The Impact of Philosophy for Children (P4C) on Middle School Students' Empathy, Perspective-Taking, and Autonomy: Preliminary Outcomes

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Abstract: Philosophy for Children (P4C) hopes to cultivate democratic dialogue as well as critical, creative, and caring thinking; the latter of which has been associated with students' social and emotional competencies (SECs) like empathy and perspective-taking. Yet, empirical, randomized studies on the effectiveness of P4C on students' SECs and sense of autonomy are scant. This paper reports findings from a pilot randomized controlled trial (RCT) assessing preliminary outcomes of the impact of an P4C approach on middle school students' SECs and their feelings of autonomy and classroom supportiveness. Ten classrooms of 6th to 8th grade students (N = 233) were randomly assigned to either receive the intervention or serve as controls. The P4C sessions were facilitated by two experienced P4C educators for one 90-minute session once a week for 8 weeks. Outcome analyses revealed no significant differences between P4C and control students on self-reported classroom supportiveness, empathy, perspective-taking, or altruism, however, P4C students were significantly lower on classroom autonomy and teacher-rated SECs at post-test, compared to controls. Person-centered analyses revealed higher post-test empathy among P4C students who were rated by teachers as having higher SECs as compared to students rated low on SECs at pre-test. Taken together, these findings provide preliminary evidence of the impacts of this type of program for early adolescent students.

Keywords: Philosophy for Children, autonomy, empathy, perspective-taking

At the beginning of the Philosophy for Children (P4C) movement in the 1970's, its founder Matthew Lipman wanted to give children the opportunity to think, reflect, and reason together. He proposed that the power for resolving conflict lies in being able to see a situation and the world from another person's viewpoint (Lipman, 1982, 2003), by calling one's own thinking and feeling into question. His pedagogical pursuit evolved around the cultivation of the "3 c's", namely critical, creative, and caring thinking (Lipman, 2003). In the years to follow, his research companion Ann M. Sharp (2009) theoretically explored and unfolded the notion of caring thinking as well as its strong link to reasonableness. In 2009, she writes that while all three types of thinking are equally important, they are interdependent and that they "manifest themselves in continual transaction with each other. [...] it is the mastery of caring thinking that is crucial in motivation and sustaining the dialogue in communal inquiry, while at the same time providing for the education of children's emotions" (p. 411). Lipman (2003), likewise, has always seen caring thinking in connection to critical and creative thinking. Consequently, and while the idea that reasonableness, empathy, and perspective-taking are interconnected is not new within the field of P4C (e.g., Lim, 2006; Murris, 1992; Sharp 2009; Weber, 2013), both its theoretical and empirical exploration has lagged behind. Something that has been lamented, for example by Costa-Carvalho and Mendonca (2016) when they write: "[...] important

aspects regarding the inter-relationship among reasonableness, emotion and community have not been sufficiently theoretically addressed." (2016, p.127).

Furthermore, previous educational research has identified a number of teachers' instructional behaviors that can foster students' perceived autonomy such as actively listening to students, allowing students to work in their own way, providing time for students to talk, being responsive to student-generated questions, and making perspective-acknowledging statements (Reeve & Jang, 2006). Because those are core elements of a philosophical Community of Inquiry (Lipman, 2003), the question arises whether P4C might have a positive impact on students' perceptions of autonomy. A sense of autonomy has been identified as a fundamental psychological need, contributing to motivation and well-being (Ryan & Deci, 2017). Particularly for children and adolescents, perceived autonomy has been shown to be related to more active engagement and success in school and generally more positive emotions in the classroom (Patrick et al., 1993).

The primary aims of this study were twofold. First, we sought to investigate the impact of P4C on middle school students' SECs (social and emotional competencies) as well as their perception of autonomy in their classroom. Second, given that research has found that "one size does not fit all" (Durlak et al., 2011; Wanless & Domitrovich, 2015) when it comes to the benefits of classroom-based programs that promote students' social and emotional learning (SEL), we also examined whether some middle school students benefitted from P4C more than others by exploring individual differences with regard to students' SECs at pretest in relation to intervention outcomes.

