

philosophy for children in saudi arabia and its impact on non-cognitive skills¹

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abstract

This study examines the effects of teaching philosophy for children (P4C) on the development of non-cognitive skills among students. Although the main focus of modern schooling is on attainment, non-cognitive skills and attitudes are still within the scope of modern education. The Ministry of Education in Saudi Arabia introduced a new policy to teach critical thinking and philosophy in its public schools in 2017. Although the effects of teaching philosophy on cognitive skills have been well-researched, fewer studies have studied the effects the teaching philosophy has on non-cognitive skills. The current study is the first to explore this issue in the Saudi educational context. This paper presents findings from a quasi-experiential design using 28 students in a Saudi elementary public school. An experimental group of sixth-graders participated in Philosophy for Children (P4C) sessions for 3 months, while the other group of sixth-graders did not receive any philosophy-related training. To collect data, the researchers used a survey designed for non-cognitive outcomes. The results show that the P4C group ranked higher in measures of communication, sociability, self-confidence, determination, willingness to try new things, happiness, and solving problems. On the other hand, the results show that the P4C group lagged behind in terms of empathy, democracy, and diversity compared to the experimental group. However, the differences are minor, and the sample is small. Nonetheless, the results are promising in indicating that P4C can improve students' non-cognitive skills.

keywords: P4C; Philosophy for Children; Non-Cognitive Skills; Elementary Education; Teaching Philosophy; PWC; Philosophy with children.

la filosofía para niños en arabia saudí y su impacto en las habilidades no cognitivas

resumen

Este estudio examina los efectos de enseñar filosofía para niños (FpN) en el desarrollo de habilidades no cognitivas entre los alumnos. Aunque el principal foco de la escolarización moderna está puesto en los resultados, las habilidades y actitudes no cognitivas siguen formando parte del ámbito de la educación moderna. El Ministerio de Educación de Arabia Saudí introdujo en 2017 una nueva política para enseñar pensamiento crítico y filosofía en sus escuelas públicas. Aunque los efectos de la enseñanza de la filosofía en las

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habilidades cognitivas han sido bien investigados, menos estudios han estudiado los efectos que la enseñanza de la filosofía tiene en las habilidades no cognitivas. El presente estudio es el primero en explorar esta cuestión en el contexto educativo saudí. Este trabajo presenta los resultados de un diseño cuasi-experiencial en el que participaron 28 alumnos de una escuela primaria pública saudí. Un grupo experimental de alumnos de sexto grado participó en sesiones de Filosofía para Niños (FpN) durante 3 meses, mientras que el otro grupo de alumnos de sexto grado no recibió ninguna formación relacionada con la filosofía. Para recoger los datos, los investigadores utilizaron una encuesta diseñada para obtener respuestas no cognitivas. Los resultados muestran que el grupo con FpN clasificó mejor en las mediciones de comunicación, sociabilidad, confianza en sí mismo, determinación, voluntad de probar cosas nuevas, felicidad y resolución de problemas. Por otra parte, los resultados muestran que el grupo con FpN quedó rezagado en términos de empatía, democracia y diversidad comparado con el grupo experimental. Sin embargo, las diferencias son menores y la muestra es pequeña. No obstante, los resultados son prometedores al indicar que la FpN puede mejorar las habilidades no cognitivas de los alumnos.

palabras clave: FpN; Filosofía para Niños; Habilidades No-Cognitivas; Educación Primaria; Enseñanza de la Filosofía; FcN; Filosofía con Niños.

filosofia para crianças na arábia saudita e seu impacto nas habilidades não-cognitivas

resumo

Este estudo examina os efeitos do ensino de Filosofia para Crianças (FpC) no desenvolvimento de habilidades não-cognitivas entre os/as estudantes. Embora o foco principal da escolarização moderna esteja nos resultados, as habilidades e atitudes não-cognitivas ainda estão no escopo da educação moderna. Em 2017, o Ministério da Educação da Arábia Saudita introduziu uma nova política para ensinar o pensamento crítico e a filosofia em suas escolas públicas. Apesar de os efeitos do ensino de filosofia nas habilidades cognitivas terem sido amplamente pesquisados, poucos estudos investigaram os efeitos do ensino de filosofia nas habilidades não-cognitivas. O presente estudo é o primeiro a explorar essa questão no contexto educacional saudita. Este artigo apresenta resultados de um desenho de pesquisa quase-experimental, no qual participaram 28 estudantes de uma escola pública saudita de ensino fundamental. Um grupo experimental de alunos/as da 6ª série participou de sessões de Filosofia para Crianças durante três meses, enquanto outro grupo de alunos/as da 6ª série não recebeu nenhuma formação relacionada à filosofia. Para coletar dados, os pesquisadores criaram um questionário para obter resultados não-cognitivos. Os resultados mostram que o grupo que participou das sessões de Filosofia para Crianças (FpC) alcançou melhores colocações nas medidas de comunicação, sociabilidade, autoconfiança, determinação, disposição para tentar coisas novas, felicidade e resolução de problemas. Por outro lado, os resultados mostram que o grupo com FpC ficou atrás em termos de empatia, democracia e diversidade, comparado ao grupo experimental. No entanto, as diferenças são mínimas e a amostra é pequena. Ainda assim, os resultados são promissores ao indicar que a FpC pode melhorar as habilidades não-cognitivas dos estudantes.

