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# Beyond fidelity: unveiling the landscape of teacher adaptation in social and emotional learning programs

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Despite the rapid growth of social and emotional learning (SEL) programs, research on program implementation has lagged behind. In the landscape of implementation science for SEL programs, fidelity and dosage are often emphasized, but important aspects like adaptation have largely been neglected. This qualitative study addresses three research questions: (1) do teachers make adaptations when implementing SEL programs? (2) how do teachers adapt these lessons? and (3) why do teachers adapt these lessons? Data on adaptation were obtained from 17 elementary and middle school teachers via interviews and open-ended responses from implementation diaries from two randomized controlled trials of SEL programs. Findings revealed that all teachers made at least one adaptation, including structural adaptations (i.e., changes to content, sequencing, and timing) and process adaptations (i.e., adaptations made to how the lesson was delivered and experienced). Teachers also described reasons for adapting that were broadly due to student factors, program factors, and contextual factors. These results shed light on the numerous ways in which teachers adapt SEL programs and the array of complex reasons that lead to the adaptation of lessons within these types of programs and highlight the critical need to consider teacher adaptations in SEL program implementation. Future research should explore the impact of these adaptations on student outcomes and develop robust methods to capture and analyze adaptations.

KEYWORDS

**social and emotional learning, SEL, implementation, adaptation, fidelity-adaptation dilemma**

## 1 Introduction

Social and emotional learning (SEL) has become a ubiquitous topic in the field of education in the United States (US) and across the globe, fueled in part by empirical evidence demonstrating that SEL programs and practices bolster students' social, emotional development and academic success (e.g., Durlak et al., 2011; Taylor et al., 2017; Cipriano et al., 2023; Greenberg, 2023). SEL is an umbrella term that refers to the process by which children and adults develop and learn salient knowledge, skills, and attitudes, including understanding and managing one's emotions, showing concern for others, maintaining

positive relationships, and making responsible decisions (Weissberg et al., 2015). Social and emotional development is a life-long process that is dynamic, ongoing, and culturally adaptive (Jagers et al., 2018).

The field of SEL and the body of research surrounding it has grown tremendously in the past two decades. A seminal meta-analysis of 213 SEL programs by Durlak et al. (2011) found that students who participated in SEL programming had an 11% increase in academic performance, among other positive outcomes. Another meta-analysis of longitudinal follow-up SEL interventions by Taylor et al. (2017) found that students who had SEL programming had significantly better social-emotional skills, attitudes, and wellbeing. A recent meta-analysis of universal school-based SEL interventions also found that SEL programming had positive impacts on a range of students' skills, academic achievement, and school climate (Cipriano et al., 2023). Collectively, these meta-analyses offer strong evidence regarding the potential positive impacts of SEL programming on children and adolescents. Despite these compelling findings, several questions remain unanswered concerning the implementation of SEL programs.

Clearly, SEL has the potential to improve the learning conditions for students in all grades. The field has grown immensely over the past two decades, but research on the implementation of SEL programs has largely focused on fidelity despite many calls to consider other aspects of implementation. As Wigelsworth et al. (2016) point out, the field has moved from the question "does SEL work?" to "*how* does SEL work?" Using both qualitative and quantitative approaches, SEL researchers should explore why and how teachers adapt, the types of adaptations teachers make, and the potential differential effects of certain adaptations. The current study is dedicated to addressing a subset of these questions: (1) do teachers make adaptations when implementing SEL programs? (2) how do teachers adapt these lessons? and (3) why do teachers adapt these lessons?

## 1.1 SEL program implementation

As a general definition, Durlak (2016) describes implementation as "the ways a programme is put into practice and delivered to participants" (p. 334). Implementation consists of many interrelated components. These include fidelity (how closely a program is followed), dosage (how often it is delivered), quality of delivery, adaptation (what changes are made), participant responsiveness (participants' levels of engagement), program differentiation (how the program compares to others), monitoring of control conditions (how control conditions might overlap with the program), and program reach (how many eligible participants partake in the program; Durlak, 2016). Together, these components function to ensure a program is delivered effectively and has the intended impact on participants.

Although it has become clear that SEL has the potential to benefit students, the work of implementing these programs often falls in the hands of teachers. This may be advantageous, as teachers can provide consistent opportunities to practice the skills students cultivate in these programs. Despite promising evidence, SEL interventions have often been plagued by inconsistent and sporadic implementation processes (Greenberg, 2010), which remains a central challenge for the field. A growing body of research has begun to emphasize the importance of implementation in SEL and other similar fields, including clinical psychology and education (Jones and Bouffard, 2012; Durlak, 2016). In addition, mounting evidence suggests that implementation factors can have sizable impacts on an SEL program's effectiveness (Durlak et al., 2011; Cipriano et al., 2023). As Durlak (2015) clearly states: "studying program implementation is not easy, but it is essential" (p. 1123).

Some aspects of implementation have received more attention than others in the literature. By far, the components that have been given the most attention are fidelity and dosage (Durlak and DuPre, 2008; Lendrum et al., 2016). In a review of prevention and health programs for children, Durlak and DuPre (2008) reported that 63% of the studies evaluated fidelity and 49% assessed dosage, whereas only 17% assessed other components (e.g., adaptation, program reach, or quality of delivery). Importantly, they found that only three of 59 (5%) of the studies they assessed examined adaptations. In a more recent scoping review of universal mindfulness training in schools for adolescents, none of the included studies provided information relating to adaptations (Tudor et al., 2022). Durlak (2015) clearly articulates the necessity for a more in-depth examination of adaptation and positions it as a central priority for future research.

## 1.2 The "fidelity-adaptation dilemma"

The "fidelity-adaptation dilemma" has often been the grounds for debate in implementation science (Lendrum et al., 2016; Castro and Yasui, 2017). Originally, this dilemma stated that complete fidelity to an intervention's core components is vital, and adaptations are not favorable, as they could compromise the integrity of the intervention. In other words, these two constructs were mutually exclusive, and complete fidelity was seen as the "gold standard to which interventionists must adhere, and adaptations were regarded as detrimental to Evidence-Based Intervention (EBI) effectiveness" (Castro and Yasui, 2017, p. 2). For example, Elliott and Mihalic (2004) advocated for maintaining strict fidelity, asserting that modifications to effective interventions reduce their impact. To some extent, it appears that this tension persists to this day, as many researchers consider adaptations as a threat to implementation and thus do not assess their potential to bolster outcomes (Castro and Yasui, 2017).

Although historically complete fidelity was often the goal of many interventions, a growing number of scholars now see the fidelity-adaptation debate in a different light. Many researchers now posit that the "fidelity-adaptation dilemma" should be reconceptualized from an *either-or* conceptualization to a *both-and* conceptualization (Durlak and DuPre, 2008; Mejia et al., 2017). In this view, both fidelity and adaptation can be achieved using "strategic adaptations" that aid in resolving real-world problems while still maintaining the intervention's key facets (Castro and Yasui, 2017). This new conceptualization challenges the traditional fidelity-adaptation dichotomy, expanding it to encompass the reality of how most interventions are delivered.

Research suggests teachers must confront this fidelity-adaptation dilemma when asked to deliver curricula. For example, in a study involving teachers who implemented a project-based learning program, Du et al. (2019) found that teachers navigated

a complex balance between fidelity and adaptation. Teachers may confront various challenges related to balancing the program with other curriculum demands, lacking resources to implement the program, or dealing with specific contextual factors, which can collectively affect the program's implementation and lead to adaptation (Du et al., 2019). Much remains to be understood in terms of how teachers who implement SEL in their classrooms navigate these multifaceted processes and decisions.

## 1.3 Adaptations

Although many definitions for adaptations exist, most researchers understand adaptation to be the additions and/or modifications to programs and interventions that do not detract from its overall integrity and curriculum (Durlak and DuPre, 2008; Berkel et al., 2011). When evidence-based interventions are implemented in real-world contexts, they are changed frequently by program implementers (i.e., classroom teachers) in ways that are different from the intervention's original content and procedures (Barrera et al., 2017). The crucial role of adaptation in implementation science is well-established, yet adaptation remains one of the "least studied" aspects of fidelity-related concepts (Bishop et al., 2014, p. 236).