Philosophy for Children and Social and Emotional Competencies

Many studies on P4C pedagogies have focused primarily on its impact on students' academic achievement (Gorard et al., 2015) and engagement (Lancaster-Thomas, 2017), or cognitive skills, such as reasoning (Fair et al., 2015; Moriyon, 2000; Murris, 1992; Topping & Trickey, 2007a), improvement of scientific thinking (Sprod, 1997), critical thinking and social skills (Hope, 1988), and language comprehension (Tian & Liao, 2016). There are also important theoretical and qualitative studies as well as P4C practitioners who suggest that through exploring philosophical concepts and personal stories in a Community of Inquiry, children are expected to engage each other in affective communication and facilitate empathic modes (Gardner 2011; Schertz 2007; Sharp 2009; Weber, 2013). But few randomized, quantitative studies have examined the impact of P4C on students' SECs (e.g., empathy) or feelings of autonomy and supportiveness in their classrooms (O'Riordan, 2015).

With respect to the few empirical studies that have explored the impact of P4C pedagogies on students' SECs, such as empathy and altruism, results have been mixed (Schleifer et al., 2003; Youssef et al., 2016). For example, in a study that examined the impact of a philosophical Community of Inquiry program with 280 6th grade students (ages 10 -12), Youssef et al. (2016) found no significant differences between intervention and control groups on students' prosocial behavior and emotional well-being. Conversely, in a study of 39 five-year-old children, Schleifer et al. (2003) found that children in the P4C group improved significantly more in empathy from baseline to post-test than those children in the control group. Considering most research on P4C pedagogies has involved younger children and has primarily focused on the impact of these programs on cognitive outcomes, more research is needed to

investigate the potential effect of P4C approaches on students' social and emotional competencies, particularly during other developmental stages, such as early adolescence.

Early Adolescence and Middle School Contexts

Early adolescence is considered a transitional phase in development (Steinberg, 2016). Fundamental changes occur in almost every sphere of life during this period—intellectual and cognitive changes, physical changes due to puberty, and social and emotional changes (Blakemore & Mills, 2014; Steinberg, 2016). These changes lead to increased challenges, such as heightened self-consciousness (Rankin et al., 2004; Takishima-Lacasa et al., 2014), but also development in other important abilities, such as Theory of Mind—the ability to consider others' thoughts and feelings (Dumontheil, 2015; Flynn et al., 2015; Thijssen et al., 2015).

Early adolescence is a time in the life cycle that is characterized by an increasing need for autonomy and belonging (Ryan & Deci, 2017; Van Ryzin et al., 2009). However, studies have shown that early adolescents report fewer opportunities for choice and connection in middle school and high classrooms compared to elementary school classrooms (Eccles & Roeser, 2011; Feldlaufer et al., 1988; Woolley & Bowen, 2007). Eccles and colleagues (1993) have posited, in their stage-environment-fit theory, that it is this mismatch between students' needs during this developmental stage and the opportunities afforded to them in their various contexts, that can contribute to many of the challenges that early adolescents experience, such as decreased school engagement and increased school dropout. In contrast, as illustrated by self-determination theory (SDT; Ryan & Deci, 2017) and demonstrated by a plethora of studies, when early adolescent experience support for their autonomy and competence they have better motivation, achievement, and emotional adjustment (Roeser et al., 1998; Ruzek et al., 2016; Ryan & Deci, 2017). Students with a greater sense of autonomy in schools also have better school outcomes such as classroom engagement, persistence, enjoyment, and achievement (e.g., Miserandino, 1996; Patrick et al., 1993). Therefore, early adolescence is a pivotal time to investigate the types of programs and pedagogies that can either buffer the frequently observed decline in perceived autonomy or promote greater perceived autonomy among students.

Method

The P4C Intervention

Most P4C approaches are based on the ground-breaking work of pioneers Matthew Lipman and Ann M. Sharp during the 1970s. At the core of most P4C approaches is the philosophical Community of Inquiry (CoI), which allows students to view others' perspectives and observe conflicting ideas. It encourages students to empathize with others, give reasons for their thinking, and readjust standpoints, while calling their own thinking and feeling into question (Lipman, 2003).

