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Thinking and focusing together: short-term impact of attentional practice and philosophy for children on socio-emotional and cognitive development

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Purpose: Children today face increasing cognitive, emotional, and social demands that may undermine their well-being and development. This study evaluated the effects of a school-based intervention combining attentional practices and Philosophy for Children (P4C) dialogue, as promoted by the SEVE Foundation. The program aimed to foster well-being, socio-emotional competencies, and academic self-evaluation.

Methodology: Using a partial waiting-list control design, the intervention was implemented over 5 or 10 weeks in four Swiss primary school classes ($N = 64$, aged 9–11). Children completed validated self-report measures of psychological well-being, prosocial behavior, emotional difficulties, and academic self-evaluation in French, German, Mathematics, and Science at multiple time points.

Findings: Significant improvements were observed in specific classes. Prosocial behavior increased and socio-emotional difficulties decreased in one class. Academic self-evaluation improved notably in Science and Mathematics, with a marginal trend toward improved peer relationships at the whole-sample level. Over half of the participants reported independently continuing attentional practices after the program.

Limitations/implications: Although findings support the feasibility and potential benefits of such programs, effects were modest and context-dependent. The lack of randomization limits generalizability, and future studies should assess implementation fidelity, explore optimal duration, and include teacher- or observer-based evaluations.

Practical implications: These brief, low-cost interventions may be feasibly integrated into school curricula to support inclusive classroom climates, student engagement, and socio-emotional development.

Originality/value: This study is among the first to evaluate SEVE's dual-component model, offering empirical support for combining P4C and attentional practices in primary education. It provides actionable insight for educators and policymakers seeking to promote student well-being through interdisciplinary approaches.

KEYWORDS

academic self-evaluation, attentional practices, child well-being, classroom interventions, philosophy for children (P4C), socio-emotional competencies

Introduction

Children's well-being is a growing concern in today's fast-paced and complex world. While advancements in technology, education, and healthcare have improved many aspects of children's lives, rising academic pressures, social media influence, family dynamics, and societal expectations contribute to increased levels of stress, anxiety, and emotional distress. The COVID-19 pandemic exacerbated these issues, with social isolation, lockdowns, and distancing measures negatively affecting children's emotional development, leading to greater loneliness and social withdrawal (Albrecht et al., 2021; Buchanan et al., 2023). Additionally, the pandemic increased the prevalence of anxiety, depression, and behavioral disorders among children (Lee, 2020). In Switzerland, nearly one third of children and adolescents report experiencing high levels of stress, which adversely impact their well-being, self-esteem, and social relationships (Albrecht et al., 2021; Delgrande Jordan et al., 2023). At the international level, major organizations such as the World Health Organization (WHO) and UNESCO emphasize the importance of promoting socio-emotional competencies and life skills in school settings as a key component of children's well-being and development (e.g., UNESCO, 2017; WHO, 2021). Similarly, in Switzerland, the Health Behavior in School-aged Children (HBSC) study recommends implementing educational strategies that foster essential life skills (Delgrande Jordan et al., 2023), and the Swiss Committee for Health Promotion highlights the necessity of supporting children in developing the competencies required to navigate their social environments effectively (Amstad et al., 2022). These recommendations underscore the growing recognition of schools as key environments for fostering both academic and socio-emotional development.

Beyond academic success, children's overall well-being encompasses emotional resilience, social connectedness, and a sense of security and self-worth. Schools, families, and communities play a crucial role in fostering these attributes by promoting emotional regulation, healthy relationships, and balanced lifestyles. UNESCO (2017) advocates education for sustainable development to nurture socio-emotional competencies, fostering values and skills essential for inclusive and sustainable growth. The Inner Development Goals further highlight the need for inner growth and transformation, providing a framework for developing self-awareness, empathy, resilience, and critical thinking, key skills for addressing personal and global challenges (Wood, 2024).

Various interventions aimed at enhancing children's socio-emotional competencies—such as the ability to identify, understand, express, regulate, and effectively use both their own emotions and those of others—have been shown to yield significant benefits in cognitive, emotional, and social development. These include improvements in self-confidence, self-regulation, social awareness, and relationship building (Cipriano et al., 2023; Durlak et al., 2022; Taylor et al., 2017), as well as reductions in problematic behaviors and emotional distress (Domitrovich et al., 2017; Nasheeda et al., 2019). Education economists have even recently assessed the economic return on investment of such socio-emotional interventions and estimated that \$1 invested in such programs around age 8 yields

approximately \$11 in benefits by age 39, with an internal rate of return of around 17% (Algan et al., 2022).

