activities, students have improved their flexible thinking skills by listening to different perspectives and expressing their own opinions. In this context, participant K.Ö.15's statement, "Teacher,

you ask a question on a topic, and we give our interpretations. Then, another friend of ours brings a different perspective. This helps us develop the ability to think from two different angles" provides strong evidence that students have internalized the multi-dimensional thinking skill.

It was observed that students often revised their previous opinions in line with new ideas while expressing their opinions. For example, in response to the question, "Can you have the freedom to treat the land you own as you wish?" participant K.Ö.13 initially replied, "We cannot treat as we wish." Then, he revised this view, stating "We can treat it the way we want to some extent, but not entirely," and concluded by emphasizing, "We cannot do things that harm the land." This shift demonstrates the student's developing ability to reconcile individual autonomy with social responsibility, suggesting a strengthened awareness of democratic citizenship (Table 8).

Qualitative data showed that students achieved significant gains at personal and societal levels. In the category of "As an Individual," it was found that the students developed greater self-confidence, increased awareness of their feelings and thoughts, recognized the importance of self-knowledge, and improved their self-expression skills. For example, participant K.Ö.9 stated, "My feelings and thoughts have changed. It also improved my ability to interpret, and I can now answer questions requiring interpretation more easily," which reflects the student's internal development and cognitive awareness. In the category of "As a Citizen," students demonstrated progress in their social interaction skills and showed development

Table 9. Findings Related to the Theme of Collaborative Thinking.

Theme	Category	Code	Description
Collaborative Thinking	Teamwork (Community of Inquiry)	Benefiting from each other's ideas Discussion Willingness to respond to a question Active participation	Engaging in teamwork within a community of inquiry by benefiting from each other's ideas, participating in structured discussions, willingly responding to questions, and actively contributing to the collaborative process

in understanding others' emotions and respecting different perspectives. Moreover, a reduction in prejudices, the adoption of a more tolerant attitude, and improvement in active listening skills were observed. For example, participant E.Ö.20 remarked, "I think, teacher, for example, people's prejudices can be broken in this course. Respect for ideas is ensured and thinking differently helps ideas to develop," suggesting that students developed democratic attitudes and were positively influenced by a learning environment based on pluralism. These findings suggest that P4C implementation contributes to enhancing students' individual awareness and fostering internalization social values (Table 9).

Qualitative data revealed that students gradually embraced the spirit of teamwork and community of inquiry within the collaborative learning environment. As the activities progressed, it was observed students gained different perspectives by benefiting from each other's ideas, which in turn positively influenced their interactions. Students demonstrated increased willingness to respond to questions and showed notable development in their discussion skills. Their active participation in discussions contributed to the formation of a democratic classroom atmosphere. The frequent use of expressions such as "I agree" and "I disagree" during discussions suggests that students listened attentively to one another and expressed differences of opinion respectfully. For example, participant K.Ö.12 stated, "I liked it because I heard more about free thought from my friends than I had thought myself," indicating that the student developed his own thinking by drawing on peers' perspectives. These findings show that P4C activities foster a collaborative, democratic, and intellectually stimulating learning environment among students.

Discussion and Conclusion

Interpretation of Quantitative Findings

This study examines the impacts of Philosophy for Children (P4C) education practices on students' perception of citizenship. The research concluded that P4C significantly improved democratic citizenship scores, while conventional citizenship scores showed limited change,

reflecting the dialogic, inquiry-based, and participatory pedagogical nature inherent in the P4C.

This result aligns with Lipman's (2003) theoretical framework, emphasizing that philosophical inquiry strengthens students' capacities for critical and democratic thinking. Similarly, Fisher (2013) and Splitter (2011) argue that philosophical inquiry within a community setting cultivates both cognitive and moral autonomy, essential components of democratic citizenship.

