

TRAUMA-INFORMED FLEXIBLE LEARNING: CLASSROOMS THAT STRENGTHEN REGULATORY ABILITIES

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Abstract: This study explores the implementation of the first of three domains, increasing regulatory abilities, within a trauma-informed positive education (TIPE) approach with flexible learning teachers as they incorporated trauma-informed principles into their daily teaching practice. Trauma-informed teaching approaches have particular relevance for flexible learning settings, and can help meet the complex needs of students who have experienced violence, abuse, or neglect. This paper proposes that redressing a trauma-affected student's regulatory abilities should be the first aim in this developmentally-informed TIPE pedagogy. Drawing from research with nine teachers working in trauma-affected flexible learning settings in a large metropolitan region, this study employs a qualitative appreciative inquiry action research methodology to explore the use of TIPE perspectives with their students. Under the domain of increasing regulatory abilities, four arising subthemes hold particular application for teacher practice and planning: rhythm; self-regulation; mindfulness; and de-escalation. These four subthemes are positioned as promising pathways to increasing regulatory abilities in students as they strive toward successful learning outcomes.

Keywords: trauma-informed classroom, flexible learning, regulatory abilities, student management, classroom strategies

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Within alternative and flexible education pathways, there is growing concern about the impact of childhood trauma on students and the subsequent impact on successful learning and classroom engagement. Working from a trauma-informed pedagogy, teachers can meet the learning and behavioural needs of students who are trauma-affected (Bloom, 1995; Downey, 2007; Wolpow, Johnson, Hertel, & Kincaid, 2009). This study contributes to pedagogical debate within the context of flexible learning classrooms and the argument for the inclusion of developmental perspectives (Milbourne, 2009; te Riele, 2007). However, trauma-informed practice models require further research to better understand how teachers incorporate and apply these strategies in their classrooms with trauma-affected students. Such understandings contribute to flexible learning settings by positioning the classroom as a daily therapeutic milieu intervention, in which the environment itself promotes post-traumatic healing and growth (Perry, 2006).

This study uses the Trauma-Informed Positive Education (TIPE; Brunzell, Stokes, & Waters, 2015) approach, which embeds trauma-informed pedagogy within a positive education strengths-based paradigm (Waters, 2011). A TIPE approach positions learning within a dual-continuum model of mental health (i.e., addressing one's deficits and building on one's strengths are two specific and differentiated pathways for intervention) in order to address domains of healing and of growth in trauma-affected students (Keyes, 2002; Keyes & Annas, 2009). Classroom pedagogies and student management are enhanced for trauma-affected students if teachers seek to directly redress the disrupted capacities (e.g., regulatory abilities and relational attachment) that have been compromised by traumatic stressors; and nurture learning experiences that allow students to identify and build upon their strengths (Brunzell, Waters, & Stokes, 2015).

The first domain of TIPE, repairing regulatory capacities, is the focus of this qualitative study, which gathers evidence from an investigation with nine teachers participating in an appreciative inquiry action research methodology (Ludema & Fry, 2008; Zandee & Cooperrider, 2008) that cycles teachers through six stages to discover, dream, design, act, observe, and reflect when using trauma-informed positive education interventions with their students.

Literature

Trauma-affected Students

Trauma is consensually defined as an overwhelming experience that undermines the individual's belief that the world is good and safe (Berry Street Victoria, 2013). The American Psychiatric Association (APA; 2013) advises that directly experiencing, witnessing, or learning about trauma can lead to trauma- and stress-related disorders such as reactive attachment disorder, disinhibited social engagement disorder, post-traumatic stress disorder (PTSD), acute stress, and adjustment disorder. Children who experience traumatisation may have a severely

compromised ability to regulate their body's stress or arousal responses, which is the result of the impact of trauma on key neurological and psychological systems (Coade, Downey, & McClung, 2008; Downey, 2007). In addition to impacting a child's regulatory abilities, trauma's impact on the developing brain can significantly impair a child's ability to form a healthy attachment to the primary care-giver; and thus compromises the child's capacity for creating and maintaining healthy relational bonds (van der Kolk & McFarlane, 1996). Trauma-affected students may experience ongoing difficulties within the classroom resulting from daily classroom stressors, such as new learning, physical and cognitive delays, and behavioural expectations that trigger their already dysregulated arousal responses (Brunzell, Waters, & Stokes, 2015).