P4C approaches usually involve the reading of philosophical novels or exposure to other stimuli (e.g., paintings, children's books, poems, philosophical aphorisms), developing discussion topics, questions, and rules, and discussing those questions (Weber & Wolf, 2017). During classroom discussions, children have the opportunity to think, reflect and reason with others, see others'

perspectives, and learn that the power of understanding lies in being able to see a situation and the world from another person's viewpoint (Lipman, 2003).

Duration

This P4C intervention was implemented in participating classrooms for one 90-minute session once a week for 8 weeks. Originally, we had planned a minimum of 16 weeks of implementation and sessions twice per week for 45-minutes each. This arrangement was not possible due to an ongoing teacher-strike in schools.

Facilitators

Two external facilitators, who were trained and experienced in facilitating P4C dialogues, implemented the intervention in the participating classrooms. During the sessions, classroom teachers remained in the classroom as observers but were told not to participate or influence the discussions. Although one teacher decided to listen to the discussions, most teachers attended to their own work. Each facilitator had an assistant facilitator (also experienced in P4C pedagogies) accompanying them during the sessions who wrote the key points of the discussions on the board, observed the classroom discussions, and took notes. Both facilitators were actively involved in the preparation and design of the program together with the Principal Investigator (PI) of the study, an expert in P4C. The PI oversaw the design of the lessons to ensure that the lessons followed the principles of this pedagogy. Both facilitators had backgrounds in philosophy and education, were experienced in facilitating Communities of Inquiry, and had teaching experience with children in schools and other educational institutes. During the program, the facilitators were in communication with one other and shared their thoughts and experiences regarding the sessions while both were communicating with the PI as well. The lessons were designed following the CoI pedagogy as developed by Lipman and Sharp.

Sessions Format

Creating and cultivating a Community of Inquiry (CoI) was central. Therefore, each session included the following five stages: (1) the facilitator presented a stimulus, usually a narrative with philosophical themes; (2) students formulated questions; (3) students dialogued about the questions as the facilitator modeled various skills of inquiry during the discussion (e.g., presenting a position, making connections, asking for clarification, giving reasons); (4) students did relevant philosophical exercises and activities to deepen their inquiry; and (5) students engaged in a reflective practice (e.g., writing of a journal, sharing last ideas). Students always sat in a circle facing one another during these sessions. Each of the 8 sessions had a dialogue component, which usually was around 40 to 50 minutes long. We did not focus on empathy, perspective-taking or autonomy related topics specifically, but rather wanted to see if the CoI in itself would have an effect on those social-emotional competencies. Moreover, it was important that the adolescence chose questions that were important to them. Table 1 shows an overview of the 8-week outline.

Table 1:

Week 1	Introduction Meaning of a safe and warm community Students develop 'rules' for the classroom CoI
Week 2	The storybook *Frederick* by Leo Lionni (2011) The role of people in their community The importance of making contribution to a community
Week 3	Distinguishing between open and closed questions The story of *Ed Sheeran* ("Ed Sheeran," 2014)
Week 4	Students develop questions in small groups
Weeks 5, 6 & 7	CoI on the questions developed by the students
Week 8	What is friendship? End of the program' Party Meta-reflection assessment of the program

Design of 8-Week Implementation

The first session started with a discussion around the concepts of safety, warmth, and inquiry. The concept of *community ball*—using a physical ball as a tool to facilitate turn-taking in discussion and identifying the present speaker—was also explained. The students were invited to autonomously create guidelines for their discussions collaboratively and democratically (e.g., We listen carefully and quietly to what someone is saying; We think about what we just heard; We respect each other's ideas.) The nature of *community* was also explored utilizing the thoughtful story of *Frederick* by Leo Lionni.

The distinction between closed and open questions was cultivated through multiple examples and activities. This prepared the students for the next session in which they formulated their own open questions. It was important to us that the questions related to the students' lifeworlds and truly mattered to them. All the questions were then written on the board and categorized. Then, everyone voted for their favorite question. Three questions with the highest votes were picked to be discussed during the upcoming weeks (Table 2). Even if a question was not chosen, it was still attended to, so no child thought that their question was not important. The facilitators worked with the PI to develop a lesson plan for the three questions selected by the students. To return to the topic of community, the

discussion in the final week of the intervention was dedicated to the concept of friendship. At the end of the intervention, there was a short dialogue about the P4C approach and students were asked to reflect about how the discussions and activities had been going for them, whether students were supporting each other in discussions, and how they could better connect or improve their collaborative thinking.