Compared to standard social-emotional learning (SEL) or mindfulness-based interventions, the SEVE approach is characterized by a dual-component structure combining attentional practices and philosophical dialogue. This integrative and low-intensity format distinguishes it from more intensive or single-component programs and may facilitate its implementation in typical classroom settings.

Philosophy for Children (P4C) programs, originally developed by Lipman (1976), are increasingly popular. They engage children in group discussions (often referred to as philosophical communities of inquiry) where they collaboratively explore ideas, question assumptions, and analyze arguments. Through philosophical inquiry, children learn to engage in thoughtful dialogue and actively listen to one another. More specifically, P4C fosters cognitive skills (attention, critical thinking, reasoning), emotional competencies (awareness of their own and others' emotions, emotional self-regulation), and social competencies (perspective-taking, clear communication, active listening, cooperation) (Siddiqui et al., 2019; Trickey and Topping, 2004). P4C interventions have demonstrated positive effects on children's general well-being (Cassidy et al., 2024) and are increasingly regarded as a valuable approach to fostering moral, civic (Jon, 2024), democratic, and equitable dialogue (Elbra-Ramsay, 2025).

Notably, Malboeuf-Hurtubise, Léger-Goodes, et al. (2021a) implemented an intervention comparing mindfulness-based interventions (MBI) and P4C to mitigate the negative mental health impact of the COVID-19 pandemic. Their findings showed that MBI significantly improved children's basic psychological needs—autonomy, competence, and relational—while P4C dialogues centered around COVID-19 significantly reduced anxiety and inattention.

Our research aimed to test an educational strategy integrating P4C and attention practices inspired by mindfulness, as developed by the SEVE (*Savoir Être et Vivre Ensemble*) association. SEVE was founded in France in 2016 under the guidance of philosopher and writer Lenoir (2016), and its Swiss branch soon followed (<https://sevesuisse.org/>). The association is particularly active in France and Switzerland and also operates in other French-speaking countries, including Belgium, Morocco, Canada, and Luxembourg. Since its founding in 2016, the SEVE Switzerland Association (personal communication, June 27, 2025) has implemented attentional and philosophical dialogue workshops in more than 53 public and private schools across the country, including 25 in the canton of Vaud, four in Geneva, 22 in Valais, one in Jura, and one in Berne-Bienne. In addition to school-based programs, SEVE has conducted activities in 27 other community settings, such as recreational centers, libraries, museums, festivals, and after-school structures—with 14 in Vaud, 10 in Geneva, and one each in Valais, Neuchâtel, and Fribourg. Between 2020 and June 2025, the association has reached approximately 6,823 children through 1,476 structured workshops delivered under formal agreements. For the earlier period (2018–2019), before official mandates were introduced, SEVE Switzerland recorded approximately 8,000 children reached via 6,000 workshops, including sessions facilitated by trainees and affiliated educators. These figures highlight the

growing institutional demand and geographic expansion of SEVE interventions, particularly in French-speaking cantons such as Vaud.

The SEVE approach is characterized by its holistic focus on three domains of development: cognitive, emotional, and social. It combines philosophical dialogue with short (3–5-minute), structured attention practices conducted at the beginning of each session to establish a calm and focused group dynamic.

These attention practices are brief, secular exercises adapted from mindfulness-based approaches, with the aim of fostering a state of focused presence. In contrast to broader mindfulness programs, which often involve sustained training and introspective awareness, SEVE's attention practices are operational and simple, targeting children's capacity to intentionally direct attention and regulate arousal in the present moment. According to Kabat-Zinn (2016), mindfulness is defined as an open, non-judgmental awareness of the present moment. This state involves two key processes: intentionally attending to present experience, and adopting a deliberate and accepting attitude toward it (Bishop et al., 2004; Renshaw and Cook, 2017). When applied in a child-centered format, mindfulness practices—such as attention to bodily sensations, breathing, or emotions—can support the development of key cognitive and emotional mechanisms involved in learning, such as executive attention and emotional self-regulation (Dunning et al., 2019; Flook et al., 2015; Rempel, 2012). However, recent studies have also raised concerns about possible negative or non-specific effects in school-based applications (Malboeuf-Hurtubise et al., 2025; Montero-Marin et al., 2022). In the present study, particular care was taken to minimize such risks by using brief, guided, and non-intrusive practices adapted to children, conducted by a trained facilitator within a structured and supportive classroom environment.

The SEVE approach has attracted growing interest among educators, parents, and policymakers in Switzerland. In particular, the Canton of Vaud currently sponsors SEVE Switzerland workshops through the Department of Youth, Environment, and Security, as part of its school health and prevention initiatives (*Unité de Promotion de la Santé et Prévention en milieu Scolaire*).