The impact of childhood trauma on biological, psychological, and social disorders can have devastating outcomes on a young person's ability to learn in educational settings. In large epidemiological studies of adults who underwent adverse childhood experiences (ACEs) in their youth, individuals who experienced ACEs are 2.5 times more likely than those who did not report ACEs to experience problems in school, such as having lower achievement assessments, being at risk for language delays and difficulties, being suspended or expelled more often, being designated to special education, failing a grade, and dropping out of mainstream education (Anda et al., 2005). Adverse childhood experiences due to trauma from abuse or neglect have significant and potentially devastating effects on effective classroom learning and connections to future education or vocational pathways.

A Trauma-Informed Positive Education Response

Trauma-informed pedagogical approaches are required to address the special and complex needs of trauma-affected students (Bloom, 1995; Downey, 2007; Wolpov et al., 2009). Although teachers are not therapists, they often find themselves acting as front-line trauma-workers for young people who do not have access to clinical care (Brunzell, Waters, & Stokes, 2015). Perry (2006) suggests that the classroom is sometimes the most consistent and stable place in a trauma-affected student's world and must be seen as a therapeutic milieu wherein the structured environment itself is the most consistent and effective intervention.

A synthesis of extant understandings within the trauma-informed teaching and learning literature supports the current study. Brunzell, Stokes, and Waters (2015) found that existing trauma-informed education models focus on two major themes: (a) repairing regulatory abilities and addressing the dysregulated stress response; and (b) repairing disrupted attachment capacities through the nurturing of strong student-teacher relationships. Both of these themes hold potent implications for teaching and learning within the trauma-informed therapeutic milieu of the classroom.

Repairing regulatory abilities within the classroom context can occur when teachers create learning environments designed for co-regulatory experiences (e.g., side-by-side interactions with a well-regulated teacher); self-regulatory capacities (e.g., opportunities for

students to monitor and practice self-regulatory strategies); working with difficult emotions (e.g., understanding one's stress triggers and strategies to shift emotions); and encouraging individualised strategies for managing student behaviour (e.g., empowering the student to create self-strategies pre-emptively and throughout the school day). Two regulatory pathways can be employed in trauma-informed classrooms: (a) cortical mediation (i.e., *top-down* regulation) whereby a student can effectively direct their own regulation; and (b) improving the body's ability to self-regulate (i.e., *bottom-up* regulation) whereby a student is given multiple opportunities to increase the body's regulatory rhythms, thus resetting their baseline arousal responses in order to fortify parasympathetic nervous system capabilities (Australian Childhood Foundation, 2010; Cole et al., 2009; Perry, 2006).

Repairing disrupted attachment styles refers to repairing the ability of students to form strong relationships. Attachment refers to an enduring relationship with another person (e.g., parent, carer, teacher, friend) that enhances soothing, comfort, pleasure, or safety (Ludy-Dobson & Perry, 2010). Attachment is a core developmental task for healthy maturation and aids the formation of self-protection strategies in the face of perceived threats or danger (Baim & Morrison, 2011). In trauma-informed classroom practice, it is paramount that the student-teacher relationship be a safe conduit to learning; and that student-student peer relationships fortify safety and belonging within the learning environment. Teacher-student relationships which emphasise teacher empathy, warmth, genuineness, and non-directivity yield positive student outcomes (Cornelius-White, 2007). Students often benefit from the feelings of connectedness and belonging they experience in the classroom, feelings that help them cope with healthy stressors (e.g., learning something new) within the classroom (Roffey, 2013; Stewart, Sun, Patterson, Lemerle, & Hardie, 2004).