Table 2:

Questions Developed by the Students in P4C

Grades	Sample questions generated by students
Grade 6/7	What is the meaning of life? Is life too short? How do we trust what we see? Did unicorns ever exist? Why do we feel emotions? Why do we name things?
Grade 7/8	Is the world made from evolution or creation? If there is an end to space, what's after that? What is power? What is worth doing? What if I could live forever? What is the value of life? How do we know something is real? What is friendship?

Each session, as mentioned above, contained a stimulus, philosophical exercises, discussion plans, activities, and reflective journal writing. The stimuli included storybooks, video/movie clips, pieces of art such as painting, and the like. There were some exercises in each session that would engage students in more exploration of the topics/questions. At the end of each session, the students did reflective journal writing by answering the following three questions in the notebooks provided for them:

- What did you learn from today's dialogue?
- What is your understanding of '[the topic]?
- What is one BIG question you still have?

Depending on how the discussion went during each session, the facilitators asked students to meta-reflect upon the CoI. These questions would involve how well the students listened to each other, how they transitioned from one topic to another, and/or how well they collaborated and built upon each other ideas. This iterative process was designed to make their CoI stronger each week as well as to cultivate a sense of 'ownership' over the quality of their thinking and dialoging together.

Evaluation of the P4C Intervention

To investigate the impact on students' social and emotional outcomes, a randomized controlled trial (RCT) was conducted, in which half of the classrooms had P4C implemented in their classrooms and half served as comparisons, which means they had no intervention program running during those weeks. All participating students and teachers were asked to complete written surveys before and after the implementation of the P4C pedagogical intervention.

Participants

The study included a total of 233 6th to 8th grade students ($Mean_{age}$ = 12.60, *SD* = .86; 45% female) recruited from 10 classrooms in one middle school located in a public-school district serving approximately 32,000 students in a suburban, predominantly middle-class community near a large Western Canadian city. The P4C (intervention) group included 124 students ($Mean_{age}$ = 12.64, *SD* = .89) and the comparison group included 109 students ($Mean_{age}$ = 12.49, *SD* = .89). With regard to language background, 79% of the students reported that English was the first language they learned at home. For the remaining students, 12% reported that their first language was of East Asian origin (e.g., Korean, Japanese, Mandarin), and 9% indicated multiple additional languages (e.g., Spanish, Punjabi). This range of language backgrounds in the sample is reflective of the cultural and ethnic diversity of the Canadian city in which this research took place.

Analyses indicated that the students did not differ across study conditions on baseline demographic characteristics, suggesting that the randomization process was successful. Of the students recruited for participation, 98% received parent/guardian consent and 91% completed both baseline and post-test surveys. None of the participating students had received a P4C-based intervention prior to this study.

Procedure

Prior to the start of data collection, research assistants visited each classroom and gave a 15-min presentation in child-friendly language to describe the study and answer any questions the students had. Following, they provided students with parent/guardian permission slips to take home. Students were informed that their participation was voluntary and that there would be no consequences if they chose not to participate. Only students with signed parental/guardian consent participated in the study. After baseline data collection, five classrooms were randomly assigned to receive the P4C implementation and five classrooms were randomly assigned to serve as controls.

Trained research assistants administered the questionnaires once prior to the implementation of P4C (baseline) and again after the program implementation had concluded (post-test). The surveys were read aloud during a 30-min class period to control for any differences in reading ability. Students were assured that all their answers would be kept confidential, and that peers, parents, or teachers would not be able to access their responses. Teachers stayed in the classroom during administration but were advised not to walk around and/or look at the students' surveys. Teachers also completed student

behavior checklists (see Measures section below for more detail) for each of their participating students, both at baseline and post-test.