palavras-chave: FpC; Filosofia para Crianças; Habilidades Não-Cognitivas; Educação Básica; Ensino de Filosofia; FcC; Filosofia com Crianças.

philosophy for children in saudi arabia and its impact on non-cognitive skills

introduction

Educational systems usually start with comprehensive aims that try to enhance the well-being of students (Graham, Powell, & Anderson, 2018; DeAngelis, 2019). Since schools are unique places where students experience a variety of social and cultural factors, expectations are high that schools achieve such aims (Siddiquie, Gorard, & See, 2017). In schools, students encounter and interact with people from different backgrounds and experience society and its complexities in a more controlled environment. The complexities of sociocultural factors mean that schools aim not only to transform knowledge but also to cultivate skills and attitudes that help students deal with life in the general sense of the word (Cassidy, Marwick, Deeney, & Mclean, 2018). These skills and attitudes include critical thinking, collaborative thinking, caring thinking, and ethical sensitivity toward others.

The teaching of critical thinking and philosophy to students in the European School of Madrid was introduced to satisfy the comprehensive aims of education (Colom, Moriyon, Magro, & Morilla, 2018). Studies show that teaching critical thinking and philosophy is reported to enhance both cognitive skills and non-cognitive skills (Trickey & Topping, 2004; Yan, 2017; Rahdar, Pourghaz, & Marziyeh, 2018). Other studies show improvements in students' ability to read, write, and do math (House, 2016; Auriac-Slusarczyk, Maire, Thebault, & Slusarczyk, 2018; Gorard, Siddiqui, & See, 2015). Studies also show improvements in students' personal and social skills (Trickey & Topping, 2004; Gorard, Siddiqui & See, 2015). The interest in this pedagogical approach, which seeks to train students in critical, creative, collaborative, and caring thinking and philosophy skills, has its foundations in the history of education. Philosophers of education such as John Dewey and sociologists such as Lev Vygotsky emphasized the importance of adopting a comprehensive view of education and the role of philosophy in realizing such a view (Dewey, 1990; Daniels, 2016). This paper examines the role of philosophy in enhancing non-cognitive skills in particular.

Non-cognitive skills include a variety of skills such as communication skills, motivation, assertiveness, confidence, resilience, determination, and self-esteem. These skills are sometimes referred to by titles such as soft skills, personal characteristics, personality traits, life skills, or social and emotional skills (Jagannathan, Camasso, & Delacalle, 2019; Gorard, Siddiqui, & See, 2015). This paper specifically focuses on social and communication skills, self-confidence, determination, social responsibility, democracy, diversity, empathy, fairness, justice, and happiness. The development of such skills is an essential goal for educational systems that aim to provide children with a comprehensive educational experience. In this paper we study how philosophy for children might help achieve such an aim.

Empirically, Philosophy for Children (P4C) became a worldwide movement in its own right, with the implementation of programs for children to study philosophy and critical thinking more systematically (Gregory, Haynes, & Murriss, 2017). Matthew Lipman (1923-2010) is considered the founding father of this movement, which spread to many countries worldwide (Lipman, 2008). The main idea of P4C centers on introducing children to philosophy from an early age. Most countries offer students philosophy courses at the college level, but P4C argues that philosophy is suitable for children well before college. P4C works to challenge two assumptions rooted in traditional education: first, that philosophy requires a level of cognitive development that is beyond the reach of young children; and second, that philosophy might encourage students to be skeptics more than learners (Pritchard, 2018). Concerning the first point, P4C offers much empirical evidence from educational experiences that children can and do philosophize (Sanders, 2017). As for the second point, P4C distinguishes between skepticism and critical thinking and aims to enhance the latter rather than the former (Zulkifli & Rosnani, 2020). Pedagogically, at least as developed by Mathew Lipman, P4C represents a dialogical inquiry facilitated by reading novels and picture books, such as *Harry Stottlemeir's Discovery* and *Lisa*, that present the child with situations designed to stimulate thinking (Lipman, 1983). The aims of P4C include (but are not limited to) improving cognitive and epistemological skills. P4C works toward

advancing social objectives such as democratic communication (Echeverria & Hannam, 2017); ethical and political goals such as equality and justice (Chetty & Suissa, 2017); and an array of aesthetic and artistic experiences (D'Olimpio and Teschers, 2017; Fletcher & Oyler, 2017).