Despite the increasing popularity of the SEVE methodology, its impact had not previously been evaluated through structured and quantitative research. To address this gap, the present study investigated the short-term effects of a SEVE-based intervention, consisting of 5 or 10 weekly workshops, on the well-being and socio-emotional competencies of children aged 9–11. This research represents the first systematic evaluation of this combined approach in a Swiss school context.

This study was designed to test the following hypotheses. First, we expected that KIDSCREEN scores (Psychological Well-being, Well-being with Peers, and Well-being at School) would be significantly higher following the intervention compared to the baseline. Second, we hypothesized that the Strengths and Difficulties Questionnaire (SDQ) Prosocial score would increase, reflecting improved prosocial behaviors, while the SDQ Difficulties score would decrease, indicating a reduction in socio-emotional difficulties. Third, we predicted that self-evaluated school performance scores in French, German, Mathematics, and Science would increase after the intervention,

suggesting enhanced academic self-evaluation (perceived academic competence). Finally, we expected that these effects would be more pronounced in the class that completed ten workshops, compared to those that participated in only five.

Method

Description of the intervention

The intervention consisted of weekly SEVE workshops conducted by the same certified facilitator, trained according to SEVE Switzerland standards. Each class received either 5 (CL51, CL52, CL53) or 10 (CL10) workshops, for a total of 25 workshops delivered between mid-February and the end of June 2024. The study protocol was submitted to and approved by the Coordination Committee for Educational Research (Canton of Vaud, Switzerland). Prior to the intervention, a consent form was distributed to parents, outlining the study's objectives, workshop content, and data usage. Parents were asked to provide consent for their child's participation and to authorize the use of their child's data for scientific publication or educational purposes (e.g., SEVE facilitator training). All parents, except for one child, signed and returned the consent form with full authorization. The child whose parents did not provide consent was not included in the study and attended a different class during the SEVE workshop sessions.

Each standard SEVE workshop lasted 45 min and included the following components:

1. Short attention practice (3–5 min): These brief exercises were adapted from mindfulness practices, aiming to foster calmness, present-moment awareness, and attentional stability.
2. Debrief of the attention practice (5 min): Children were encouraged to express what they experienced and how the practice made them feel.
3. P4C workshops (30 min): Sessions began with a stimulus (e.g., a story, image, or question), which prompted a collective inquiry. The facilitator guided children through structured questioning to promote critical thinking, conceptual clarification, and philosophical dialogue. Activities included defining concepts, providing counterexamples, exploring implications, and making logical connections. Typical themes included justice, freedom, friendship, cooperation, and respect.
4. Debrief of the philosophical session (5 min): Children reflected on what had been discussed, how they listened and participated, and the quality of group interaction (e.g., mutual respect, turn-taking).

All sessions followed the standard structure developed and certified by SEVE Switzerland, ensuring fidelity to the pedagogical model.

This study used a quasi-experimental design featuring a partial waiting-list control group, with assignment to condition determined at the class level without randomization (see Figure 1):