Measures

Outcome Measures

Students completed a battery of measures at baseline and post-test that included demographic questions and that assessed their perceptions of their classroom context, namely autonomy and classroom supportiveness, as well as dimensions of prosociality—operationalized by measures of empathy, perspective-taking, and altruism. Teachers also completed behavioral ratings of students' social and emotional competence.

Demographic Information. Students were asked to complete a demographic questionnaire in which they were asked to provide information about their gender, birth date, grade, first language learned, and family composition.

Classroom Context: Autonomy and Classroom Supportiveness. Students reported on their own sense of support in their classrooms through questions about how much their classmates care, help, and get along with each other. They also reported how much autonomy they felt in their classrooms by how involved they are in decision making and setting classroom rules (Battistich et al., 1997). Specifically, students' perceived autonomy in the classroom and classroom supportiveness were assessed via the 10-item Student Autonomy and Influence in the Classroom (e.g., "In my class students have a say in deciding what goes on") and the 14-item Classroom Supportiveness subscales (e.g., "My class is like a family") from the Sense of Classroom as a Community measure (Battistich et al.,1997). Students responded to the Autonomy scale using a 5-point Likert-type scale ranging from 1 (*never*) to 5 (*always*) and the Classroom Supportiveness scale using a 5-point Likert-type scale ranging from 1 (*disagree a lot*) to 5 (*agree a lot*). Previous research has shown evidence for the validity and reliability of this measure (Battistich et al., 1997). In the present study, internal consistency as assessed via Cronbach's alpha was adequate at both baseline and post-test, for Autonomy (.83 and .85, respectively) and Classroom Supportiveness (.72 and .72, respectively).

Empathy and Perspective-taking. Students' empathy and perspective-taking were assessed via the Empathic Concern (6-item) and Perspective-Taking (7-item) subscales of the Interpersonal Reactivity Index (IRI; Davis, 1983) that has been modified for children (Schonert-Reichl et al., 2012). The Empathic Concern scale assesses the tendency to feel concern for other individuals (e.g., ''I often feel sorry for people who don't have the things I have''), whereas the Perspective-Taking subscale measures the tendency to consider things from others' viewpoints (e.g., "Sometimes I try to understand my friends better by imagining how they think about things"). Students rated each item on a 5-point Likert-type rating scale ranging from 1 (*not at all like me)* to 5 (*always like me*). Supportive evidence for the construct validity and reliability of the empathic concern and perspective-taking subscales of the IRI has been obtained in previous research (Davis, 1983; Schonert-Reichl, 1993). In the present study, Cronbach's alphas for the empathy subscale were .89 and .82 for the perspective-taking subscale at both time points.

Altruism. Students reported their altruistic behavior by responding to five modified items from the Altruistic Behavior Questionnaire (Developmental Studies Center, 2005) using a 4-point Likert-type scale ranging from 1 (*never*) to 4 (*many times*). In the present study, altruism was operationalized as students' reports of helping others in distress (e.g., hurt, sad) (Developmental Studies Center, 2005). Students were asked to think about ("Since the start of this school year …") how often they had done behaviors such as "I helped someone who was hurt" and "I cheered someone up who was feeling sad." Previous research has shown evidence of good internal consistency (α = .82) for the full scale (Developmental Studies Center, 2005). In the present study, internal consistency of the five items was assessed via Cronbach's alpha and was good at both baseline (α =.84) and post-test (α =.82).

Social and Emotional Competence (SEC). The construct of social and emotional competence (SEC) was assessed via a composite of teachers' ratings of their students' empathy, helpfulness, prosociality, emotional awareness, and acceptance by peers (Kam & Greenberg, 1998). Specifically, teachers reported on their students' SEC related to prosociality (i.e., empathy, compassion, self and social awareness) by completing six items of the Social and Emotional Competence subscale of the Teacher Social Competence Rating Scale (Kam & Greenberg, 1998) for each of their participating students, both at baseline and post-test. The Canadian province in which this study took place includes social and emotional competencies as part of the provincial curricular objectives (see https://curriculum.gov.bc.ca/competencies/personal-and-social/personal-awareness-and-responsibility). Therefore, teachers at schools in this province are well versed and practiced in responding to questions about their students' SEL and classroom context. Example items were "shows empathy and compassion for other's feelings" and "provides help, shares materials, and acts cooperatively with others" and were rated on a 5-point Likert-type scale, ranging from 0 (*almost never*) to 5 (*almost always*). Previous research has provided evidence of the validity and reliability of this full scale (Kam & Greenberg, 1998) and good internal consistency has been found with samples of early adolescent students (Schonert-Reichl & Lawlor, 2010). Internal consistency of the six items was assessed via Cronbach's alpha and was high in this study, both at baseline (α = .93) and post-test (α = .94).