Different types of adaptations have been described in the literature. *Cultural adaptations* (also known as designer adaptations) refer to modifications to an intervention's contents or activities that aim to address the needs, preferences, or life experiences of a particular cultural group and are often made prior to implementation (Castro et al., 2010; Miller-Day et al., 2013; Barrera et al., 2017). These may be particularly important in SEL curricula, as research has shown that SEL interventions are most beneficial when designed with a specific cultural context in mind, contesting a "one-size-fits-all" approach (Wigelsworth et al., 2016).

*Local adaptations*, the primary focus of the current study, refer to modifications that are not part of the intervention as described by the developer and are often made by the implementing organizations or communities (Barrera et al., 2017). These types of adaptations may also be called impromptu, *in vivo*, or implementer adaptations, conveying the sense that these types of modifications are often made spontaneously due to unexpected events (e.g., disruptive classroom) or perceived needs of students (Miller-Day et al., 2013; Barrera et al., 2017). These types of adaptations may help bridge the gap between the paradigmatic environments in which the programs are created and the actual context in which they are implemented. Notably, there are now several examples of brief skill-targeted SEL programs that utilize a field-flexible approach, where the lessons are designed to be readily adaptable (e.g., Wu et al., 2023; Colagrossi et al., 2024), highlighting an increased emphasis on embracing local adaptations in SEL interventions.

Beyond the cultural/local dichotomy, various typologies have been proposed to further classify local adaptations. One of the earliest examples is Blakely et al.'s (1987) typology, which consists of three basic parts: additions, modifications, and deletions of program components. Other typologies have examined valence/congruence (whether the adaptation was consistent with the intervention's goals) in addition to quality (e.g., Hansen et al., 2013). Similarly, Moore et al. (2013) proposed a typology that assessed adaptations in terms of three elements: fit (philosophical or logistical), timing (proactive or reactive), and valence (positive, negative, and neutral). Miller-Day et al. (2013) found that teachers adapted the content and format of the lessons. Together, these classification schemes provide a basic framework for understanding the types of adaptations made in an intervention, though future research may explore these in additional detail. For the current study, we primarily relied on Blakely et al.'s (1987) tripartite framework and Miller-Day et al.'s (2013) content-format framework, as they were both originally used in—at least in part—in educational settings (e.g., school-based prevention programs).

## 1.4 Frequency and rationale for adaptations

Some recent research in various disciplines has begun to examine *why* implementers adapt aspects of a program or intervention. As Barrera et al. (2017) point out, when those who implement an intervention communicate their rationale for making local adaptations, our understanding of implementation barriers and limitations grows. Research has highlighted a wide range of reasons for which an intervention may be locally adapted, including resistance from implementers, cultural mismatch, students' attention spans, and level of engagement, among others (Miller-Day et al., 2013; Moore et al., 2013).

A range of researchers and practitioners from multiple disciplines, including healthcare and education, have called upon researchers to better understand the role of adaptations and how these may be used to inform efforts that reduce inequities seen in intervention and prevention research (e.g., Baumann and Cabassa, 2020; Metz et al., 2021). In this context, scholars have explicitly detailed how SEL holds the potential to address inequities resulting from interconnected systems of oppression in the US and globally (Jagers et al., 2019). Prominent organizations in the SEL domain, such as the Collaborative for Academic, Social, and Emotional Learning (CASEL), have explicitly outlined how SEL can contribute to the creation of more equitable learning environments and empower youth with skills to scrutinize various sources of inequity, termed as "Transformative SEL" (Jagers et al., 2019). Therefore, gaining insights into the extent to which teachers modify SEL programs to foster equity becomes crucial for advancing the field.

Although adaptations are often overlooked, a few studies in the broader education literature have examined the frequency with which adaptations occur in school-based interventions. A study by Miller-Day et al. (2013) examined teachers' classroom-level adaptations of a substance use prevention program. Teachers reported adapting 68% of program lessons, whereas observers found that 97% of the lessons were adapted, highlighting the pervasiveness of adaptations. Additionally, other studies have found that adaptations in educational programs and interventions happen more often than not (e.g., Hansen et al., 2013; Burkhauser and Lesaux, 2017; Troyer, 2019). Interestingly, a recent qualitative study examining teachers' emotions in relation to disengaged students found that teachers who adapted to their students' needs experienced more positive emotions, such as satisfaction and pride (Fix et al., 2020). Overall, research has shown that adaptations to programs and interventions are the norm rather than the exception,

demonstrating a need to further focus on these in research on SEL implementation.

## 1.5 The untapped potential of adaptation research in SEL

It is evident that adaptations, though a crucial aspect of implementation, are still an understudied aspect of many research paradigms. Chambers and Norton (2016) note the importance of building a science of intervention adaptation to fully explore the range of ways in which adaptations could affect program outcomes. They call upon future researchers to identify principles and guidelines for conducting effective cultural and local adaptations. This type of research could help stakeholders identify "strategic adaptations," which would localize the intervention to improve its sensitivity to local conditions to be culturally relevant and accepted among community members (Chambers and Norton, 2016). Other scholars also have noted the importance of explicitly documenting the adaptations that occur throughout implementation, including how adaptations occur, at what level, for what purposes, and the impacts on implementation and student outcomes (e.g., Cabassa and Baumann, 2013; Baelen et al., 2023).

The field of SEL has an opportunity — and responsibility — to fully explore the science of intervention adaptation. As Chambers and Norton (2016) point out, the field can begin to systematically collect adaptation data to contribute to the literature and use these data in the process of continuous improvement in various SEL curricula. Given that SEL programs are becoming more widespread, it is important to understand the ways in which districts and/or teachers may be adapting these programs to begin to identify what adaptations work best for which students under what conditions. Additionally, as Ringwalt et al. (2004) maintain, curriculum developers and researchers should methodically document and understand how teachers are adapting their curricula and integrate these modifications into their programs, if appropriate. In addition, frameworks from similar fields, such as mindfulness-based interventions, have recently proposed principles and criteria for when, how, and why to adapt interventions (Loucks et al., 2022). As SEL programs are often implemented in real, dynamic classrooms — in addition to a wide range of other contexts outside of the school — around the world, the research must follow and document this exciting (albeit challenging) component of applied work to further advance the field.

## 1.6 Current study

The current study aims to add to the dearth of literature on why and how teachers make adaptations to lessons in SEL curricula using secondary data collected from two SEL program evaluations. Specifically, this study aims to qualitatively examine teacher adaptations using teacher implementation diaries and teacher interviews from two SEL programs (MindUP—a program with 6th and 7th middle school students that integrates mindfulness with SEL; Well-being Canada—a program for 4th and 5th grade elementary school students that integrates SEL with service learning). Such an approach will help to elucidate how SEL lessons are truly implemented in real-world settings and may also serve to help various program developers understand the on-the-ground experiences of teachers who implement SEL programs in their classrooms. The research questions for this study included:

1. Do teachers make adaptations when implementing SEL programs?
2. What are the *ways* in which teachers adapt lessons in SEL programs? (i.e., how do teachers adapt these lessons?)
3. *Why* do teachers make adaptations to lessons in SEL programs?

In addition to these research questions, an additional aim of this study was to identify any differences between the two SEL programs in if, why, and how teachers adapted them, given the differences in content and age group.