The exceptionally large effect size ($d = 3.01$) substantially exceeds typical educational intervention ranges (Hattie, 2009) yet aligns with recent meta-analytic evidence suggesting P4C interventions demonstrate larger effects in contexts characterized by traditional, teacher-centered pedagogies (Kilby, 2025). The Turkish educational context, with its historically centralized curriculum and authority-oriented classroom norms (İnce, 2012; Üstel, 2004), represents precisely such an environment where philosophical dialogue may produce transformative rather than incremental change. This finding provides empirical support for Kohan's (2014) argument that P4C reconstructs students' democratic subjectivity through dialogue and reflection, particularly in Eastern or transitional societies.

Democratic citizenship education requires more than knowledge transmission; it demands pedagogical environments encouraging critical examination of ideas, reflective dialogue, and constructive engagement with diverse viewpoints (Gutmann & Thompson, 2004). Students' active participation in P4C discussions significantly strengthened their democratic citizenship perceptions—cognitively, socially, and emotionally—fostering empathy, perspective-taking, and collaboration skills. These findings position P4C as a robust pedagogical model for developing democratic competencies, aligning with research demonstrating that experiential learning, dialogic practices, and critical thinking effectively enhance democratic citizenship (Barber, 1984; Fisher, 2013; Kohan, 2014; Lipman, 2003; Shapiro, 2013; Splitter, 2011).

Interpretation of Qualitative Findings

Quantitative results revealed strong improvement in perception of democratic citizenship scores among students

exposed to P4C, while traditional citizenship scores remained limited. This notable difference (Cohen's $d = 3.01$) indicates that the dialogic, inquiry-based, and participatory structure of P4C effectively transforms how students conceptualize citizenship, affirming P4C as a transformative pedagogy developing democratic subjectivity through reflection and dialogue (Kohan, 2014; Lipman, 2003).

Qualitative analyses reveal transformation mechanisms: students' questioning, perspective comparison, and solution evaluation demonstrated enhanced critical thinking, aligning with Lipman's (1988, 2003) fourfold model integrating cognitive and affective development (Ab Wahab et al., 2022). Philosophical dialogue within a community of inquiry fostered cognitive autonomy and moral responsibility (Fisher, 2013; Splitter, 2011). Students' willingness to revise ideas supports Murris's (2008) "educative disequilibrium," cultivating tolerance and empathy, while strengthening civic awareness (Abubakar, 2021; Garratt & Piper, 2012), resonating with Dewey's conception of education as lived democracy (Cam, 2006).

Students developed creative and flexible thinking, generating new ideas and appreciating diverse viewpoints (Akan & Çüçen, 2023; Balcı & Eryılmaz, 2024), supporting Lipman's (2003) and Bleazby's (2015) view that creativity and criticality are inseparable dimensions of democratic reasoning. Their openness to revising ideas embodied Popper's "open society," valuing self-correction and intellectual humility (Lam, 2013), aligning with evidence that P4C enhances intellectual and moral imagination in democratic contexts (Cassidy & Christie, 2013; Di Masi & Santi, 2016).

The emergence of caring thinking—the ethical dimension of reasoning (Lipman, 1987; Sharp, 2007)—was evident as students demonstrated empathy, respect, and self-awareness, reflecting UNESCO's (2007) understanding of philosophy as "a school of freedom." Such affective growth corroborates Kohan's (2014) argument that philosophical inquiry transforms both cognition and emotion. Attentive listening and mutual respect revealed how P4C nurtures democratic citizenship's moral dimension (Bartels et al., 2016; Ndofirepi et al., 2013), fostering emotional sensitivity and moral imagination crucial for civic coexistence (Haynes, 2008).

Students exhibited significant growth in collaborative thinking through sharing ideas, and cooperating with peers, reflecting the establishment of a genuine community of inquiry (Lipman, 1992) and embodies Barber's (1984) concept of "strong democracy." These findings affirm that democratic learning emerges through deliberation rather than passive knowledge transmission (Shapiro, 2013).