Findings

The findings are presented in two sections. The first describes the preliminary intervention effects; the impact of P4C on students' prosociality and classroom context. The second section takes a person-centered approach to investigate the interaction between students' baseline SEC and the P4C intervention on classroom context and students' prosociality.

Program Outcomes

Intervention Effects

A series of Analyses of Covariance (ANCOVAs) were conducted to investigate post-test differences between the intervention and control group on outcomes related to student prosociality (empathy, perspective-taking, altruism) and the classroom context, while controlling for demographics such as age, gender, and baseline scores on the outcomes. Cohen's d is provided as a measure of effect size, whereby d = 0.2 is considered small, d = 0.5 is medium, and d = 0.8 is large (Cohen, 2013).

Prosociality. Results from a series of ANCOVAs, controlling for age, gender, and baseline scores, indicated no significant differences between intervention and control groups on empathy, $F(1, 228) = .10$, $p = .76$, $d = .05$, perspective-taking $F(1, 228) = .47$, $p = .49$, $d = .11$, or altruism, $F(1, 228) = .14$, $p = .71$, $d = .03$ (see Table 5 for means). There was, however, a significant difference between groups on teacher-rated SEC, with the control group being rated by their teachers as higher in SEC at post-test than the P4C group students, $F(1, 225) = 4.93$, $p = .03$, $d = .29$. Specifically, the control group did not change significantly in SEC from pre- to post-test, while the P4C group declined.

Classroom Context. After controlling for age, gender, and baseline perceived autonomy scores, a significant difference was found between intervention and control group on student-rated autonomy at post-test, $F(1, 228) = 8.89$, $p = .003$, $d = .29$. As can be seen in Table 5, students in the P4C group reported lower autonomy than students in the control group at post-test (i.e., after the P4C intervention). Moreover, as illustrated, the intervention group declined in autonomy from baseline to post-test, while the control group remained relatively unchanged. There was no significant difference between intervention and control students on classroom supportiveness, $F(1, 226) = 2.41$, $p = .12$, $d = .21$. Both intervention group and control group students reported a decline in classroom supportiveness from baseline to post-test (see Table 5).

Differential Effects: Teachers' Reports of Social and Emotional Competence at Baseline

P4C Outcomes. To further unpack the impact of the P4C intervention and to investigate the potential influence of students' baseline SEC on the effectiveness of the P4C program, a *k*-means cluster analysis was used to create profile clusters of students based on their standardized (baseline) teacher-rated SEC scores (Milligan & Cooper, 1988; Steinley, 2004, 2006). *K*-means cluster analysis sorts cases into clusters that minimize differences among members of each cluster, via an iterative process using squared Euclidean distances from initial cluster centers (Beauchaine & Beauchaine, 2002; Denham et al., 2012; Matsuba et al., 2007). A two-cluster solution provided the best statistical and conceptual fit, by maximizing distance between cluster centres and providing distinct groups with adequate *n* in each cluster for subsequent analyses. One hundred and nine students were assigned to the first group labeled *Low Teacher-Rated SEC* (mean scores below 50th percentile) and 129 students were assigned to the second group which was labeled *High Teacher-Rated SEC* (mean scores above the 50th percentile) SEC (see Table 6 for means). An ANCOVA validated a significant difference between clusters on the cluster variable, teacher-rated SEC (see Table 6).

A series of ANCOVAs were conducted, with dimensions of classroom context and prosociality as the dependent variables, experimental condition and teacher-rated SEC cluster as independent variables, and age, gender, and baseline scores as covariates. No main or interaction effects were found on students' post-test reports of classroom supportiveness, perspective-taking, altruism or teacher-rated SEC.