TABLE 1 Participant demographic information.

| | Study 1 (Well-being Canada) | | Study 2 (MindUP) | |
|---|---|---|---|---|
| | *n* | % | *n* | % |
| **Gender** | | | | |
| Female | 7 | 70% | 6 | 85.7% |
| Male | 3 | 30% | 1 | 14.3% |
| Non-binary | 0 | 0% | 0 | 0% |
| **Race** | | | | |
| White | 10 | 100% | 5 | 71.1% |
| Asian | 0 | 0% | 0 | 0% |
| Black | 0 | 0% | 0 | 0% |
| Latino/a/x | 0 | 0% | 1 | 14.3% |
| Other | 0 | 0% | 1 | 14.3% |
| | Mean | *SD* | Mean | *SD* |
| Years teaching experience | 14.0 | 5.57 | 29.0 | 10.17 |

# 2 Materials and methods

## 2.1 Participants

Data for this study were drawn from two larger studies (Well-being Canada program; MindUP program) examining the effectiveness of SEL programs for early adolescents. In total, participants included 17 4th to 7th grade teachers. Of these, 13 were teaching in a public school district in British Columbia, Canada, and four were teaching in one public elementary school in Washington State in the US. Participant demographic information for each study is displayed in Table 1.

## 2.2 Research context

The present study uses data from two research studies examining the effectiveness of SEL programs. Both research studies took place in highly dynamic circumstances surrounding the COVID-19 pandemic during the 2021–2022 school year. To comply with public health restrictions related to COVID-19, all meetings, informational sessions, and recruitment with school district superintendents, school principals, school counselors, teachers, and students were carried out via Zoom or Microsoft Teams; however, all students were attending classes in person and both programs were implemented in person.

Both studies took place in the province of British Columbia (BC) in Canada, with Study 2 (MindUP) exclusively occurring in this context. The BC Ministry of Education has formally promoted SEL in its school curricula since 2016, with "social and personal competence" as one of the core tenets of the curriculum (Government of British Columbia, 2023). Study 1 (Well-being Canada) also took place in Washington State, US. Washington formally adopted the Washington SEL standards and benchmarks in January 2020, including standards for self-management, self-awareness, self-efficacy, social awareness, social management, and social engagement (Washington Office of Superintendent of Public Instruction, 2016).

## 2.3 Procedure

Study 1 took place in two public school districts, one in the province of BC, Canada, and the other in the state of Washington, US. Due to the ongoing COVID-19 pandemic, all recruitment occurred remotely. After an initial meeting with a superintendent (District 1) and counselor (District 2), the research team applied for and received ethics approval from the school districts and the university ethics board to conduct this research study. In District 2, one of the schools was an Education+ school, formerly known as a WE School (i.e., a school that is participating in a WE program or campaign)[1] and its school principal and school counselor had expressed interest in participating in the research study because of the strong relationship they had with the WE Organization and their experience with engaging in prior WE programming. Following initial contact by phone or e-mail, teachers were invited to meet with members of the research team to learn more details about the study and to ask any questions. After answering all questions, the research team sent teachers the teacher consent form and then teachers were invited to virtually attend an initial professional development training. Data collection occurred in two phases: Pre-intervention (February/March 2022) and post-intervention (May/June 2022).

Study 2 took place in a large public school district in the province of BC, Canada. Ethics approval was obtained from the university's ethics board and administrators in the participating school district, with similar recruitment procedures being followed as with Study 1. Data collection occurred in two phases: Pre-intervention (February/March 2022) and post-intervention (May/June 2022).

1 www.we.org

## 2.4 Interventions/programs

In this study, we utilized data from two distinct SEL programs, which serve as exemplary cases for studying adaptation for two reasons. First, these two represent SEL programs in two different developmental contexts—late elementary school and early middle school—which are age ranges commonly targeted in SEL interventions. Additionally, these two programs embody the recommended high-quality program features represented by the acronym SAFE: sequenced, active, focused, and explicit (Durlak et al., 2011; Cipriano et al., 2023). Together, these factors make these two programs suitable for studying adaptation.

### 2.4.1 Study 1 (Well-being Canada program)

The Well-being Canada program integrates research from the fields of positive youth development, service learning, and SEL to promote student's social and emotional competence, positive mental health, and positive human qualities (e.g., empathy, gratitude, altruism). The Well-being Canada program is relatively young, beginning in 2018. It includes a series of 15 core lessons that are developmentally appropriate and that focus on the promotion of students' social-emotional skills and wellbeing through service learning. Each lesson is designed to last approximately 40–50 min, but lesson length can vary depending on the service-learning activities. Teachers were asked to implement one lesson per week. See the Supplementary material for a description of each lesson.

### 2.4.2 Study 2 (MindUP program)

The MindUP Middle School Program is a mindfulness-based SEL program for students in grades 6–8 that integrates neuroscience, mindfulness, positive psychology, and SEL. The MindUP program was initially developed in 2005 and since its development, the program has been evaluated in multiple research studies (e.g., Schonert-Reichl and Lawlor, 2010; Schonert-Reichl et al., 2015; de Carvalho et al., 2017; Matsuba et al., 2021). It consists of 15 lessons taught approximately once a week, and each lesson ranges from 30 to 50 min. The core mindfulness practice in the program consists of a "Brain Break" which includes focusing on one's breathing and attentive listening to a single resonant sound 3 times a day. The lessons focus on reducing stress and promoting kindness, resiliency, and wellbeing in students during the middle school years. See the Supplementary material for a description of each lesson.

## 2.5 Measures

Similar types of data were collected across the two different studies and measures used between the two studies were comparable. Any differences between the two studies are noted.

### 2.5.1 Self-report surveys

Teachers completed a self-report survey at pre-test and post-test that included a variety of questions regarding demographic information, teaching experiences (e.g., years of teaching experience), experiences implementing SEL programs, and their own social and emotional competencies (e.g., teaching efficacy, burnout, mindfulness). For the purposes of this study, the surveys were used to obtain demographic information only.

### 2.5.2 Implementation diaries

Data used in the present study were drawn from implementation diaries that teachers completed weekly as part of the two studies. Teachers completed implementation diaries after each lesson they delivered in the SEL program. In each entry, teachers were asked a variety of quantitative and qualitative questions ranging from how much time the lesson took to how engaged their students were in the lesson (e.g., "please estimate the percentage of your students who were engaged during the lesson"). For the current study, the prompts of interest were "Please describe any other additions or adaptations you made to the lesson" and "Did you make any adjustments for diverse learners? Please explain." See Supplementary material for the full implementation dairies.

### 2.5.3 Teacher interviews

At the conclusion of the study, teachers were invited to participate in optional semi-structured interviews about their experiences with implementing the SEL program of interest. In total, eleven teachers agreed to participate in the interviews (six in Study 1 and five in Study 2). The interviews were similar between the two SEL programs, though small differences existed in the questions. Teachers were asked about their experiences with the SEL program (e.g., "What have been some of the greatest challenges implementing the MindUP program?") in addition to their perception of the program's impact on their own social-emotional skills and wellbeing. The interviews were all conducted by the same researcher (the first author) and lasted approximately 15–20 min (Study 1) and 20–30 min (Study 2). Interviews occurred via Zoom and were automatically transcribed. Each transcript was checked and reviewed by research assistants to correct any mistakes.

## 2.6 Analysis

The procedure for analyzing the data aligned with the general approach outlined by Miles et al. (2019). The first author coded and analyzed the data for this study. As with most qualitative research, initially, there was an immersion process in which the data were read through multiple times. Then, in line with Saldaña's (2016) approach, coding occurred in two major stages. In the first cycle of coding, various coding schemes were utilized, such as in-vivo coding (i.e., coding using participants' actual language) and process coding (i.e., using gerunds to identify actions). In this phase, a codebook was constructed with definitions in addition to inclusion and exclusion criteria for each code; the codebook was updated throughout the analysis. To aid in understanding any differences by program, the MindUP data were coded first given that it is more established, and more studies have examined it. This codebook was then updated after the initial round of MindUP coding, and any new codes that emerged in the Well-being Canada program were documented. Next, a second cycle of pattern coding occurred, where the codes were organized into patterns, themes, and categories (Miles et al., 2019). During both phases, frameworks from Blakely et al. (1987) and Miller-Day et al. (2013) were used as a reference to develop and refine codes, as they were initially developed and applied in educational settings, making them highly relevant for our analysis. As qualitative inquiry is an immensely iterative process, other types of coding (e.g., sub-coding) were utilized when necessary.

