

The missing piece of the puzzle: Social and Emotional Learning in the Mathematics classroom (Summary)

School type : Co-educational 7-12

Location : Outer suburban

Size : 1000+ students

The Missing Piece of the Puzzle: Social and Emotional Learning in the Mathematics Classroom was undertaken in a large Catholic co-educational secondary college located in a multicultural outer suburb of Melbourne. In 2010, a team of wellbeing and teaching staff embarked on a curriculum-based project to teach Social and Emotional Learning (SEL) competencies. The project demonstrated that SEL skills can be taught explicitly across a range of domains to foster student engagement in learning and working together.

In 2009, school data had shown that student engagement and motivation to learn and do well were extremely low. As Year 7 Coordinator and as a Year 7 Mathematics teacher, I had noticed an increase in challenging student behaviours inside and outside the classroom, student disengagement, limited success in the classroom, disruptiveness, and a lack of social skills. A large number of students were accessing the college's counselling service for help with friendship, bullying and self-esteem issues. This suggested a need for change towards active and explicit teaching of responsibility, caring and concern for others and self, and a need to increase students' engagement in their own learning. According to Cahill & Freeman (2007, p. 95), the existence of supportive classroom environments, those in which students are cared for, respected, valued and feel they belong, are critical to enhancing students' engagement levels.

In developing this action research project, my long-term goal was to build upon previous college initiatives to bring about policy and culture change preliminary to introducing SEL in all areas of the curriculum. My approach involved making changes within my own teaching and classroom practice by trialling the implementation of SEL into one of my mathematics classes. In the short term I wanted to create positive change in the students' sense of social and emotional wellbeing, and engagement in their own learning. This was consistent with research stating that action research starts small with a single committed teacher focusing on their own practice (Lomax, 1990, as cited in McNiff, Lomax, & Whitehead, 1996, p. 11) and works towards extensive or whole-school change (Kemmis & McTaggart, 1992, as cited in Cohen, Manion, & Morrison, 2007, p. 300).

Working collaboratively with the Student Wellbeing Coordinator, the Assistant Year 7 Coordinator, another Year 7 Mathematics Teacher, and the students, I focused on implementing the SEL competencies of **social awareness** and **relationship skills**. These two competencies, along with self-awareness, self-management and responsible decision-making, are identified by the Collaborative for Academic, Social, and Emotional Learning (CASEL) as the five key areas of social and emotional competence (Zins & Elias, 2006, p. 3).

IMPORTANT INFORMATION

This project was undertaken in partial fulfillment the Master of Education (Student Wellbeing), Melbourne Graduate School of Education (MGSE) at the University of Melbourne. The project has been edited for online use and individuals and organisations have been de-identified for ethical reasons. CEOM and MGSE gratefully acknowledge the author for making the projects available.

According to Merrell, Gueldner, & Tran (2008, p. 167) children with social-behavioural concerns may have difficulty learning, and they propose that comprehensive integration of social and emotional learning within the school and classrooms offers a promising way to deal with academic and socialisation problems. Fredricks et al. (2004, as cited in Frydenberg et al. 2005) state there are three forms of engagement: behavioural, emotional and cognitive, and these are often dependent on each other (Frydenberg et al., 2005, p. 4). The promotion of social and emotional learning is no longer seen as *separate* from the academic mission of schools; rather, it is essential, and can be taught and implemented in schools in a number of ways (Zins, Bloodworth, & Weissberg, 2004, p. 4), including incorporating SEL into the curriculum and developing supportive learning environments.

The project involved explicitly teaching the SEL competencies through eight 50-minute and six 100-minute mathematics lessons over a six-week period. Using formal and informal strategies such as team and group work, class discussions and Circle Time, the SEL activities were implemented into the curriculum through the topic of Chance and Data, and focused on student needs. A typical lesson started with a discussion about an area of SEL, followed by team work on a mathematics task, then discussion about how they felt the activity went, and concluded with students writing in their learning journals. Adjustments to lesson plans were made to respond to issues that arose in the lessons.

Initial Y chart survey data asking students to reflect and comment on the way the interaction between students looked, sounded and felt, revealed two themes:

- 88% of students used the words bullying or fighting to describe how the social interactions looked, sounded or felt.
- 54% of students commented on their incapacity to complete work due to the noisy, out-of-control environment of the classroom.

A number of students articulated their thoughts, highlighting the impact that bullying was having on their emotional wellbeing:

1. *'It sounds like verbal bullying. Teasing people about their weight, looks, family members, if they're smart or not.'*
2. *'When you get bullied in this class it feels like everyone hates you because no-one backs you up. It makes me feel like no-one cares.'*
3. *'It feels like I want to move classrooms most of the time because I hear a lot of people in the class calling me names.'*

Initially, the students struggled with writing in their learning journals, but by the end of the six weeks they were writing a lot more and showed improved self-awareness and cognitive engagement. Students were beginning to take responsibility for their own learning and were experiencing self-satisfaction, as shown in these sample journal entries:

One student, who struggles with mathematics, does not settle well and consistently engages in disruptive, attention-seeking behaviour, wrote:

'Today I got all of my work done. It feels really good to know I have achieved something this lesson. It was quiet in class today and everyone being silent was really helping me learn and get all of my work done. I really look forward towards doing more partner activities.'

Another student, reflecting on his group assignment, wrote:

'I thought the assignment was hard, but next time we do this I need to participate more in order to pass.'

At the conclusion of the six weeks, the initial Y chart survey was repeated to determine any changes in the students' perception of social interaction in the class. Findings showed:

- 72% of students commented that the amount of bullying had decreased.
- 22% felt there had been an increase in the number of students helping one another and co-operating with one another.
- 22% felt there was more learning taking place and they were enjoying mathematics more.
- 28% commented on feeling safer in the classroom than they had before.

Despite the students' reflections indicating changes in their relationships and engagement, observations and incidents occurring external to their mathematics class showed that these improvements were not occurring in the yard or in other classes. As the Level Coordinator I had not noticed a significant change in their social interactions; therefore, I held a focus group with five students to determine why the students felt there had been such a significant change. The students spoke positively about the strategies used in mathematics, and about the decrease in negative social interactions. One student noted the difference in mathematics as resulting from using a strategy, such as a class discussion, 'if [the students] are not getting along' because 'it just gets worse' if no action is taken.

My project has demonstrated a need to implement SEL as a whole-school initiative where students' social and emotional needs are met in each lesson, in the yard and in co-curricular activities. My recommendation to the leadership team will be to promote a whole-school approach to SEL, emphasising the need for a shared vision of SEL; to create a SEL team to implement changes; and to invite staff to work together towards initiating curriculum changes.

References

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