With respect to students' reports of empathy, a significant interaction was found between experimental condition and teacher-rated SEC, $F(1, 223) = 6.89$, $p = .009$, $d = .35$. Specifically, for students with high teacher-rated SEC at baseline, the students in the P4C group reported significantly

higher post-test empathy scores (M = 3.67, SE = .06) than students in the control groups (M = 3.48, SE =.07), $F(1, 223) = 3.94$, $p = .048$, $d = .17$. In contrast, for students with low teacher-rated SEC at baseline, the P4C group had lower empathy at post-test (M = 3.48, SE = .08), compared to controls (M = 3.67, SE = .08), $F(1, 223) = 3.04$, $p = .08$, d =.16.

Discussion

The purpose of this pilot study was to investigate the impact of the P4C intervention program on students' SECs and autonomy in a middle-school classroom context. We were also curious to explore the potential differential effect of P4C on students with different baseline SECs. In other words, is P4C more effective for some students over others and/or does it need to be coupled with prerequisites?

Despite some students feeling as though they learned about perspective-taking and acceptance, there were no significant differences at post-test between students in the P4C and control groups on students' reports of their own empathy, perspective-taking, or altruism, after controlling for gender, age, and baseline scores. Indeed, these findings align with some previous research that has found no differences in prosocial behavior following a P4C intervention (Trickey & Topping, 2006; Youssef et al., 2016). There was, however, a significant difference in teacher-rated SEC at post-test, with the P4C group being rated by their teachers as having lower SEC than the control group. These results are in contrast with previous research and suggest additional research is needed to investigate the impact of P4C on students' prosociality, particularly from the teachers' perspective.

Findings indicated there was no difference between P4C and control groups on classroom supportiveness at post-test, however, there was a significant difference between groups on student-rated autonomy at post-test, with students in the intervention group reporting lower levels of autonomy in their classroom than students in the control group. This result was contrary to what we expected from the implementation of the P4C. However, after taking a closer look at the autonomy survey items, it seems that they might assess students' *overall* feelings of autonomy at school and not just within the P4C program (e.g., "In my class I get to do things that I want to do," "In my class the teacher and students decide together what the rules will be," "The teacher in my class asks the students to help decide what the class should do").

Moreover, students' perceived sense of autonomy has been shown to decline in the transition from elementary to secondary school, with students feeling they have fewer opportunities to participate in decisions, less choice and less self-management (Eccles & Roeser, 2011). A program like P4C was assumed to buffer this decline by intentionally providing students with opportunities to exercise their autonomy. Instead, however, this program may have drawn attention to the mismatch between the autonomy early adolescent students yearn for at this developmental stage and the lack of opportunities provided in middle school contexts to enact this important competency. P4C programs have been described before as a "Trojan Horse" (Vansieleghem & Kennedy, 2011). Vansieleghem and Kennedy (2011) wrote: "This is to suggest that the discursive form that characterizes philosophy for children—communal dialogue in an ideal speech situation—is inherently subversive of the goals of biopower, and as such represents a sort of Trojan Horse wheeled into the ideological state apparatus of Western schooling" (p. 179). And it is for this reason that P4C practitioners have discussed whether it is even

ethical to engage students in P4C, especially when children live in oppressive societies where they have not much choice or possibilities to change their environment (Ghazinejad & Ruitenberg, 2014). However, more research is needed, which incorporates qualitative investigations with students, to truly unpack these findings regarding P4C and students' perceived autonomy.

The finding of a significant interaction between intervention condition and teacher-rated SEC clusters on student empathy is notable. Specifically, for students rated by teachers as having high SEC at baseline, the P4C group reported higher post-test empathy than the control group. In contrast, for students with low baseline teacher-rated SEC, the results were the opposite. These findings may imply that a minimum level of social and emotional skills and competencies is needed to effectively engage with and benefit from P4C approaches. However, more research is needed to investigate this further.

Limitations

We recognize that concepts like empathy, perspective-taking, and autonomy are highly complex phenomena. With a combination of self-report measures and teacher observations we attempted to capture internal reflection on the subscale questions as well as observable behavior. Nonetheless, we realize that this is just a small aspect. Additional qualitative data would give even more insight into each child's cultivation of feeling and thinking as well as how those are interlaced. Furthermore, the mix of instruments and the revision of instruments might have affected our outcomes and needs to be addressed in further research.