Finally, given that an aim of the current study was to examine programmatic differences (i.e., differences that are found between the Well-being Canada program and MindUP programs), a code-document comparison matrix was created to analyze the occurrence and frequency of the categories/themes and sub-codes across the data from each program. This was done by combining all documents (i.e., implementation diary entries and interview transcripts) from each program into a document group and comparing the percentage of teachers who made certain types of adaptions across the two programs.

### 2.6.1 Trustworthiness, credibility, and positionality

There is a general agreement that qualitative researchers should demonstrate credibility and trustworthiness in their analysis of the data, and a variety of strategies exist to establish rigor in qualitative research (Creswell and Miller, 2000; Miles et al., 2019). In addition to the two-phase cycle of coding, an audit trail of all codes, codebooks, and other relevant documentation was kept. Additionally, as recommended by Miles et al. (2019), the primary researcher (first author) wrote a series of memos. Memoing is a procedural and analytical tool that is central to qualitative research; this process helps map the research trajectory, extract meaning from the data (Birks et al., 2008; Miles et al., 2019), and facilitate a more reflexive approach to the analysis (Creswell and Miller, 2000; Olmos-Vega et al., 2023).

The first author also engaged in peer debriefing, which is a process by which colleagues provide support and challenge the researcher's assumptions, question the methods and interpretations, and serve as a sounding board for ideas (Lincoln and Guba, 1985; Creswell and Miller, 2000). Specifically, two peer debriefers were identified. One peer debriefer was a current doctoral student studying mentoring relationships; she identifies as a White woman and was previously a high school special education teacher. The second peer debriefer was a postdoctoral research associate with expertise in the design, implementation, and testing of SEL and mindfulness-based programs; she identifies as a White woman and has five years of experience as a classroom teacher. Meetings were held approximately every two weeks over three months, and this external input into the analysis helped to overcome challenges, bring in different perspectives on the data, and address potential biases that could arise from the researcher's own assumptions and perspectives. This process ensured a more complete and balanced interpretation of the data, bolstering the credibility of the findings.

The first author (the sole coder for the data) brings a variety of experiences that undoubtedly shaped the ways in which he approached the project, analyzed the data, and interpreted the findings. He is a white cis-gender male who was born and raised in the Southern United States. He spent multiple years teaching, including teaching English as a Second Language at public elementary schools, alternative schools, and adult academies. He pulls from these experiences in many ways and often reflects on his own teaching experiences throughout the research process. He primarily operates from interpretivist and critical paradigms, believing that that we construct our own realities and that power and systems of oppression, such as white supremacy,

homophobia, and sexism, profoundly impact our lived experiences and opportunities. He has an affinity for qualitative research and mixed-methods research.

# 3 Results

## 3.1 Occurrence of adaptations (RQ 1)

To answer our first research question as to whether teachers make adaptations when implementing an SEL program, we examined all of the data for the frequency of adaptations across all teachers. Results revealed that all 17 teachers (100%)—across both SEL programs—reported making at least one adaptation. The number of coded adaptations per teacher ranged from 1 to 38, with a mean of 11.24 (*SD* = 9.17). See Table 2 for the number of adaptations by teacher.

## 3.2 Types of adaptations (RQ 2)

With regard to research question two—what are the ways in which teachers adapt lessons in an SEL program?—we found that overall, teachers reported making a wide range of adaptations to the lessons within each SEL program. These were divided into two broad categories: *structural* adaptations and *process* adaptations. Structural adaptations were defined as adaptations made to the actual lesson components outlined in the lesson plan; these were further divided into adaptations to content, sequence, and timing. Process adaptations (i.e., how the lessons were delivered and engaged with) were classified into a spectrum ranging from teacher-focused adaptations to student-focused adaptations.

### 3.2.1 Structural adaptations: the "What"

#### 3.2.1.1 Content adaptations

Many teachers reported making content adaptations, which were adaptations made to the actual content (i.e., lesson materials and activities) that were not in the original lesson plan. Content adaptations were further sub-coded as content additions, content deletions, content modifications, and content substitutions.

**3.2.1.1.1 Content additions**

Teachers reported adding content to the lesson that was not originally in the lesson plan or materials. Teachers specifically mentioned that they added audiovisual materials, such as videos or podcasts, to the lessons. For example, Teacher 3 stated that "We watched a video to help solidify the contents, since they were not particularly tangible," highlighting the addition of a video that was not in the original lesson plan. Some teachers also stated that they added other types of materials, such as quotes, charts, or stories, to the lessons. As teacher 13 recounted, "I added quotes from the staff members to whom they had sent gratitude PowerPoints," showcasing the addition of content (i.e., staff quotes) that were not originally in the lesson.

Teachers also noted adding materials that they created into the lessons. For example, multiple teachers mentioned creating handouts for the lessons. Teacher 3 said "I created a handout so students could follow along with the terms being learned and

TABLE 2 Number of adaptations by teacher.

| Type of adaptation | Teacher ID | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| Content | 7 | 7 | 20 | 3 | 10 | 5 | 2 | 3 | 6 | 5 | 3 | 7 | 5 | 1 | 5 | 0 | 2 |
| Process | 1 | 6 | 15 | 4 | 4 | 3 | 5 | 1 | 8 | 0 | 2 | 1 | 3 | 1 | 1 | 1 | 1 |
| Sequence | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 9 | 2 | 1 | 4 | 4 | 1 | 2 | 0 | 0 |
| Timing | 0 | 2 | 0 | 1 | 0 | 5 | 0 | 1 | 3 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 0 |
| Total | 8 | 15 | 38 | 8 | 15 | 13 | 7 | 5 | 26 | 7 | 6 | 13 | 14 | 3 | 9 | 1 | 3 |

Teachers 1–7 implemented the MindUP program (Study 2) and teachers 8–17 implemented the Well-being Canada program (Study 1).

a place to write their thoughts, as class discussions aren't for everyone," conveying the addition of a material that the teacher made. In addition, some teachers noted adding an activity that was not in the original lesson plan, such as Teacher 1, who discussed how they created a new activity for their class:

> [I] created an activity where students had to find an "optimistic" quote online that they can relate to. Students then were given a blank sheet of paper and asked to write the quote (and author, if known) on the sheet and rewrite it.

#### 3.2.1.1.2 Content modifications

In addition to adding new content to the lessons, teachers reported modifying or refining existing content within a lesson. Multiple teachers reported modifying the lessons by refining small pieces. For example, Teacher 6 described a small change to the material for a mindful eating lesson: "I gave each student a small box of raisins rather than just one and had them start by eating one quickly." Teachers also adapted the lesson by tailoring the lesson's content or instructions, as seen with Teacher 4, who said "I changed up some of the language in the instructions to make it a little more suited to the maturity of my class."

Finally, some teachers reported making refinements to the lessons by tweaking existing activities or materials. "I typed up the quotes given for the lesson and found a few more. I printed and cut them out," as Teacher 3 wrote in their implementation diary, conveying a modification of content by typing the quotes, printing them out, and adding a few more. In an interview, Teacher 8 talked about how they made refinements to a lesson about setting intentions:

> I changed the setting intentions one a little bit because I want them to really understand what that meant, so we ended up doing, like on colored sticky notes, the kids wrote down the date, and then they wrote their intention for the day, and we stuck them on their desk so they could see it.

#### 3.2.1.1.3 Content deletions

Another type of content adaptation involved removing, deleting, or skipping parts of a lesson or an entire lesson. Some teachers noted skipping parts of a lesson, such as an activity. As Teacher 5 wrote: "I did not do the multitasking mindful activity as I have a student who is very sensitive to noise," conveying their decision to remove an activity in the lesson. Teachers also noted some simple deletions of content in their implementation journal entries, such as "used only some slides."

In addition to skipping certain parts of a lesson, teachers reported skipping entire lessons. Teacher 8 expressed how they skipped an entire lesson (i.e., lesson 7): "There were a couple of lessons that I skipped. I think it's lesson seven I skipped all together, because it kind of overlapped . . . it kind of blended in with the other lessons," indicating how they intentionally cut out this lesson in their implementation of the program. These clearly highlight some ways in which teachers deleted or removed content from the lessons.