Such programs are highly influenced by socioeconomic and cultural factors (Chetty, 2018). Scholars continue to study how these factors affect these programs in terms of policies and implementations (Tian & Liao, 2016; O'Riordan, 2016). However, not all economic, cultural, and social contexts are the same. Each educational system deals with different contexts and hence offers a unique experience. While some contexts have been studied more than others, others have been ignored. The educational system in Saudi Arabia had been shaped by its own experience (Rajab & Wright, 2020), which includes a unique experience with philosophy. For a long time, the Saudi system took a critical and sometimes hostile attitude toward philosophy as such, not to mention toward teaching it. Philosophy was seen as a threat to the correct understanding of Islam. As a result, philosophy was banned not only in K-12 education but also in higher education. That is, not only was philosophy not taught in schools and universities, but students were also taught that philosophy represented an incorrect way of thinking about important issues such as life and existence.

However, outside of schools, philosophy was increasingly receiving more attention from the public, and organized philosophical circles started to hold regular meetings and public events on philosophical matters. Educationally, private centers such as Baseera,⁴ an educational consultancy organization that uses internationally-accredited programs to introduce philosophical thinking and Socratic dialogue, were established and started to attract public attention. In addition to these earlier developments, a recent change has taken place. Within the more general economic and social reform program introduced in Saudi Vision 2030,⁵ the Ministry of Education introduced its new critical thinking and philosophy curriculum for high school students in 2019. The Minister of Education introduced this curriculum at a public event, and the media reported the

⁴ <https://baseera.com.sa/en/>

⁵ <https://vision2030.gov.sa/en>

announcement widely (Al-Kinani, 2019). Because there were no philosophy instructors among the ranks of Saudi teachers, the Ministry of Education implemented a curricular training program for about 200 teachers that was led by a professional international philosophy for children program.⁶ After being trained, teachers were sent to teach the new curriculum in two hundred designated schools all around the country as an experimental first step. This new curriculum introduced students to critical thinking and philosophical skills not through a systematic study of philosophical approaches but rather by offering examples and stories that raise questions and dilemmas. The new curriculum aims to develop both cognitive and non-cognitive competencies, such as the ability to lead a virtuous life, speaking and listening skills, the capacity to ask questions, and an improved pace of reading, writing, and calculating (Ministry of Education, 2019).

This development is part of a larger vision that sees education as a means of accomplishing economic and social change. The economic goal is central to this vision, and the new curriculum will be evaluated based on its success in advancing that goal. The effects of implementing this curriculum remain to be seen. This study predicts the effects of teaching P4C in the Saudi context, but on a smaller scale and to younger children. Although the benefits of P4C in terms of academic attainment are very important, this study explores the more general effect of P4C on non-cognitive skills. We attempt to answer the following question: What are the effects of teaching philosophy for children in a context where philosophy is not only new to the general public but also preceded by the active discouragement of philosophy?

method

The researchers used the posttest-only control group design, which is one of the ways in which the true-experimental design can be implemented (Morgan & Renbarger, 2018). This method was implemented at an elementary school in the western suburb of Riyadh in the second semester of 2019-2020. We chose this school for several reasons. First, one of the researchers is a teacher at this school,

⁶ From *Society for the Advancement of Philosophical Enquiry and Reflection in Education* (SAPERE): <https://www.sapere.org.uk/about-us/>

which made it easier to get the school's authorization to do the experiment. Second, this school is a public school, and most students belong to middle-class families, ensuring that all students are familiar with similar curricula and are at the same educational and learning level. Third, this school is in a new neighborhood where families belong to a variety of cultural and racial groups. These characteristics help reduce the odds of having students with previous training in philosophy or that certain social groups will be represented more than others. Equalizing other factors is important to relate the changes that students might have to the new way of teaching.

After acquiring the parents' permission for their children to participate in this study, as well as securing the children's consent, the researcher/teacher equipped the classroom with the materials needed for facilitating the P4C sessions according to the guidelines of Bassera and Dialogue Works. These included paper, cards, name tags, a sponge ball for dialogue circulation, colored markers, colored A4 paper, photos, and video clips. The teacher also used materials offered by the Society for Advancing Philosophical Enquiry and Reflection in Education (SAPERRE).