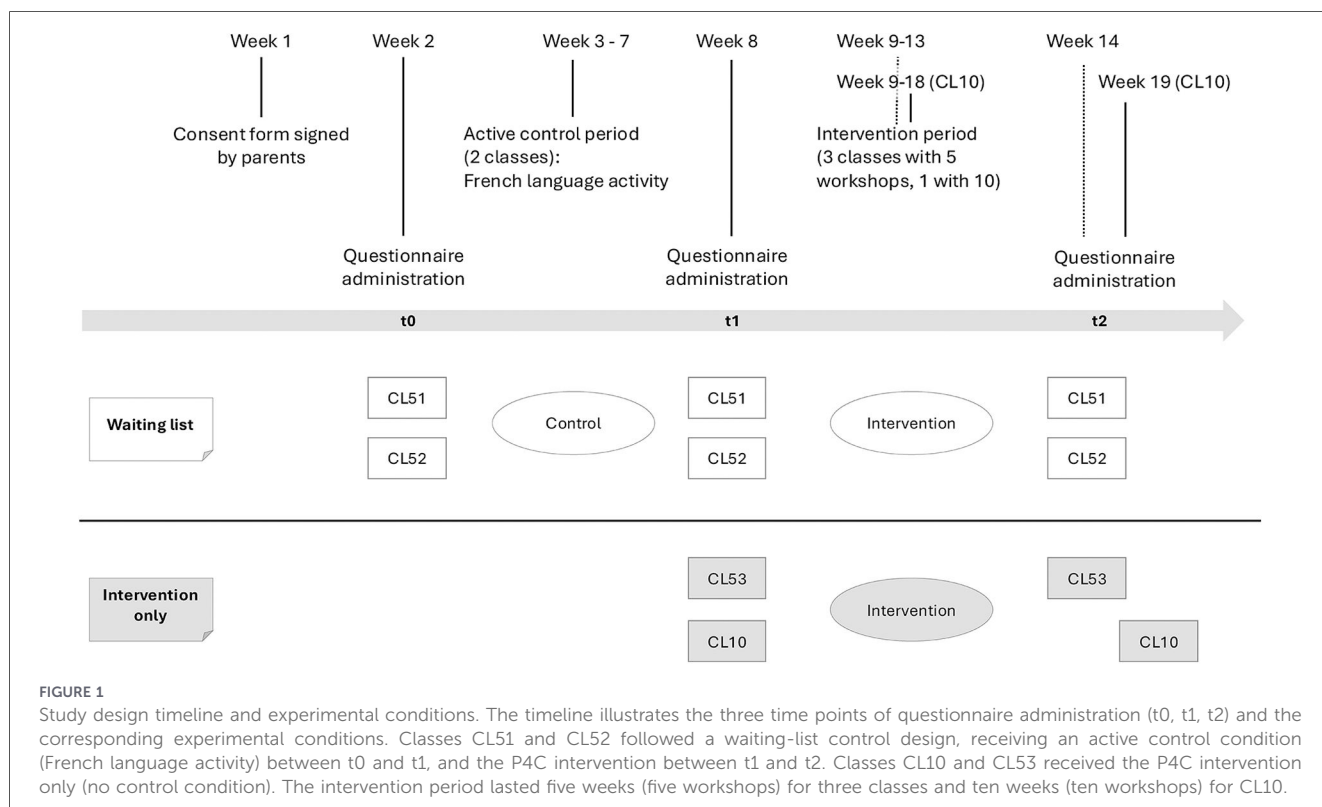


FIGURE 1 Study design timeline and experimental conditions. The timeline illustrates the three time points of questionnaire administration (t0, t1, t2) and the corresponding experimental conditions. Classes CL51 and CL52 followed a waiting-list control design, receiving an active control condition (French language activity) between t0 and t1, and the P4C intervention between t1 and t2. Classes CL10 and CL53 received the P4C intervention only (no control condition). The intervention period lasted five weeks (five workshops) for three classes and ten weeks (ten workshops) for CL10.

- Test period: three classes (CL51, CL52, CL53) participated in a 5-week intervention (one session per week), and one class (CL10) participated in a 10-week intervention.
- Control period: two of the classes (CL51, CL52) served as controls prior to the intervention. During this period, they participated in a French-language activity focusing on fairy tales, which covered literacy devices and grammar (e.g., description, repetition, tenses, vocabulary).

Due to organizational constraints, the active control condition was implemented in two classes only (CL51 and CL52), while the other classes did not receive a control activity. This imbalance should be considered when interpreting the results. This design was chosen due to practical and ethical constraints inherent to school-based research, including the use of intact classroom groups and the need to preserve natural classroom organization. As such, the study reflects an ecologically valid implementation context, although it limits the ability to draw causal inferences.

Participants

The study was conducted in four primary school classes in a city in the Canton of Vaud, Switzerland. A total of 64 pupils, aged 9–11 years and enrolled in levels 5H and 6H, completed the questionnaires at all measurement points of the study (see Table 1).

Questionnaires

Four questionnaires were administered at three time points: before the control period (t0), after the control period/before the intervention period (t1), and after the intervention period (Figure 1). Questionnaires were administered in class during school hours. Items were read aloud by the teacher or researcher to ensure comprehension among all children. Pupils completed the questionnaires individually, with support available for reading or

TABLE 1 Sample characteristics by class.

Class	Participants	Female	Male	5H level	6H level	Control period	Workshops
CL10	16	11	5	8	8	No	10
CL51	16	10	6	10	6	Yes	5
CL52	18	10	8	7	11	Yes	5
CL53	14	9	5	0	14	No	5
Total	64	40	24	25	39	—	25

5H and 6H refer to grade levels. Control period refers to participation in a pre-intervention (t0) phase.

comprehension if needed. The reliability coefficients (α) for all scales are provided in the [Supplementary Material](#).