#### 3.2.1.1.4 Content substitutions

Teachers described substituting or replacing elements of the program as well, which was characterized as both an addition and a deletion, often indicated when teachers used the phrase "instead of." Teachers expressed swapping out some materials or items in the lessons, such as books, videos, or supplies. Teacher 7 expressed replacing the items for a mindful tasting lesson: "Instead of having students have a raisin, I gave each student a gummy bear (trying to make it more interesting/fun)," demonstrating a simple substitution of lesson materials.

Teachers also reported replacing various activities in the lessons. Teacher 5 wrote about having students write in journals rather than doing the original activity in the lesson (a debate). "I did not have time to do the debate. Students wrote in their journals instead." Similarly, Teacher 2 conveyed their choice to do a different activity: "they were supposed to do a math problem and then writing and then switch back and forth, and I thought "oh as soon as I hand out math and writing, they're going to disengage and chat . . ." So I ended up doing [something] different. I showed them this little video about switch tasking," exhibiting how an activity in the lesson was replaced with a video.

### 3.2.1.2 Sequence adaptations

In addition to adaptations to content, teachers reported adapting the sequence of the individual components within a lesson. These adaptations primarily involved three sub-types of adaptations: splitting the lesson, re-ordering the lesson components, and combining parts of a lesson (and even entire lessons).

Various teachers described splitting the lessons in their implementation diary entries. For example, Teacher 5 stated, "I had to split it into 2 days as we did not have enough time," and similarly, Teacher 9 commented that they "broke the lessons into chunks," illustrating the sequential breaks teachers made in the implementation of these lessons. Additionally, teachers conveyed how they re-ordered the lessons by rearranging the prescribed order of the components within a single lesson. Teacher 13 recounted this rearrangement of lesson components in their interview:

> They engaged a little bit more toward the end. I started adding some of the media pieces more at the beginning and talking more about the media, and kind of tying in the topic like the last one–empathy and compassion. Um, so that works better, like using it as a hook.

A final type of adaptation to sequence occurred when teachers combined parts of lessons or even entire lessons together. Some teachers mentioned combining various materials or questions in the lesson, such as Teacher 12, who noted that they "added questions from slides together." A small number of teachers also noted combining entire lessons, such as Teacher 11, who stated simply in their diary that they had "combined this [lesson 6] with lesson 5." These results suggest teachers combined aspects within one lesson together in addition to entire lessons.

#### 3.2.1.3 Timing adaptations

Beyond making adjustments to the content and to the sequence of the lessons, teachers adapted how long they spent on various components of the lessons. Multiple teachers noted making adaptations to extend the time on certain lesson activities. Teacher 8 noted in their diary entry for WE Lesson 1 that they "took much longer than 25 min. I needed 40 at least with a brain break." In addition, Teacher 6 similarly described having to give students more time when talking about a lesson about the adolescent brain (MindUP Lesson 6):

> Yeah the ones, particularly things like the Adolescent Brain lessons where they had to read the fact sheets and make their poster. Um, where there was like a multi-paragraph fact sheet that they had to read and then synthesize information. . . they needed a lot more time than the estimates that were given in the lesson plans.

In contrast, teachers also noted how they had shortened aspects of the lesson or sped through the lesson faster than anticipated. "I had to rush due to time constraints; we got the idea but didn't do the activities," as Teacher 9 described. Teacher 2 also described speeding through the brainstorm portion for the first lesson in MindUP: "Since we have created a class charter and discuss it throughout the year, we didn't spend a lot of time on the brainstorm part." These adaptations clearly emphasize the various adaptations to timing teachers made when implementing these programs.

### 3.2.2 Procedural/process adaptations: the "How"

Teachers reported making procedural (process) adaptations, which were adaptations made to *how* the teacher delivered the lesson or *how* the class and students experienced and engaged with the lesson. Rather than falling within distinct types, these types of adaptations were found to occur along a wide spectrum ranging from teacher-directed adaptations (i.e., how the teacher delivered the lesson) to student-focused (i.e., how the students engaged with the lesson), with class-wide adaptations occurring at the intersection of the two. See Figure 1 for a visual depiction of this continuum of process adaptations.

#### 3.2.2.1 Teacher-level adaptations

Adaptations that were more teacher-focused included those in which the teacher had to alter the delivery of the lesson; these tended to involve "I" statements about how the teacher adapted how the material was conveyed to their students. These types of adaptations included the teacher clarifying the material, scaffolding, and sharing personal examples.

Teachers described scaffolding the students' learning as a type of adaptation they made to the program. Teacher 6 noted in their interview that "some activities needed more scaffolding than what was provided in the lessons, which was fine, that was an adjustment I could make, but yeah I think worth noting." Teachers also had to add clarifications to the materials, such as Teacher 7 who "tried to break down what "SAFE" really meant -not get hurt -can say what you want etc," (safe capitalized for emphasis) demonstrating the additional work the teacher put in to clarify the material. Teacher 9 described how they had to further "unpack" the concept of altruism: "some of the language was a little bit difficult as well, so like altruism, for example, the definition provided wasn't necessarily also the easiest, so that one took a little bit to help unpack with the kids."

Teachers also adapted the delivery of the content by sharing personal stories, anecdotes, and experiences. For example, Teacher 3 wrote about this type of adaptation in their implementation diary: "I shared a story of a student that was always holding the door for me here at school and I didn't know who he was," highlighting how teachers shared their own examples and experiences with their students.

#### 3.2.2.2 Class-level adaptations

A broad range of process adaptations occurred in the middle of the teacher-class-student spectrum, partially involving both students and teachers. These types of adaptations involved mostly "we" statements and occurred when both teachers *and* students were involved in discussions or connections that went beyond the content covered in the lesson plan.

Teachers described how they and their students made connections between the lesson contents and current events in addition to other subjects. In terms of connections to current events, teachers reported how their classes connected the content with current events, such as Teacher 3, who wrote "During the "Digging Deeper," we also discussed the war in Ukraine," highlighting how the teacher and their students made explicit connections to current events happening in the world. In addition, Teacher 13 stated that "we discussed a bit how the pandemic had impacted mental health to try to make connections," showcasing how the teacher and students discussed the material beyond the prompts in the lesson script. Teachers also reported that they adapted by connecting the SEL lesson to other classes and subjects. For example, Teacher 14 wrote that they "connected [the SEL lesson] to health lessons about self-esteem and bullying," demonstrating the explicit integration of SEL into class discussions when covering the SEL content.

In addition to making connections, teachers also conveyed that they had extra discussions beyond those outlined in the lesson plans. "After each word was added, we discussed an example when we've been that way and why it could be problematic but we also discussed having compassion for ourselves," as Teacher 3 explained, which demonstrates an example of these types of additional discussions. Another teacher stated, "We talked about other things we do in our life that we take for granted (besides walking) and how we can engage with our bodies and the amazing things they do for us," highlighting another way in which teachers and their students engaged with the material through additional discussions and connections.

#### 3.2.2.3 Student-level adaptations

Some adaptations fell on the student end of the spectrum, focusing more on the students and how they engaged or interacted with the material or with one another. These adaptations mostly involved "they" or "my student(s)" statements, and teacher involvement was lower for adaptations on this end of the spectrum.