We facilitated 10 sessions with 14 12-year-old students. Each session took around 80 minutes. The first five sessions focused on introducing philosophical thinking and reasoning, building arguments, the Socratic method, and distinguishing between favorable and regular questions. The last session focused on creating a community of inquiry around a stimulus. Specifically, the first session contained an introduction to the program and a discussion about the roles that students should adopt during the inquiry, followed by some practice with asking questions to inspire dialogue with others. The next session started with a question about the previous session to ascertain whether students wanted to add something about it. The third session started with introductory practices in philosophy containing "agree/do not agree," "Would you rather X or Y," using drama, thought trains, question banks, silent acting, and "art or not art" and "I care/I don't care" questions. The audiovisual aids consisted of photos, video clips, stories, and drama.

Then, the teacher presented the philosophical stimulus, which aims to introduce the topic as indicated in the lesson plan. The whole class then took a minute for silent reflection before starting to work to develop the main concepts in the stimulus. Next, students were divided into groups and asked to create questions with the characteristics specified to them during the first session. For example, opining questions that make us think it over and general (life) questions. After that, students voted to select the questions they found most interesting philosophically. Finally, the class engaged in a discussion around that question. The teacher worked as a facilitator with minimal involvement. In other words, he modeled what it is to be a good listener.

A simple random sample was collected from the sixth-grade male students (the students in the school are all male). The sample contained 28 students, 14 of whom participated in the experimental group, while the other 14 students represented the control group that did not participate in the P4C program (Table 1). The evaluation of the equivalence between the two groups in terms of social and economic status was achieved by using the data provided in students' files. The control group was originally composed of 15 students, but one student withdrew because his parents did not approve of his participation. His parents explained that it was because they did not want this experiment to disturb his usual schedule; they did not express any negative attitude toward philosophy per se.

The program consisted of ten sessions offered over the course of eight weeks. In the first two weeks, students participated in four sessions, and in the next six weeks, students participated in six sessions, one session per week. After finishing the ten sessions, students in both groups took a post-non-cognitive capabilities scale test.

Table 1. Participants

Groups	Number	Missing	Total
Experimental	15	1	14
Control	14	0	14
Total	29	1	28

Not all the students were able to participate in all the sessions for a variety of reasons. For example, the sessions were conducted during the regular school schedule, and sometimes students preferred to go to their regular classes. Four students were able to finish all ten sessions, and the participation of the other students ranged from four to nine sessions (Table 2).

Table 2. Participants in the P4C Sessions

Number of Sessions	10	9	8	7	6	4	Total
Attendees of Students	4	5	1	1	1	2	14

measurement tools

In this study, we used the non-cognitive survey developed by the research team at Durham University in collaboration with researchers from Leicester University (Siddiqui, Gorard, & See, 2017; Siddiqui, Gorard, & See, 2019). The researchers emailed Dr. Siddiqui and obtained permission to use the survey. Then, the researchers translated the survey into Arabic and contextualized it to fit Saudi culture without altering the main concepts. For example, we used “mosque” instead of “church” and changed names to Arabic names. After that, the translated survey was reviewed by faculty members from the Psychology Department at the College of Education at King Saud University and the Educational Policies Department at the College of Education at King Saud University to judge the appropriateness of the survey, its language, and phrasing for use with Saudi students. The survey was modified according to the reviewers’ suggestions and ultimately contained three main sections related to non-cognitive skills. The first section contained 11 statements about non-cognitive skills related to communication skills, sociability, cooperation and teamwork, self-confidence, determination, social responsibility, well-being, and empathy. The second section included five vignettes with a choice of three possible scenarios. Pupils had to select one of three options. The vignettes were about imaginary characters the same age as the students, and the questions provided did not seek to elicit closed answers like yes or no but rather required a judgment based on students’ understanding of social responsibility, empathy, and genericity and their understanding of democracy, justice, and social diversity.

analysis

Because the conditions of the Independent Samples t-Test regarding the sample size and the nature of the dependent variable were not met, the researchers used the Man Whitney U Test to analyze the data of both the experimental and control groups. The researchers relied on the value of Asymp. Sig 2 Tailed to measure the statistical differences between the two groups at the level of significance 0.05, noting the differences between the two groups' mediums. In addition, the results contain the frequencies and percentages related to other variables.

first section: attitudes

This section measured non-cognitive attitudes for both the experimental and control groups in order to ascertain the effects of teaching sixth-grade children philosophy using the P4C method. This section included 11 statements designed to measure a set of non-cognitive abilities: communication skills, sociability, cooperation and teamwork, self-confidence, determination, social responsibility, well-being, and empathy. Because of the small sample size, because students did not respond to some statements, and to get as the most accurate results possible, the researchers conducted three statistical measures using the Man Whitney U Test:

1) Exclude Cases

After excluding the participants whose responses to the first section were incomplete, the number of the experimental group was 9, and the control group was 12. The results showed higher means for the experimental group than the control group in all measures except empathy and social responsibility. However, the differences that the means showed were not statistically significant on the level of 0.05 except in four factors: communication skills, social responsibility, the courage to try new things, and problem-solving, via the statement, "I know where to go for help with a problem."