Two approaches included in trauma-informed learning pedagogies — repairing regulatory abilities and repairing disrupted attachment styles — both have an emphasis on healing. While this healing approach is a critical part of trauma-informed classroom practice, these two domains can be further enhanced by integrating a strengths-based perspective. This argument is based on Keyes' two-factor theory which recognises that building mental health requires more than addressing deficits of ill-being (Keyes, 2002; Keyes & Annas, 2009). Moreover, the two-factor theory can be used to argue that since trauma-informed education must teach students in ways that both heal weaknesses and build strengths two different trajectories of learning are required (Magyar-Moe, 2009). A student who struggles in the domains of regulation or relationship may show promise in other areas that can then be developed as strengths of character and capability. Healing and growth are two perspectives that can assist teachers in understanding students and their developmental needs.

Trauma-Informed Positive Education (TIPE; Brunzell, Stokes, & Waters, 2015) is informed by positive psychology. Positive psychology is the study of wellbeing, human strengths, and optimal functioning (Gable & Haidt, 2005); it aims to foster the two conditions of

wellbeing: *feeling well* and *doing well* (Jayawickreme, Forgeard, & Seligman, 2012). The TIPE model enhances understandings of trauma-informed pedagogies by building on regulatory capacities and relational attachments to also emphasise teaching practices that foster positive emotions, engagement, relationships, meaning, and accomplishment (Seligman, 2011) as psychological resources for vulnerable students.

One goal of the TIPE model is to assist teachers to promote this set of classroom-based interventions in a developmentally aligned way by increasing student capacity within regulatory abilities, which fortifies the development of strong classroom relationships, and leads to student readiness to increase psychological resources in their areas of strength. This links to understandings of hierarchical brain organisation in that the lower parts of the brain govern the body's regulatory tasks; the limbic system mediates relational and emotional capacities; and the neocortex is the seat of higher-order thinking (Perry, 2006; 2009). The TIPE model emphasises classroom intervention principles that build regulation (lower brain), strengthen relationships (limbic system), and prepare the student for the learning of psychological strategies such as resilient thinking and leading with character strengths (neocortex). Using the TIPE model, teachers may assist trauma-affected students to nurture the necessary healing and growth for successful learning, while providing significantly more intervention pathways for classroom adaptation to meet specific student needs.

Alternative and Flexible Education

Alternative and flexible learning settings strive to educate students who are no longer in mainstream schools. In the Australian context, many alternative education programs have been established in the last 20 years, in part to address the political pressure to increase school retention (Wilson, Stemp, & McGinty, 2011).

McGregor and Mills (2012, p. 843) identify the concept of alternative education as being firmly rooted in the “progressive tradition” of education. te Riele (2014) notes that these programs, which may be referred to as alternative education, second chance education, or re-engagement programs, attempt to meet the needs of students from disadvantaged backgrounds (e.g., trauma-affected, low socio-economic, Indigenous, rural areas), who are disproportionately represented in alternative education. This paradigm of education has given rise to a general “blurriness” in both the terms that are used to describe the sector and the sector's education contexts, services, and outcomes (Aron & Zweig, 2003, pp. 20–21).

As of 2014, there are over 900 flexible learning programs educating over 70,000 students each year in Australia (te Riele, 2014). te Riele (2007, p. 54) argues that this has created a “bewildering array” of initiatives, specialist units, flexible learning options, and curricular models established by State Departments and community service organisations. While these options may provide promising pathways, many of them are working in isolation. This sector has

been labelled confusing, inefficient, unstable, and lacking a shared framework (Cole, Griffiths, Jane, & Mackay, 2004; te Riele, 2007).