In the Turkish context, students' initial hesitation to express opinions reflects Hofstede's (2001) cultural dimensions of high-power distance and collectivism. The Turkish education system has historically emphasized centralized control, uniform curricula, and the cultivation of the "ideal citizen" (Üstel, 2004), prioritizing conformity and respect for authority over individual autonomy and critical deliberation (Ince, 2012). Within such contexts, philosophical inquiry may initially confront structural and cultural resistance, as open-ended questioning challenges long-standing pedagogical norms. However, P4C's adaptive nature enables gradual barrier dissolution (Fraser-Burgess, 2023). Adaptive pedagogies can mediate these challenges by aligning philosophical inquiry with culturally valued notions of respect (*saygı*) and communal harmony (*uyum*; Hofstede, 2001). Through culturally responsive facilitation and dialogic practices, students progressively overcame hesitation to express dissenting opinions. This positions P4C as a transformative pedagogical bridge—retaining cultural respect while cultivating critical, autonomous, and empathetic democratic participation. Future implementations in transitional societies may benefit from culturally situated adaptations balancing traditional respect-based values with dialogic, inquiry-based learning principles (Echeverria & Hannam, 2017; Fraser-Burgess, 2023).

The "careful thinking" dimension emphasized *respect* (*saygı*) and *tolerance* (*hoşgörü*), reinforcing Sharp's (2007) assertion that P4C must be responsive to sociocultural context. Simultaneous cognitive and affective growth aligns with Topping and Trickey's (2007) view of interdependence between rational and emotional development, while supporting Matthieu and Junius's (2023) argument that culturally contextualized P4C functions as a democratic equalizer. Conversely, limited change in traditional citizenship perceptions may stem from Türkiye's centralized and authority-oriented educational structure centered on cultivating the "ideal citizen" (Ince, 2012; Üstel, 2004). Within this framework, P4C provides an alternative pedagogy promoting questioning, empathy, and democratic participation (Echeverria & Hannam, 2017; Lipman, 2003).

These findings confirm that P4C unites the cognitive, affective, and social dimensions of learning into coherent democratic pedagogy, reinforcing contentions that democratic citizenship emerges through ethical deliberation rather than knowledge transmission (Di Masi & Santi, 2016; Gutmann & Thompson, 2004). Though methodological rigor remains essential for transformative outcomes (Michaud, 2020).

In an era of polarization, P4C serves as a vital rehearsal for democratic life, cultivating students' capacities for questioning and productive disagreement. Implemented

with cultural sensitivity and teacher preparation, P4C can transform classrooms into democratic communities that nurture critical, caring, and collaborative citizens capable of sustaining pluralistic democracies (Jirásek & Jágerová, 2023; Xu, 2022).

Implications for Practices

These findings hold significant implications for educational practitioners, curriculum developers, and policy-makers. Successful P4C implementation in Turkish middle schools demonstrates that traditional teacher-centered classrooms educators can transform into democratic communities of inquiry.

Teachers require comprehensive training in facilitation techniques, particularly maintaining neutrality while guiding philosophical discussions and creating safe spaces for diverse perspectives. Educators must anticipate initial student resistance, as consistent implementation over 10 to 12 weeks proves necessary to overcome cultural barriers and establish productive dialogue patterns.

Curriculum developers should systematically align P4C activities with existing standards while maintaining philosophical inquiry as the central approach. Cultural adaptation strategies remain essential, including selecting culturally relevant stimuli. Traditional assessment methods may inadequately capture democratic competencies developed through P4C.

Successful implementation of P4C requires robust institutional support: professional development investments, ongoing mentorship, peer observation, and physical space modifications supporting circle-based discussions. Policymakers should fund P4C professional development, revise assessment policies to include democratic competencies, and integrate P4C methodology into teacher education programs.

Successful P4C implementation requires systematic planning through three phases: establishing classroom community and dialogue skills (Weeks 1–4), introducing philosophical concepts and deeper inquiry (Weeks 5–10), and advancing sophisticated discussion and democratic decision-making processes (Weeks 11–15). Critical success factors include consistent weekly implementation, culturally adapted materials, ongoing educator support, and institutional commitment to democratic education principles. The practical significance of this study extends beyond the Turkish context, offering insights for educators worldwide seeking to enhance democratic citizenship education through evidence-based pedagogical approaches adaptable to diverse cultural and institutional settings.