Table 3. Overall Post-test Differences on Non-cognitive Skills by Excluded Cases

Attitude Items			Post-intervention mean	Asymp. Sig
	group	N		
Communication skills	Experimental	9	14.00	0.026
	Control	12	8.75	
	Total	21		
Sociability	Experimental	9	12.39	0.173
	Control	12	9.96	
	Total	21		
Cooperation and teamwork	Experimental	9	11.72	0.32
	Control	12	10.46	
	Total	21		
Self-confidence	Experimental	9	13.11	0.075
	Control	12	9.42	
	Total	21		
Determination	Experimental	9	13.11	0.079
	Control	12	9.42	
	Total	21		
Social responsibility	Experimental	9	9.00	0.018
	Control	12	12.50	
	Total	21		
I like to be told exactly what to do	Experimental	9	11.33	0.407
	Control	12	10.75	
	Total	21		
I am often afraid to try new things	Experimental	9	13.50	0.041
	Control	12	9.13	
	Total	21		
Well being	Experimental	9	12.56	0.139
	Control	12	9.83	
	Total	21		
Empathy	Experimental	9	10.61	0.4
	Control	12	11.29	
	Total	21		
I know where to go for help with a problem	Experimental	9	13.89	0.02
	Control	12	8.83	
	Total	21		

Table 3 shows little difference between the two groups' means, with the experimental group achieving higher means in 9 factors: (1) Communication skills. (2) Sociability. (3) Cooperation and teamwork. (4) Self-confidence. (5) Determination. (6) I like to be told exactly what to do. (7) I am not afraid to try new things. (8) Well-being. (9) Solving problems by asking the right person for help.

The higher means for the control group were limited to empathy and social responsibility.

2) Analysis by compensating lost values by series mean:

This analysis contains all members of the sample (28 students - 14 for the experimental group, and the same for the control group). We dealt with the lost values by using SPSS and the means of the chain of the responses using the order Series Mean. Five responses were missing from the experimental group and two from the control group. All were compensated for by measuring the mean of the chain. Table 4 shows that the experimental group was ahead in nine factors out of 11. However, the differences were not significant at 0.05, as shown by Man Whitney U Test, except (in part) for not being afraid to try new things.

Table 4. Overall Post-test Differences in Non-cognitive Skills by Series Mean

Attitude Items	group	N	Post-intervention mean	Asymp. Sig
Communication skills	Experimental	14	16.07	0.154
	Control	14	12.93	
	Total	28		
Sociability	Experimental	14	16.46	0.088
	Control	14	12.54	
	Total	28		
Cooperation and teamwork	Experimental	14	15.04	0.363
	Control	14	13.96	
	Total	28		
Self-confidence	Experimental	14	15.75	0.202
	Control	14	13.25	
	Total	28		
Determination	Experimental	14	16.00	0.154
	Control	14	13.00	
	Total	28		
Social responsibility	Experimental	14	13.14	0.095
	Control	14	15.86	
	Total	28		
I like to be told exactly what to do	Experimental	14	15.75	0.193
	Control	14	13.25	
	Total	28		
I am often afraid to try new things	Experimental	14	15.77	0.049
	Control	14	10.82	
	Total	28		
Well being	Experimental	14	15.29	0.287
	Control	14	13.71	
	Total	28		
Empathy	Experimental	14	13.39	0.235
	Control	14	15.61	
	Total	28		
I know where to go for help with a problem	Experimental	14	16.32	0.116
	Control	14	12.68	
	Total	28		

We note the similarities between the first and second analyses on the level of the means to measure the effect of teaching P4C for the 11 factors. Regarding the statistical significance on the level of 0.05, we observe that the experimental group was ahead in one factor: not being afraid to try new things. However, the first analysis, which removed the lost responses, showed statistical significance on the level of 0.05 in four factors: communication skills, sociability, not being afraid to try new things, and problem-solving by asking the right person for help.

3) *Analysis of responses by participants who attended only nine or ten classes.*

In this analysis, the researchers removed the responses of those who attended fewer than 9 out of 10 classes that offered P4C and the cases where responses were missing and then compared the remainder with the results of the control group. The remaining sample contained six students in the experimental group and 12 in the control group. Table 5 displays the results of this analysis, which show the experimental group ahead in eight variables of the non-cognitive abilities. However, the differences were not statistically significant on the level of 0.05 except for two variables: social communication, and sociability.