KIDSCREEN-27

To measure children's well-being, we selected three subscales from the French version of the KIDSCREEN-27 questionnaire (Ravens-Sieberer et al., 2005). *Psychological Well-Being* (7 items; α across t0–t2 ranged from .74 to .81), captures positive emotions, life satisfaction, and the absence of feelings such as sadness or loneliness. *Social Well-Being*, as reflected in the *Peers and Social Support* dimension (4 items; α across t0–t2 ranged from .49 to .74), refers to perceived support from peers, quality of friendships, and the frequency of time spent with friends. Finally, *School-Related Well-Being*, reflected in the *School Environment* dimension (4 items; α across t0–t2 ranged from .71 to .85) assesses children's perceptions of their cognitive engagement, feelings of safety, relationships with teachers, and overall satisfaction with the school setting.

Strengths and difficulties questionnaire (SDQ)

To assess socio-emotional and behavioral competencies, we used two composite scores from the French version of the SDQ (d'Acremont and Van Der Linden, 2008): *Prosocial Behavior* (5 items; α across t0–t2 ranged from .38 to .71) and *Socio-Emotional Difficulties* (20 items; α across t0–t2 ranged from .71 to .78), which combine emotional symptoms, conduct problems, hyperactivity-inattention, and peer problems.

Self-Evaluation of academic performance

Following the comparative self-evaluation approach (Zell et al., 2020), children rated their academic performance in four subjects (French, German, Mathematics, and Science) using a five-point Likert scale ("Far above my classmates", "Above my classmates", "Like my classmates", "Below my classmates", "Far below my classmates"). These measures reflect perceived academic self-evaluation in various school subjects considered important in Switzerland.

Reporting of attentional practice

At the final measurement (t2), children were also asked whether they had practiced attention exercises outside of the SEVE workshops, and if so, for what reason. This *ad hoc* variable was analyzed descriptively.

Data analyses

We conducted Shapiro–Wilk tests to assess normality. Although some variables met normality assumptions at specific time points, repeated violations were observed across multiple variables, time

points, and class-level subsamples (see [Supplementary Appendix B](#)). Given the small sample sizes and this inconsistent pattern of normality, a conservative approach was adopted, and nonparametric tests were systematically used for all analyses to ensure robustness and comparability across conditions.

One-tailed nonparametric paired-sample Wilcoxon tests were conducted to assess changes from pre- to post-intervention (t1–t2) across the full sample and within each class. Effect sizes were initially estimated using rank-biserial correlations for Wilcoxon tests. However, due to small sample sizes and the presence of numerous tied values, some coefficients reached extreme values (± 1.00), which may not accurately reflect the magnitude of the effects. Therefore, effect sizes should be interpreted with caution.

To examine potential dose-response effects (5 vs. 10 sessions), additional between-group comparisons were conducted. Because the intervention began at different time points depending on the study condition (see [Figure 1](#)), t1 was treated as the common pre-intervention baseline across all groups. Independent-samples Mann–Whitney *U*-tests were performed on all outcome variables at t1 and t2, as well as on intervention-related change scores (t2–t1).

To examine change over the full study period (t0–t2) in the two waiting-list control classes (CL51 and CL52), we conducted Friedman tests followed by Durbin–Conover *post-hoc* comparisons when appropriate.

Results

Following the nonparametric strategy outlined in the Data Analyses section, we conducted one-tailed Wilcoxon signed-rank tests to examine pre–post changes (t1–t2) across the full sample and within each class (see [Table 2](#)).

Well-being

In the full sample, a marginally significant improvement was found in *Peers and Social Support* (KIDSCREEN) between t1 and t2 ($p = .057$, $r = -.25$), suggesting a possible enhancement in perceived social connectedness following the intervention.

Strengths and difficulties

In Class CL51, a significant increase in *Prosocial Behavior* was observed ($p = .022$, $r = -.73$), consistent with the hypothesis of improved social functioning following the intervention.

Self-evaluation of school performance

In the full sample, a significant improvement was found in *Science* self-evaluation scores ($p = .023$, $r = -.35$), suggesting a perceived gain in academic confidence in this subject. At the class level, CL52 demonstrated significant improvements across all four academic domains: *French* ($p = .021$, $r = -.78$), *German* ($p = .024$, $r = -1.00$), *Mathematics* ($p = .007$, $r = -.69$), and *Science* ($p = .004$, $r = -.83$). Additionally, CL53 showed a significant gain in *Science* self-evaluation ($p = .018$, $r = -1.00$).

TABLE 2 Significant pre–post changes on socio-emotional and academic self-evaluations by class and total sample.