Another limitation of this study was that the duration of the implementation was only 8 weeks rather than the intended 16-weeks (45-minute sessions twice per week), due to an unanticipated district-wide strike. Given that most studies of P4C pedagogies that have found positive results conducted the interventions for a longer period of time (Collins, 2005; Topping & Trickey, 2007b), the shortened duration in the present study may have contributed to the limited findings. However, findings are equivocal about the ideal length of SEL interventions and programs targeting prosocial outcomes (Durlak & Dupre, 2008), with some studies indicating that a longer duration is not necessarily better or more effective (Botvin, 2000). It is possible that a longer implementation period could have allowed us to reach out to those students who were less engaged, as it takes time to cultivate a CoI with a larger group (e.g., Collins, 2005; Fair et al., 2015; Topping & Trickey, 2007b) and takes some students time to develop the abilities and courage to participate in these discussions. Nevertheless, more research is needed to determine whether the shortened length of the intervention indeed impacted the findings.

Finally, the large class size of the participating students ($n \sim 30$) may have created less opportunity for them to share and participate in the discussions, resulting in students' varying engagement levels. Participation in the community of inquiry is an important part of philosophical inquiry approaches (Lipman, 2003) and studies that have found positive results have typically had smaller groups (e.g., Gardner, 1998; Lipman & Bierman, 1980). It is possible that the large groups of participants in each class in this study might have contributed to the limited findings.

Conclusion and Future Directions

The exposure to the P4C program resulted in lower student self-reports of autonomy, however, it is unknown whether this was a true iatrogenic effect or if it reflects, as posited, an increase in students' critical awareness of their own thoughts and feelings as well as the thoughts and feelings of others, and more understanding of their sense of freedom and classroom autonomy. Additional research, utilizing focus groups or interviews with students, is needed to further investigate these nuanced effects among early adolescents. Moreover, results indicated that SEC may act as an important prerequisite to gaining benefits from P4C approaches. Future studies are needed that investigate the effects of implementing philosophical or moral reasoning programs such as P4C in combination with SEL programs and practices that perhaps more explicitly teach social and emotional competencies. Taken together, the present research emphasizes the need for continued investigations of the use of P4C approaches with students in middle school.

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Appendix

Table 3

Additional Teacher Feedback about the P4C Program

Question	Sample Responses
Which parts of the process of the [P4C] program did you feel had the most positive effect on your class?	"Discussion based on video clips and the process of generating questions for discussion" "Discussion was engaging with good topics"

	"I think the discussions were interesting however wasn't completely sure how thing were impacting the students empathy"
	"The opportunities for all students to share & be heard. The facilitators worked hard to make contact with each student each session."
Please provide any additional comments that you think might be important for us to know as part of this evaluation.	"So many other factors influence the children at school, at home, etc. I don't know to what extent participating in the study raised their overall empathy or whether other factors came into play."
	"They seemed to enjoy the discussions and ideas, but I don't know if there were any effects beyond class time."

Table 4

Students' Open-Ended Feedback on the P4C Program

Questions	Sample responses
Is there anything else that you learned about in the P4C program?	"Almost everyone has different emotions" "Be kind to your friends and help them" "Everything is the way it is for a reason" "How to see things from other people's perspective" "I already knew everything they were teaching" "I had learned about acceptance and how people think, act and speak" "I learn how to treat others with respect, share opinions" "I learned a little about why we need emotions" "I learned that people can be brave and scared at the same time" "I learned that we are all philosophers"

What did you like best about the P4C program?	"Being able to learn more about my friends" "Everything, literally" "How we got to listen to each other share and the journals we wrote in" "How we got to open up and tell about ourselves" "I liked asking big questions" "I liked how they accepted everyone" "Talking about death"
If you were going to talk about the P4C program to other children, what would you say?	"Be open to talking" "Don't judge" "[P4C] can learn things and it also can make you think deeply about questions" "It's a program where you talk and discuss a lot" "It's boring, but you learn some stuff"

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