Table 5. Overall Post-test Differences in Non-cognitive Skills for Students Who Attended 9 and 10 Sessions

Attitude Items	group	N	Mean Rank	Asymp. Sig
Communication skills	Experimental	6	13.33	0.014
	Control	12	7.58	
	Total	18		
Sociability	Experimental	6	10.33	0.311
	Control	12	9.08	
	Total	18		
Cooperation and teamwork	Experimental	6	9.25	0.443
	Control	12	9.63	
	Total	18		
Self-confidence	Experimental	6	10.67	0.24
	Control	12	8.92	
	Total	18		
Determination	Experimental	6	10.67	0.251
	Control	12	8.92	
	Total	18		
Social responsibility	Experimental	6	7.50	0.02
	Control	12	10.50	
	Total	18		
I like to be told exactly what to do	Experimental	6	9.67	0.459
	Control	12	9.42	

	Total	18		
I am often afraid to try new things	Experimental	6	11.42	0.128
	Control	12	8.54	
	Total	18		
Well being	Experimental	6	10.08	0.364
	Control	12	9.21	
	Total	18		
Empathy	Experimental	6	8.17	0.222
	Control	12	10.17	
	Total	18		
I know where to go for help with a problem	Experimental	6	11.83	0.089
	Control	12	8.33	
	Total	18		
	Control	12	9.38	
	Total	18		

Table 5 shows the eight items in which the experimental group scored higher. We note that cooperation and teamwork were not among the items affected by P4C. The rest of the items were similar in all three analyses. Moreover, there were statistically significant differences in communication skills (0.012) and social responsibility (0.02).

summary of the first section of the scale: personal characters

The results show the effect of teaching P4C to sixth-grade students in the categories based on the non-cognitive skills, as shown by Man Whitney Test means. The experimental group scored higher in social communication, sociability, self-confidence, determination, liking to be told exactly what to do, not being afraid of trying new things, well-being, and solving problems by asking the right person for help.

The results show that P4C did not have an effect on three items: empathy, social responsibility, and cooperation and teamwork. The statistical significance for the differences between the means of the experimental and the control group in the three analyses shows four significant factors on the level of 0.05: communication skills, sociability, not being afraid of trying new things, and solving problems and asking the right person for help. To measure the relationship between these differences, the researchers conducted Rank Biserial Correlations, and the results were all less than 0.50, meaning that the relationship was not

strong except in communication skills, where it was 0.638, which is higher than 0.05.

Table 6. Ranking Biserial Correlation on Non-cognitive Skills for Students Who Attended 9 and 10 Sessions

Attitude Items	Mean Rank of Experimental Group	Mean Rank of Control Group	N	Ranking Biserial Correlation
Communication skills	13.33	7.58	18	0,638
Social responsibility	7.50	10.50	18	-0.333
I am often afraid to try new things	15.77	10.82	28	0,352
I know where to go for help with a problem	13.89	8.83	21	0.481

The results in this section are consistent with other studies which support the slight effect of P4C on non-cognitive skills (Siddiqui, Gorard, & See, 2019; Ventista, 2019; Gorard, Siddiqui & See, 2015; Colom, Moriyón, Magro, & Morilla, 2018; Trickey & Topping, 2004).

part two: vignettes

The survey included five vignettes as measures of changes in students’ sense of social responsibility, empathy, generosity, understanding of democracy, justice, and finally, social diversity. The outcomes for the vignette results are presented in terms of odds ratios.

Table 7 shows students’ responses to the first vignette on social responsibility. Both groups demonstrated a higher sense of responsibility, since they chose the option to organize a team to clean up the playing field over moving with their friends to a cleaner space or complaining to their friends that nobody cares about the space. However, students in the control group ranked higher, at 79%, compared to 64% for the P4C group.

Table 7. Ranking Biserial Correlation on Non-cognitive Skills for Students Who Attended 9 and 10 Sessions

Groups	Responsibility	Not Responsibility	Odds Ratio
P4C	64%	36%	0.47
Control	79%	21%	

The second vignette was about empathy and generosity. Students were asked about a classmate who has fallen behind in reading and writing and finds it hard to keep up in class. The teacher has to spend a lot of time helping him. Table 8 shows that students in the experimental group ranked higher than the control group. 50% of the experimental group chose “It is fair that the teacher should spend more time helping the student in need, even if the other students have to wait,” as opposed to the other two options: “The student should work harder to keep up with the class,” and “The student should be taught in a separate class,” compared with the 14% of the control group who chose the empathetic option. However, the odds ratio is 6.14, and thus the intervention effect is weak.