Limitations

This study has several limitations that warrant consideration. The 15-week intervention period, while demonstrating significant effects, limits understanding of long-term sustainability of P4C. Conducted in a single state middle school in Turkey with seventh-grade students, generalizability across diverse educational contexts, grade levels, and cultural settings remain limited. While the Turkish context provides valuable insights into P4C implementation in non-Western educational systems, replication across multiple sites and cultural contexts would enhance the transferability. Reliance on self-report measures for citizenship perceptions, though methodologically appropriate, fails to capture behavioral manifestations of democratic citizenship competencies in real-world contexts.

Cultural adaptation required modifications to traditional P4C approaches, and initial student resistance may have influenced early outcomes. The absence of a no-treatment control condition means P4C was compared against conventional citizenship instruction rather than measuring absolute effects. While we employed paired-samples and independent-samples *t*-tests—standard approaches in intervention studies (Dimitrov & Rumrill, 2003)—Repeated Measures ANOVA with interaction terms would more directly test differential change over time. Nevertheless, the large effect size (Cohen's $d = 3.01$) and methodological triangulation provide robust causal inference support.

Future research should explore long-term sustainability and cross-cultural transferability of P4C's through longitudinal studies tracking civic attitudes and behaviors beyond the classroom. Comparative cross-national studies could clarify how cultural variables—power distance, collectivism, and classroom discourse norms—influence P4C effectiveness. Investigating teachers' philosophical facilitation skills and belief systems is critical for maintaining dialogic integrity and democratic learning environments. Mixed-methods designs incorporating behavioral observations, civic participation measures, and systematic quantitative coding of facilitator questions would strengthen implementation fidelity assessment and yield comprehensive understanding of how P4C cultivates democratic competencies across diverse educational settings.

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Ethical Considerations

Ethical approval was obtained from the Ethics Committee for Educational Sciences in Human Research at Erzincan Binali Yıldırım University (Approval No: 27/10/2021-10/12, dated October 27, 2021). Additional research permission was granted by the Malatya Provincial Directorate of National Education to which the participating institution is affiliated.

Consent to Participate

A comprehensive informed consent process was implemented prior to data collection. Parents/guardians received detailed written information sheets explaining the study's purpose (examining P4C effects on democratic citizenship perceptions), procedures (15-week discussion-based intervention), voluntary nature, confidentiality protections, and the right to withdraw without academic consequences. Parents were given 2 weeks to review materials and ask questions before providing written consent. For student participants, the lead researcher conducted age-appropriate oral presentations in each class, explaining the study in accessible language and emphasizing voluntary participation and withdrawal rights. Students provided verbal assent after having opportunity to ask questions. Throughout the intervention, researchers monitored for signs of discomfort or desire to withdraw, though no participants chose to discontinue participation. To ensure confidentiality, all data were anonymized using participant codes (e.g., KÖ1, EÖ2).

Author Contributions

Zehra Betül Şişman: Conceptualization, Investigation, Data Collection, Formal Analysis (Qualitative), Writing—Original Draft, Project Administration. İhsan Ünlü: Conceptualization, Methodology, Supervision, Formal Analysis (Quantitative), Writing—Review & Editing, Validation. Alper Kaşkaya: Methodology, Supervision, Data Analysis, Writing—Review & Editing, Resources. The research was conducted under the supervision of İhsan Ünlü and Alper Kaşkaya. All authors collaborated on research design, data interpretation, and manuscript finalization. All authors approved the final manuscript version.

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The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Data Availability Statement

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request. Due to the nature of the data collected (including classroom observations, student reflective journals, and focus group interviews with minors), full datasets cannot be made publicly available to protect participant confidentiality and privacy. However, anonymized quantitative data supporting the conclusions of this article are available upon request to qualified researchers who meet the criteria for access to confidential data. Requests for data access should be directed to the corresponding author and must include: (a) a detailed research proposal outlining the intended use of the data, (b) institutional ethics approval for the proposed secondary analysis, and (c) a data sharing agreement ensuring participant confidentiality and compliance with applicable privacy regulations.*

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