Teachers reported a range of ways in which they adapted the ways in which students interacted with and experienced the lessons. One common example was a group format change (i.e., changing the groupings of students for activities). For example, Teacher 1 described how they "broke the class into groups and

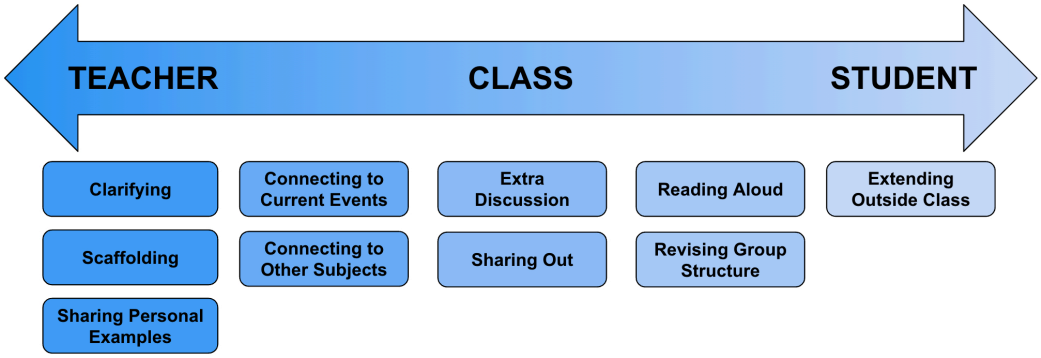


FIGURE 1
Spectrum of process adaptations.

asked them to define optimism" rather than the original activity outlined in the lesson plan. Similarly, Teacher 16 conveyed how "instead of whole group activity / showing gratitude–students individually made cards for our school community members they are grateful for," demonstrating another way teachers changed the ways in which students interacted with both the lesson's content and with each other.

Interestingly, teachers also adapted the lessons by encouraging the students to apply the material beyond the confines of the classroom. These adaptations (coded "extending outside class") involved instances of students engaging with the content in other settings that were outside the classroom due to the teacher's suggestion or requirement. For example, when talking about a field trip the students went on, Teacher 2 stated "We went to [field trip location]. I challenged kids to show kindness in the community (giving coins to street performers, offering seats on skytrain, etc.)," showing how the teacher expanded the lesson to an out of school event. Similarly, another teacher wrote about how they challenged their students to engage with the content after the lesson ended: "Afterward, I challenged them to take a risk and hand these paragraphs to the person they wrote about." These examples highlight some of the dynamic ways in which teachers made student-centered process adaptations.

## 3.3 Reasons for adapting (RQ 3)

For research question three we were interested in answering the question: why do teachers make adaptations to SEL lessons? When analyzing teachers' responses, we found that teachers offered many explanations as to why they adapted their SEL lessons within each program. In total, eight reasons were identified, which were then grouped into three main categories: program factors, student factors, and contextual factors. Importantly, the reasons teachers gave for adapting their lessons were complex, and thus, teachers may have noted multiple reasons for a single adaptation. See Figure 2 for a visual depiction of the three main categories and sub-types.

### 3.3.1 Reasons related to program factors

Teachers reported adapting the lessons in various ways due to factors centering on the SEL programs. A common reason that teachers adapted lessons was due to the lesson having content that was repetitive (i.e., the teacher had already covered similar content with the class before). As Teacher 4 noted in their diary entry about MindUP Lesson 9 (Optimism), "we've discussed this topic a lot, so we didn't need to complete the full lesson as prescribed." Additionally, Teacher 2 described in their interview how they adapted because they had already covered much of the content in the first lesson of the MindUP program (focused on establishing a classroom community):

> I didn't always follow them [the lessons] exactly. . . I mean you kind of sort of read your class and figure out. . . We have a class Charter and this year my class in particular does really well with following our agreements, and so I didn't need to remind them of the agreements ahead of time because it's an agreement we have; it's on our board. We talked about all the time, so I didn't use parts of that.

In addition to repetitive content, teachers described how they adapted their lessons due to the lesson's difficulty. Some teachers noted that the materials in the lesson were difficult for their students, such as Teacher 5, who expressed "switching out" content due to student reading level: "Yeah, and I have some very low readers. I got a K level in grade seven, so some of the things I had to switch out to accommodate those kids." Teacher 6 described a difficult handout in a lesson about the adolescent brain: "[The lesson plan said] your students should be able to read it and summarize it in 10 min. . . nowhere near like even my strongest students could do it in 10 min," highlighting how the lesson's difficulty was a core reason for the teacher making adaptations.

Finally, teachers noted how the lessons' timing estimates were sometimes too optimistic, which served as a reason for teachers having to adapt. These timing constraints were described by Teacher 5 in their interview when discussing how they edited out parts of the script: "the script definitely needs to be shorter, and some of the lessons are planned for much more time than we actually have time to learn in the classroom." Moreover, Teacher 6 commented in their interview that the timing suggestions in the lesson plans were, at times, "extremely optimistic":

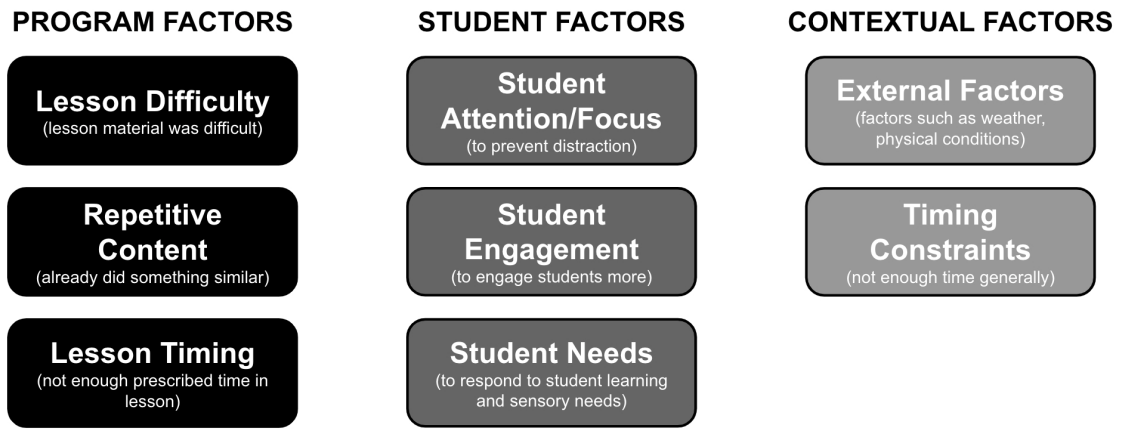


FIGURE 2
Reasons for adapting SEL lessons.

> But I did find that in some of the lessons the pacing, um, when it was students needing to do an activity that involved, you know, reading and synthesizing information or something like that, the timing estimates were extremely optimistic. Some of the activities needed more time or more scaffolding than what was provided in the lessons, which was fine—that was an adjustment I could make. But yeah, I think it's worth noting, in terms of some of the time estimates and things like that.

### 3.3.2 Reasons related to student factors

Teachers justified adapting the lessons for reasons that were related to their students as well. These reasons primarily centered on students' attention/focus, student engagement, and student needs.

One primary reason that teachers reported adapting was to focus or keep the attention of their students (i.e., to help students "focus" or to prevent students from being distracted). Teacher 5 noted how they needed to cut some parts of the lesson due to their class being easily distracted: "I had to "out" some parts as they were having a hard time sitting for so long." Teacher 3 described an adaptation (i.e., structured note taking) due to their students' limited ability to focus after coming back from another class:

> I did this [structured note taking] as an adaptation for my class—they have difficulty staying focused and it was the afternoon. They came back from their other class really riled up and I knew they would lose their focus. Doing the note-taking together was really helpful to keep them on track and focused on the lesson.

Teachers also adjusted the lessons to facilitate greater student engagement (i.e., to "make it more fun" or to prevent students from becoming bored). Teacher 13 wrote about how they rearranged the lesson in order to use the media as a "hook" to engage students: "I moved some of the multimedia content to earlier in the slides to try to engage the learners more." Additionally, in an interview, Teacher 10 described how they had altered an activity to have students critically evaluate two videos rather than just showing the videos:

> It was the one before gratitude and there was two video clips . . . but I flipped it up and I said UBC [University of British Columbia] is actually wondering which one of these videos will be better for grade four or five students to use. So, we used critical thinking to evaluate the two videos and they were really invested in that . . . I'm pretty sure if I had just shown the class the video, it wouldn't have had the same level of engagement, which is why I chose to switch it up.

Teachers described a variety of students' needs as the basis for their adaptation, which included learning needs and sensory needs. Learning needs centered on students' academic abilities, such as reading levels. Teacher 3 noted how they elected to have the handout read aloud to accommodate the learning needs of their students: "To help with focus and those that are not strong readers (I have quite a few), we read the handout aloud." Teachers also conveyed adapting their lessons due to health and sensory needs, such as Teacher 5, who wrote "some of my students are fasting, so could not participate in the tasting," indicating that the teacher had to make adjustments to the lessons to accommodate the needs of their students.