Table 8. Vignette on Empathy/Generosity: Percentage Agreeing and Odds Ratio

Groups	Empathy	Not Empathy	Odds Ratio
P4C	50%	50%	6.14
Control	14%	86%	

The third vignette focused on students’ attitudes toward democracy. The vignette is based on whether a leader for a group task should be picked randomly, selected by an adult, or voted on by all students. The results show that the control group was ahead compared to the P4C group. 50% of the control group chose to vote for a leader, whereas only 43% of the P4C chose to vote for a leader. The ratio odds value was 0.75, which is less than (1), which means the intervention was effective, as shown in Table 9.

Table 9. Vignette on Vote for a Leader: Percentage Agreeing and Odds Ratio

Groups	Vote for a leader	Not Vote for a leader	Odds Ratio
P4C	43%	57%	0.75
Control	50%	50%	

The fourth vignette focused on the concept of fairness by presenting the following situation: One student spends all evening doing his homework. He searches on the internet and books, and then writes up his findings in his own words. Meanwhile, another student quickly scribbles down some answers to the homework on the way to school. When the homework is marked, the first student gets a lower grade than the second. Table 10 shows that both groups scored low in understanding the concept of fairness. Only 14% of the P4C group described what happened as not fair (that the first student gets a lower grade despite putting in a lot of effort) compared to the 36% of the control group that chose the same option, which focuses on effort more than talent. The other choices were, ‘The second student must be smarter than the first student, so it is fair that he gets a higher grade even though he did not put in as much effort,’ and ‘Both students should get the same grade on this homework.’ The odds ratio value was 0.28, which is less than (1), which means the intervention was effective.

Table 10. Vignette on the Concept of Fairness: Percentage Agreeing and Odds Ratio

Groups	Not fair	Fair	Odds Ratio
P4C	14%	86%	0.28
Control	36%	64%	

The last vignette focuses on social diversity. Students were asked to consider this situation: Yasser’s family follows a different religion from most people in their country, and they want Yasser to be taught in a school that is based on that different religion. This means that he will not go to his local school. Table 11 shows that both groups scored less than 50%. However, the P4C group scored higher when they chose the statement, “This is fair because people who are different should have the opportunity to attend different schools,” with 43%, compared to the 29% of the control group that chose the same option. This means that 71% of the control group chose either the statement, “That is not fair because school is one place where people who are different should be able to work alongside each other,” or, “I can’t decide if it is fair or unfair that Yasser be taught

in a school based on that different religion.” The odds ratio value was 1.84, which is larger than (1), which means the intervention was not effective.

Table 11. Vignette on social diversity: Percentage agreeing and Odds Ratio.

Groups	Diversity	Not Diversity	Odds Ratio
P4C	43%	57%	1.84
Control	29%	71%	

In conclusion, the results show that teaching philosophy via P4C was effective in two aspects: empathy/generosity and social diversity. Both groups scored above 50% in the case of social responsibility. Moreover, both groups scored low in the case of justice. The P4C group ranked lower on democracy. We will offer some explanations for these results in the discussion section.

discussion

Limitations of the study:

The first limitation of this study is the small sample size, which makes it difficult to generalize the results. However, the sample was carefully chosen to be representative of students in Saudi public schools. We made sure that they had received no previous education in philosophy and that they belonged to similar social classes. Another limitation is that there are no similar studies in Saudi Arabia with which to compare the results.. Although the Ministry of Education incorporated philosophy into its high school curricula, philosophy, as a new subject, is still viewed with suspicion by school administrators, and it was not easy to obtain permission to conduct this study.

Another limitation of this kind of study is that measuring non-cognitive outcomes is fundamentally difficult, even though the instrument used in this study is developed from standardized tests used in previous trials and has been adjusted for the Saudi context (Egalite, Mills, & Greene, 2016). The first difficulty is that results are self-reported by the students. To reduce the effect of this obstacle, we used reverse-coded items. Moreover, the vignettes were designed to help students think about others in objective situations, which might reduce the tendency to report positively about oneself. The attitudes sections helped us

measure students' attitudes when they themselves are the subjects, and the vignette sections helped us measure students' attitudes when others are the subjects.