Class	Variable	M at t1 (SD)	M at t2 (SD)	W	p	Effect size (rank-biserial correlations)
CL51	Prosocial behavior (SDQ)	7.31 (1.49)	8.19 (1.38)	7.50	.022	–.73
CL52	Self-evaluation in French	3.22 (0.73)	3.61 (0.98)	4.00	.021	–.78
CL52	Self-evaluation in German	3.17 (1.04)	3.50 (1.15)	0.00	.024	–1.00
CL52	Self-evaluation in mathematics	3.44 (1.10)	3.94 (0.87)	14.00	.007	–.69
CL52	Self-evaluation in science	3.33 (0.69)	3.89 (0.76)	5.50	.004	–.83
CL53	Self-evaluation in science	3.00 (0.68)	3.36 (0.74)	0.00	.018	–1.00
Full sample	Peers and social support (KIDSCREEN)	15.27 (3.68)	15.98 (3.36)	537.50	.057 [†]	–.25
Full sample	Self-evaluation in science	3.14 (0.73)	3.33 (0.80)	181.50	.023	–.35

One-tailed Wilcoxon signed-rank tests were used. Some effect size estimates reached extreme values (e.g., $r = -1.00$), likely due to small sample sizes and a high number of tied ranks. These values should not be overinterpreted and are reported for completeness only.
[†] $p < .10$, marginal trend.

Between-group comparisons by intervention dosage

No significant differences were observed between the 5-session and 10-session groups across the primary outcome variables (psychological well-being, peer relationships, school environment, and socio-emotional difficulties), either at t1 or t2, nor on intervention-period change scores (all $ps > .15$).

Longitudinal analyses (control and intervention periods)

To examine changes across the full study timeline (t0–t2) in CL51 and CL52, Friedman tests were conducted on socio-emotional and academic outcomes, followed by Durbin-Conover *post hoc* comparisons when appropriate (see Table 3).

A significant effect of time was found for *socio-emotional difficulties*, $\chi^2(2) = 8.99$, $p = .011$. *post hoc* analysis revealed a significant decrease from t0 to t2 ($p = .002$). Similarly, a significant time effect emerged for *French* self-evaluation, $\chi^2(2) = 8.27$, $p = .016$,

TABLE 3 Longitudinal change in socio-emotional difficulties and French self-evaluation (friedman tests, CL51 and CL52).

Measure	Friedman χ^2 (df = 2)	Overall p	Comparison	p
Socio-Emotional Difficulties (SDQ)	8.99	.011	t0–t1	.143
			t0–t2	.002
			t1–t2	.097
Self-evaluation in French	8.27	.016	t0–t1	.175
			t0–t2	.004
			t1–t2	.104

Friedman rank sum tests were used with Durbin–Conover *post hoc* pairwise comparisons. Unadjusted p -values are reported.

with a significant improvement from t0 to t2 ($p = .004$). These results suggest that the intervention period contributed meaningfully to the observed changes, particularly in reduced emotional difficulties and increased academic self-evaluation.

Attention practice

At post-test, 52% of children reported engaging in at least one attention practice outside of the SEVE workshops. The most frequently cited reasons were “to calm down” and “to be quiet” (see Figure 2 for detailed frequencies by reason), indicating that children were able to identify benefits and spontaneously integrate the practice into their routines.

Discussion

The present study aimed to evaluate the effects of a short-term SEVE intervention—combining mindfulness-based attention practices and philosophical dialogue—on children’s well-being, socio-emotional competencies, and academic self-evaluation. While the findings offer only partial support for the intervention’s efficacy, several significant improvements were observed in specific domains and within certain classes, pointing to the potential value of this integrative approach in primary school settings.

Well-being and socio-emotional competencies

In line with previous research on social-emotional learning (Cipriano et al., 2023; Durlak et al., 2022; Taylor et al., 2017) and mindfulness-based school interventions (Dunning et al., 2019; Flook et al., 2015; Rempel, 2012), we observed overall trends toward improved well-being and reduced socio-emotional difficulties following the intervention. However, significant effects were limited. Specifically, a significant increase in prosocial behavior was found in one class (CL51), and a marginal improvement was observed in peer-related well-being across the full sample.