### 3.3.3 Reasons related to contextual factors

The reasons teachers gave for making adaptations also included factors that were contextual in nature. These included external factors and general timing constraints.

A variety of external factors were described as the impetus for teachers making adaptations to the lessons. These factors typically involved contextual factors that were external and out of the teacher's control. Teacher 5 noted how "it was pouring outside, so I didn't do the walk. It is supposed to rain all week so I didn't reschedule," showing how the physical environment prevented them from doing the lesson as intended.

Teachers also reported adaptations that were due to timing constraints in general (rather than specifically due to the lesson's estimates being incorrect). These generally involved teachers conveying limited time in general due to a range of factors. Some teachers were quite general when describing these reasons, such as a teacher who wrote "Didn't have time to do the whole lesson," not specifically indicating why they were short on time that day.

Teacher 13 commented "We have so much going on this term I am having a hard time really following the lessons carefully and doing all the components. I was rushed today and only did a portion of the lesson," ascribing external timing constraints as being the reason for rushing through and skipping parts of the lesson. These showcase how general timing constraints served as an additional reason teachers adapted the lessons.

## 3.4 MindUP and Well-being Canada: program differences in adaptations

In addition to our three primary research questions, an additional aim of the current study was to analyze differences in adaptations between the two SEL programs. We saw this as warranted for two reasons: (1) the two SEL programs were designed for different age groups (i.e., one being implemented with elementary school students and the other with middle school students), and (2) the two SEL programs had somewhat different foci (i.e., one being more focused on mindfulness and the other being anchored in service-learning). To broadly compare the two programs, the code co-occurrence function in *Atlas.ti* was used to create a cross-comparison matrix of the higher-order types of adaptations and the eight reasons teachers adapted. Given that the studies differed in sample size (i.e., 10 in Study 1 and seven in Study 2), the unit of analysis was at the teacher level; thus, the percentage of teachers who made that type of adaptation was used to assess programmatic differences.

In terms of types of adaptations (RQ 2), it was found that teachers in the two programs made content additions and deletions at relatively similar rates; however, content refinements and replacements were found in a higher percentage of teachers who implemented MindUP. Notably, it was found that 70% of teachers who implemented the Well-being Canada program adapted the sequence of the lessons compared to just 29% of the MindUP teachers. Timing adaptations occurred across the two groups at relatively similar rates. In terms of process adaptations, teachers implementing the MindUP program made more student-oriented and teacher-oriented process adaptations overall. See Table 3 for the number of codes across the two programs.

Regarding the reasons teachers adapted (RQ 3), it appeared that MindUP teachers were more likely to report reasons in general. It was also found that teachers in the MindUP program (Study 2) mentioned all eight reasons, whereas only five reasons were coded in the Well-being Canada (Study 1) teacher data. Specifically, no teachers implementing the Well-being Canada program reported adapting for reasons due to student attention/focus, student needs, or external factors. Notably, 50% of teachers who implemented Well-being Canada reported student engagement as the reason for making at least one adaptation, similar to the rate for MindUP teachers (57%). See Table 4 for the number of codes across the two programs.

TABLE 3 Percent of teachers making each type of adaptation by program.

| | Well-being Canada (Study 1) | MindUP data (Study 2) |
|---|---|---|
| **Structural adaptations** | | |
| Content additions | 80% | 71% |
| Content deletions | 60% | 57% |
| Content refinements | 50% | 86% |
| Content replacements | 40% | 86% |
| Sequence adaptations | 70% | 29% |
| Timing adaptations | 50% | 43% |
| **Process adaptations** | | |
| Class-oriented | 70% | 57% |
| Student-oriented | 30% | 71% |
| Teacher-oriented | 30% | 71% |

Percentages are based on a sample size of ten for Study 1 and seven for Study 2.

TABLE 4 Percentage of teachers' reasons for adapting by program.

| | Well-being Canada (Study 1) | MindUP (Study 2) |
|---|---|---|
| **Program factors** | | |
| Lesson difficulty | 10% | 43% |
| Lesson timing | 10% | 29% |
| Repetitive content | 10% | 86% |
| **Student factors** | | |
| Student attention/focus | 0% | 29% |
| Student engagement | 50% | 57% |
| Student needs | 0% | 43% |
| **Contextual factors** | | |
| Timing constraints (general) | 20% | 43% |
| External factors | 0% | 57% |

Percentages are based on a sample size of ten for Study 1 and seven for Study 2.

# 4 Discussion

The present study aimed to understand if, how, and why teachers adapt lessons in two distinct SEL programs. An additional aim was to assess differences between the two SEL programs—the Well-being Canada and MindUP programs. This study is one of the first to analyze teacher adaptations specifically in SEL programs and sheds light on the array of complex reasons that lead to the adaptation of lessons within these types of programs. Durlak (2015) states that a core research priority is to "assess the influence of adaptations" (p. 1125), and this study makes a step to address this critical gap in the literature. Additionally, implementation scientists have explicitly called upon researchers to systematically document adaptations made to interventions in addition to their impacts (Chambers and Norton, 2016), and this study presents an important first step for SEL interventions specifically.

The findings from this study have several important theoretical implications. First, our findings revealed that all teachers reported making at least one adaptation (ranging from 1 to 38 adaptations), which aligns with previous work from Miller-Day et al. (2013), who found that nearly all teachers made adaptations to a drug prevention program. This supports the view that teacher

adaptations are a common and unavoidable aspect of implementing structured SEL programs (Lendrum et al., 2016). In addition, the relatively large range of adaptations also suggests certain teachers may be more or less likely to adapt interventions. This variation could be attributed to several factors, including teacher experience, perceived flexibility of the program, and individual teaching styles. For example, more experienced teachers might feel more confident adapting the program, while less experienced teachers might adhere more closely to the prescribed program (Eisman et al., 2020).

We also found that teachers made both structural (i.e., content, sequencing, and timing) adaptations and process adaptations, which occurred along a teacher-class-student spectrum. Together, these findings on how teachers adapted these lessons contribute to our theoretical understanding of adaptations. First, our findings suggest Blakely et al.'s (1987) three-part typology—additions, modifications, and deletions of program components—are useful for understanding content adaptations but fail to capture the dynamic nature of process adaptations (i.e., *how* teachers are delivering components of a program). Instead, our findings align more with those of Miller-Day et al. (2013), who found that teachers adapt the content and format of lessons. A notable extension is our "substitution" category as a particular type of content adaptation. Additionally, we contend that process adaptations occur along a complex spectrum that ranges from teacher-focused adaptations to student-focused adaptations rather than a strict typology, as suggested by previous work (e.g., Miller-Day et al., 2013). This new conceptualization expands current theory by acknowledging the nuanced, multifaceted ways in which teachers tailor how they deliver SEL programs to meet the diverse needs of their students and the specific context of their classrooms.

Regarding the reasons teachers made adaptations, our findings suggest a complex interplay of student, program, and contextual factors driving these modifications. These findings largely align with previous work in other fields (e.g., Miller-Day et al., 2013; Moore et al., 2013) and suggest that a broad range of reasons can serve as the impetus for teacher adaptations. Our study builds on this prior work by specifically identifying reasons within the categories of student, program, and contextual factors in the context of school-based SEL program implementation. Moreover, our findings provide detailed reasons within each category, enriching our understanding of why teachers modify SEL programs. Our findings support calls from implementation scientists to create a shared data platform to systematically document information around adaptations to evidence-based interventions (Chambers and Norton, 2016).