Another issue is that the design of this study is not ideal to address a causal question like the one this paper tries to answer. Although the results reported positive effects of teaching philosophy for children on certain non-cognitive skills, students' educational experiences are complicated, and it is difficult to causally attribute specific changes to specific interventions. Students sometimes interact with interventions in unexpected ways. This is essential to educational experiences since there are always opportunities for unexpected reactions (Biesta, 2013). Thus, there is a need to develop more comprehensive ways to assess the effect of teaching philosophy on non-cognitive skills, such as ethnographic methods that employ participant observation and interviews.

implication for research

Other researchers recommended certain improvements to the scale used in this study. For example Siddiqui, Gorard and See (2019) suggested developing more vignettes to cover more non-cognitive skills. We recommend another way for international scholars to improve these vignettes: more contextualization of both vignettes and attitudes. Non-cognitive attitudes and skills are heavily influenced by social and cultural factors (West, Kraft, Finn, Martin, Duckworth, Gabrieli, & Gabrieli, 2016). Vignettes are developed to represent real situations that students might encounter in their daily lives. The more these vignettes reflect real life conditions, the better we help them think deeply about these vignettes. Moreover, since schools are an environment unto themselves, another way of improving these vignettes is to use real situations that students might encounter in schools. Situations that students face directly, such as evaluation and disciplinary measures and the kind of fairness and justice they might represent.

Another implication for research is to supplement measuring scales with observations and interviews with students and teachers. Non-cognitive skills are social in nature, and thus observing them in practice and in real situations will improve our ability to measure the effect of the intervention we choose to

implement (Vallejo, 2018). These additional tools will enable us to see effects not as responses to already-written questions, but as actions and reactions to direct situations.

The findings of this study contain another important implication for research. As shown in the previous section, the effect of P4C on fairness, democracy, and responsibility was negative as compared to the control group. This raises a theoretical question regarding how certain philosophical schools conceptualize certain social ideas. It is reported that some schools of philosophy promote more of an individualized or self-centered perspective of the self and social relations (Koons, 2019; Ratner, 2016). Thus, the question becomes: Does P4C advance attitudes toward a collective understanding of the world or toward individualized ways of thinking? The first section shows that P4C was not effective in terms of empathy and teamwork, which are closely related to democracy, fairness, and responsibility. Too much emphasis on individual responsibility might encourage students to blame others for situations rather than accepting collective responsibility (Hand, 2008; Doddington, 2014). Thus, we ask about the representation of the philosophy of otherness in P4C, as the philosophical experiences of students can be supplemented with philosophies that shift the priority from the self to the other (Levinas, 1969; Levinas, 1981; Sharp & Laverty, 2018; Raphael, Creely, & Moss, 2019).

implications for policy and practice

Saudi policymakers showed an awareness of the importance of philosophy for high school students by experimenting with the new curricula. The results of this study support extending that policy to elementary schools. Saudi Arabia is experiencing major social change as a result of Vision 2030, which emphasizes the role of education in facilitating change. This study shows that P4C improves students' abilities to engage in creative and constructive discussions with others who hold different opinions. P4C provides schools with pedagogical contexts to connect students to changes in the world. P4C can prepare students to hold educative and respectful ideas, since it invites different views and helps students

to interact with them respectfully. Modern societies are becoming more diverse, and schools have the advantage of helping students encounter that diversity effectively.

However, the results also show that P4C is not a guaranteed way to improve students' non-cognitive skills and attitudes. Schools should look carefully and critically at the content and the practice of P4C to create a flexible approach that can adapt to students' specific ethical and social needs. Moreover, policymakers, schools, and teachers should recognize that P4C should not be implemented only in classes. A more comprehensive way to implement P4C, which includes a variety of activities, will provide students with a more engaging and social experience of P4C. Teachers are essential for implementing P4C not only as in-class facilitators but also as examples of principles such as empathy, sociability, and democracy (Schuelka, Sherab, & Nidup, 2019).

Vision 2030 emphasizes the role of education in preparing students for a new world that is changing both socially and economically. Such preparation is not limited to improving students' educational attainment but also includes enhancing non-cognitive skills such as cooperation, sociability, determination, and self-confidence (Anghel & Balart, 2017; Mýtina Kureková, Beblavý, Haita, & Thum, 2016). This study shows that P4C helps achieve such goals. This argument should be of interest even to those who hold a market-based understanding of education, since being successful in the new, changing economy requires the ability to be open-minded and critical. The dialogic nature of P4C helps students acquire such abilities (Rahdar, Pourghaz, & Marziyeh, 2018).

The results of this study provide an important indication for schools that P4C can serve comprehensive aims for education in which the overall well-being of the student is the goal. Schools are aware of their responsibility to help students gain useful knowledge and scientific views of the world. However, more awareness is needed of the importance of non-cognitive skills and their role in helping students lead meaningful and happy lives. P4C is one useful way of reaching such goals and, as has been widely reported, students have a natural tendency to be receptive to it.

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