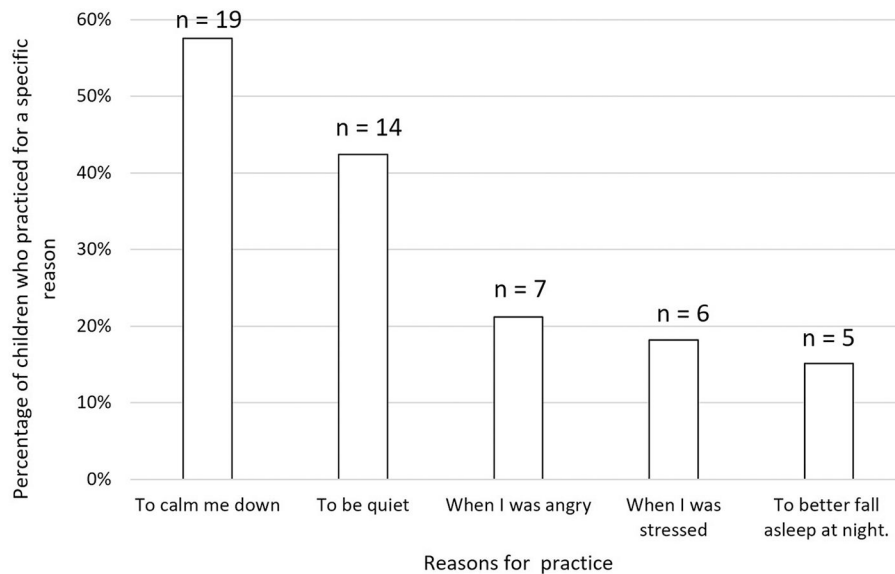


FIGURE 2

Reasons reported by children ($n = 33$) for practicing attentional exercises outside workshops. Percentage of children (out of those $n = 33$ who reported using attentional practices independently) endorsing each reason for practice. The most frequently cited reasons were “to calm me down” (58%) and “to be quiet” (43%), followed by emotional regulation (“when I was angry” and “when I was stressed”) and sleep-related use (“to better fall asleep at night”).

In CL51, socio-emotional difficulties also decreased significantly between the beginning (t0) and end of the study (t2), with a trend-level reduction between t1 and t2. This suggests that the intervention may have a stronger impact in specific classroom contexts.

These differences across classes may reflect variability in classroom dynamics, group cohesion, or teachers’ facilitation styles—factors that could moderate intervention effectiveness. Prior studies (e.g., Malboeuf-Hurtubise, Di Tomaso, et al., 2021b) also report mixed findings for P4C, with some benefits (e.g., autonomy, anxiety reduction) and other outcomes (e.g., life satisfaction, depressive symptoms) remaining unaffected. This pattern supports the idea that outcome specificity and implementation context are critical factors. However, as these contextual factors (e.g., classroom climate, group cohesion, or facilitator implementation) were not formally assessed in the present study, their potential role remains speculative. Complementary analyses conducted on the same intervention, focusing on behavioral observations and thematic analysis of philosophical dialogues, provide additional insight into children’s engagement and the development of thinking skills (Martin et al., in press). These analyses, based on the same sample but addressing different research questions and using distinct methodologies, suggest that the intervention may influence classroom dynamics and cognitive engagement processes in ways that are not fully captured by self-report outcome measures. These aspects should be examined more systematically in future research.

Furthermore, the limited duration of the program—five or ten sessions—may have restricted its potential impact. More durable effects on well-being and socio-emotional functioning may require sustained exposure, particularly given the complex interplay of school climate, teacher-student interactions, and peer relationships (Gutman and Feinstein, 2008; Lester and Cross, 2015).

Nonetheless, the observed trends in peer-related well-being are consistent with the P4C component’s emphasis on caring dialogue, respectful exchange, and active listening (Cassidy et al.,

2024; Lipman, 1976). These practices may promote social connectedness and cooperation—competencies likely to enhance classroom relationships.

Academic self-evaluation

Our findings also indicate gains in academic self-evaluation. In line with earlier studies showing positive effects of P4C on reasoning, reading, and mathematical skills (Trickey and Topping, 2004), we found that children’s self-evaluations in Science improved significantly across the full sample. Moreover, one class (CL52) demonstrated significant increases across all academic domains (French, German, Mathematics, and Science).

These improvements are notable given that the intervention did not target academic content directly. This may suggest indirect effects via enhanced attention, metacognition, or self-regulation, as documented in prior research (Siddiqui et al., 2019; Trickey and Topping, 2004). P4C has been shown to increase reading comprehension (Clarkson and Webster, 2024; Youssef et al., 2016). In addition, both mindfulness-based interventions (Malboeuf-Hurtubise, Léger-Goodes, et al., 2021b) and P4C (Malboeuf-Hurtubise, Di Tomaso, et al., 2021a) have been found to promote autonomy. These developments—enhanced comprehension and greater autonomy—may contribute to improved academic performance and increased academic self-evaluation.

Intervention dosage

Contrary to expectations, no clear dose-response effect was observed. Increasing the number of sessions from five to ten did

not lead to greater improvements across the measured outcomes. This finding suggests that the effectiveness of the intervention may depend more on contextual and implementation-related factors (e.g., classroom dynamics, engagement, or facilitation quality) than on the number of sessions alone. However, these conclusions should be interpreted with caution given the limited sample size and the quasi-experimental nature of the design. In addition, the duration of the intervention—ten sessions of 45 min—may still have been insufficient to produce robust effects. Future studies should examine the dose-response relationship more systematically, taking into account both session quantity and fidelity of implementation.