Looking across the two programs, there were a few notable findings. First, it was found that the two programs had certain types of adaptations that were more or less common. For example, the "sequencing" adaptations occurred in a higher percentage of Well-being Canada program teachers, whereas more MindUP teachers appeared to make "content replacement" adaptations. This suggests that different programs may be structured in ways that engender distinctive types of adaptations. Second, differences were seen in terms of the reasons for adapting. For instance, a relatively high percentage of teachers in Study 1 (Well-being Canada) reported student engagement as their rationale for adapting, suggesting that this may be an area of improvement for this program. These findings may also highlight developmental considerations, given the programs were implemented with different age groups. Specifically, the Well-being Canada program was created to be developmentally calibrated to younger students in 4th and 5th grades, whereas the MindUP program was developed to be targeted to early adolescents in 6th and 7th grades.

In addition to expanding our theoretical knowledge of adaptations, understanding the ways teachers adapt SEL programs serves a variety of practical purposes. Notably, it helps researchers, program developers, and other involved parties have a more accurate understanding of how these types of programs are implemented under real-world circumstances. Rather than only assessing pre-post differences on quantitative variables, a deeper examination of how teachers make adaptations adds a layer of nuance and complexity that more accurately captures how SEL programs are carried out "on the ground." Furthermore, understanding how teachers adapt these types of curricula can inform program development, refinement, and training. For example, when updating or refining SEL programs, adaptation data may be leveraged to inform changes by examining how and why certain lessons or parts of lessons were adapted. As SEL programs spread, it can be very beneficial to use adaptations to guide how SEL programs are assessed, tailored, and ultimately implemented.

In light of these findings, we have several recommendations for teachers, researchers, and program evaluators who work with SEL programs. First, we suggest program developers and researchers continue to develop innovative ways to capture adaptations when evaluating SEL programs. Our use of implementation diaries after each lesson presents one such method. We also recommend programs build upon our framework to examine whether similar findings can be found across different programs and contexts, particularly in terms of the reasons for adapting. This is so that we can continue to develop our collective knowledge base of adaptations to enhance our understanding of how SEL programs are changed by those carrying out these interventions. Finally, we concur with Lendrum et al. (2016), who call upon program developers to clearly specify the "critical components" of their interventions (p. 60). This will enhance our understanding of SEL program implementation so that adaptations can be understood in the context of whether they are made to core or peripheral elements of a particular program.

## 4.1 Strengths and limitations

The current study has several strengths. This study utilizes data from two distinct data sources that both offer unique insights into how and why teachers adapt the lessons. Specifically, the use of implementation diaries allowed teachers to document thoughts soon after a lesson ended, and interviews allowed teachers to describe their experiences in more detail. By triangulating immediate reflections from diaries with post-program interviews, this study paints a more comprehensive picture of adaptation than past research, which has often relied on single sources like interviews (Holtrop et al., 2022). Additionally, the present study utilized a rigorous qualitative methodology to capture the complexities of teacher adaptations, which may have been overlooked with quantitative measures. A variety of tactics, including audit trails, analytic memos, and peer debriefing, served to enhance the credibility and trustworthiness of the analysis.

The current study also has a number of limitations. Although the implementation diaries yielded a substantive number of written responses about how teachers made adaptations, they were limited as they did not explicitly ask for *reasons* for making adaptations. In addition, the interviews with teachers did not solely focus on adaptations and were relatively short (i.e., less than 30 min). Future studies may aim to interview teachers on how and why they make adaptations to lessons in more depth. Future work may also utilize focus groups to understand why teachers may adapt similar lessons in different ways. Similarly, given that teachers may underreport adaptations (Miller-Day et al., 2013), having other measures, such as observational measures, would be beneficial to better understand how teachers adapt interventions.

Given its qualitative nature, the present study also has limitations regarding the generalizability of its findings. Both studies occurred in North American contexts where SEL is widely accepted, practiced, and embraced by the local governments. Thus, teachers in these programs may adapt somewhat differently than in contexts where SEL is less supported by school leaders or policymakers. While these factors limit the generalizability to other contexts, the study provides valuable insights into the adaptation processes within supportive SEL environments. Additionally, the two programs examined in this study may not capture all the types of lessons within SEL programs, and thus, teachers' adaptations may be specific to these programs. Future studies may investigate how teachers adapt other SEL programs, particularly programs that significantly differ in content, structure, focus, and length.

## 4.2 Future directions

The current study lays the groundwork for future work concerning teacher adaptations of SEL programs. Notably, the current study helps to establish a typology of content adaptations and a continuum of process adaptations that can be built upon in future studies to more systematically document how teachers adapt SEL curricula. Having a better instrument to measure adaptations would be of great use for programs, schools, and perhaps even teachers themselves. For example, mixed methods approaches might use these qualitative results to develop a quantitative instrument to capture these adaptations more fully.

Although not an aim of the current study, future research may also look to examine if teachers exhibit a certain "style" of adaptation. In other words, do some teachers tend to adapt in a certain manner? Do some teachers tend to adapt more than others? Are teachers primarily adapting "on the fly" or are most adaptations planned before the lesson begins? This study does not examine individual teachers in terms of their adaptations, so future work may build on the current study to better understand how teacher characteristics—such as prior experience implementing SEL or confidence in teaching SEL—affect how and why they adapt SEL programs.

Another area of future research is to utilize more participatory methodologies to examine teacher adaptations. For example, Participatory Action Research (PAR), which positions participants (e.g., teachers, students) as architects of research rather than passive recipients of it, may lead to better insights and more complex understandings of how adaptations occur in real time. Meland and Brion-Meisels (2023) outline how ideas and values from Youth Participatory Action Research approaches can be used to guide how SEL is implemented by educators, noting that "skillful adaptation" is likely required for effective SEL implementation (p. 4). Future work should aim to foster research-practice partnerships that work together to understand how, why, and when teachers adapt SEL lessons and the effects these have on different student populations.

The impact of teacher adaptations on student outcomes remains understudied and is an important area for future work. Given the rise of SEL programs in the past decade, understanding how particular types of adaptations or modifications affect students is fruitful. Previous work in other fields has examined how adaptations affect various outcomes, such as student engagement (Barrera et al., 2017) and program effectiveness (Hansen et al., 2013; Kim et al., 2017). Similar work should be carried out with SEL programs to assess the effect of teacher adaptations on various student outcomes. Future work would benefit from collecting data specifically on teachers' perceptions of how certain local adaptations impacted their students.

Finally, future work should consider examining systemic and contextual factors that may influence how interventions are adapted. Given the range of factors that can influence implementation more broadly (Forman et al., 2009), future research can investigate system-level factors (e.g., school support, district funding, state policy) that influence adaptations of SEL programs and other similar interventions. As SEL interventions are implemented in a wider range of settings, this becomes even more critical.

# 5 Conclusion

Although much remains unknown about how teachers adapt SEL programs, this study shines a small light into the often opaque "black box" of implementation (Harachi et al., 1999), with an explicit focus on adaptations made to SEL programs. Findings revealed that teachers made a number of adaptations to how SEL programs are implemented, making changes to the program's content, sequence, and timing. Teachers also reported making a wide array of process adaptations to how they delivered the lessons and how their students experienced the lessons. Additionally, this study illustrates a complex array of motives surrounding teacher adaptations of SEL lessons, such as student engagement, repetitive content, and external factors. Collectively, these findings add to the scant literature on how and why teachers adapt SEL programs in school-based settings and pave the way for future research to systematically document, analyze, and ultimately leverage adaptations for improved program effectiveness.

# Data availability statement

The datasets presented in this article are not readily available because of the nature of this research, as participants did not agree for their data to be shared publicly. Requests to access the datasets should be directed to JL, jlovet3@uic.edu.

## Ethics statement

The studies involving humans were approved by the University of British Columbia Behavioural Research Ethics Board. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

## Author contributions

JL: Conceptualization, Formal analysis, Investigation, Methodology, Software, Visualization, Writing – original draft, Writing – review & editing. KS-R: Conceptualization, Funding acquisition, Supervision, Writing – review & editing. KZ: Conceptualization, Writing – review & editing. ML: Conceptualization, Writing – review & editing.

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## Conflict of interest

ML was employed by the Goldie Hawn Foundation (MindUP) at the time of submission.

The remaining authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## Publisher's note



## Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/feduc.2024.1444588/full#supplementary-material

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