The limited and context-dependent effects observed in the present study are consistent with previous research suggesting that the effectiveness of socio-emotional interventions depends strongly on implementation conditions. In particular, meta-analytic evidence indicates that programs delivered by regular teachers tend to produce stronger and more consistent effects than those delivered by external facilitators (Durlak et al., 2011).

In this perspective, the recent orientation of the SEVE Association toward strengthening teacher training within continuing professional development frameworks appears particularly relevant. By supporting teachers in integrating these practices into their daily classroom routines, rather than relying solely on externally delivered short-term interventions, this approach may foster more sustained and ecologically embedded effects over time.

Engagement with attention practices

A promising result was that 52% of children reported continuing attention practices outside the workshops. The most cited reasons were “to calm down” and “to be quiet,” suggesting that children not only appropriated the techniques but perceived them as useful. This supports the feasibility of integrating short mindfulness-based practices into daily school life and points to their potential for autonomous use after limiting exposure.

Limitations and future directions

This study has several limitations. First, small sample sizes and variability across classes limited the statistical power and generalizability of the findings, reducing the likelihood of detecting small to moderate effects and potentially contributing to variability in results across classes. Second, the absence of random assignment and reliance on intact classroom groups introduce potential selection bias and limit causal inference. In addition, the implementation of the control condition was not fully balanced across groups: only two of the four classes (CL51 and CL52) participated in the active control period, while the other classes received the intervention only. As a result, the study does not constitute a fully controlled or randomized design. The findings should therefore be interpreted within a quasi-experimental framework and considered as a preliminary evaluation conducted in naturalistic school conditions. Moreover, the absence of differential effects between intervention durations (5 vs. 10 sessions) should be interpreted

cautiously, as the study was neither specifically powered nor fully controlled to detect dose-response effects. Third, the use of self-report measures may have introduced social desirability bias or limited the validity of some constructs, particularly for younger children. In addition, internal consistency coefficients were low for some scales. Fourth, although no adverse effects were reported during the intervention, future studies should systematically assess potential unintended or negative effects of such practices. Finally, some effect size estimates (rank-biserial correlations) reached extreme values, which may reflect instability due to small sample sizes ($n = 14\text{--}18$ in the present study) and a high number of tied ranks in the data. These coefficients should therefore be interpreted with caution and further highlight the need for larger samples to obtain more stable and reliable effect size estimates in future studies.

Future research should address these limitations by incorporating randomized or cluster-randomized designs, larger sample sizes, and multimodal data collection, including teacher and parent reports, behavioral observations, and standardized assessments. Attention should be given to ensuring balanced control conditions and systematically assessing implementation fidelity and classroom contextual factors that may influence outcomes. Longitudinal designs with multiple follow-up points would allow for the assessment of sustained effects. Finally, future studies should explore the interactive or additive effects of combining mindfulness and P4C to determine whether these components function synergistically or independently.

Conclusion

This study offers preliminary evidence on the potential of SEVE workshops—integrating mindfulness-based attention practices and philosophical dialogue—to support children’s well-being, socio-emotional functioning, and academic self-evaluation. Although statistical significance was not consistently achieved across all measures, several trends and class-level effects suggest that such interventions may promote meaningful changes in peer relationships, social behavior, emotional regulation, and school self-evaluation. These findings also highlight the importance of implementation conditions, particularly the role of teachers in sustaining intervention effects over time.

Importantly, more than half of participating children reported independently practicing attention strategies, highlighting the accessibility and perceived utility of these tools. These results support the broader implementation of similar integrative approaches in school settings, while also underscoring the need for further research to optimize their delivery, dosage, and long-term impact. Future large-scale, longitudinal evaluations are needed to confirm these promising findings and refine the integration of attentional and philosophical approaches in education.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The study protocol was submitted to and approved by the Coordination Committee for Educational Research (Canton of Vaud, Switzerland). Ethical approval was waived by the same committee because the study did not involve any sensitive personal data or medical procedures and was conducted entirely within an educational setting as part of regular teaching activities. The studies were conducted in accordance with local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin.

Author contributions

NM: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. CZ: Conceptualization, Data curation, Investigation, Methodology, Writing – review & editing. PG: Data curation, Formal analysis, Methodology, Resources, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing, Conceptualization.

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Conflict of interest

The author(s) declared that this work was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/feduc.2026.1804273/full#supplementary-material>

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