Despite the multiple alternative education options for many communities, there are surprisingly few examples of pedagogical approaches (Milbourne, 2009). te Riele (2007, p. 55; 2014) argues that pedagogical responses in flexible learning contexts should take developmental perspectives, rather than framing students via their deficits where often, the term ‘youth at risk’ has connotations of deficiency and minority status. Such developmental approaches should originate from a student’s strengths and surrounding systems of support. Alternative or flexible learning options are necessary to provide viable education pathways for at-risk students who are often blamed for a lack of motivation or irresponsibility (Aaltonen, 2012). te Riele advocates changing the approach, rather than problematising the student; and that developmental perspectives can empower *all* children through whole-school change.

Best practice depends on the mix of a number of factors and variables. Pedagogical factors include teaching practices and learning experiences that are consistent, structured, and clearly defined; relationship-based teacher-student interactions; student-centred curricula that encourage diversity and creativity, and facilitate positive outcomes; and flexible assessment protocols and procedures (Stokes & Turnbull, 2011).

We contend that using the TIPE model provides a pedagogy based on a developmentally-informed approach that has previously not been applied in flexible learning settings. As shown, the TIPE model is based on three sequential and synergistic domains. The first domain, repairing regulatory abilities, is the focus of this study, in which teachers explore developmentally-informed regulatory strategies for students within trauma-affected flexible learning cohorts.

Method

The present study draws on the investigation and first findings of a larger, longitudinal study of the developmentally-informed, hierarchical TIPE model. The aim of this first study is to show the action research outcomes of the first 13 weeks of intervention which corresponded to the first 13 weeks of the academic calendar. Within the TIPE model, the domain — *increasing regulatory abilities* — is theorised as the first area of pedagogical focus when establishing teaching and learning routines in a flexible learning classroom. Due to limitations of time-frame and reporting, this study focused on increasing regulatory abilities as the intervention concern for teachers in the first quarter of their school year as they worked with trauma-affected students in a flexible learning unit.

Design

A longitudinal (13 week) qualitative design was used. Located within a constructivist paradigm of qualitative interpretivist research, this design is an adaptation of participatory action research: appreciative inquiry action research (Ludema & Fry, 2008; Zandee & Cooperrider,

2008). In this approach, the embedded researcher and the research participants are both situated and reflexive, working towards democratic and practical knowledge (Reason & Bradbury, 2006); the inquiry is qualitative and interpretative which privileges teacher self-reflection and meanings (Kemmis & McTaggart, 2000); and the exploration is in keeping within the positive psychology paradigm focus on growth and increasing positive psychological resources (Ludema & Fry, 2008).

Sample

The qualitative research data were collected in a school (kindergarten through year-12) in a growing outer-metropolitan suburb. Although the total student population in this school is large (1900 students), the school has supported a flexible learning unit on-site that caters specifically to secondary students (aged 12–17) who have disengaged from the mainstream cohort. This school was selected based on teacher-reports of increasing numbers of trauma-affected students in both the flexible learning unit and mainstream student populations. This judgment was also supported through the school's psychologist, wellbeing teams, and the school's involvement with child protection services, youth justice, and refugee and newly arriving families. The school reports 42% of students have a language background other than English (South East Asian, Middle-Eastern, African and Polynesian languages); and 42% of families are in the lowest quartile for socio-economic status. The nine participants ($N = 9$), all classroom teachers between 23 and 38 years of age, were seven females and two males. They ranged in years of teaching experience from one to six years. Only three teachers had been teaching for more than four years. At this time of this study, the flexible learning unit was in its second year of operation.

Procedure

Permission to conduct the research was granted through the University of Melbourne Human Ethics Advisory Committee and the State Government Victoria Department of Education and Training prior to the research being conducted.

The procedure includes a series of longitudinal interviews conducted with the nine participants. Interviews for this study were conducted over a thirteen-week period. Participants each took part in three interviews, conducted as group interviews. Interviews, conducted face-to-face with participants, were audio-recorded and fully transcribed. In addition to participating in group interviews, each teacher completed two reflective journal entries based on prompts such as: "Reflect on and describe a specific students(s) that was particularly impacted by the changes you made in your classroom." Journal entries were included in the data analysis procedures outlined below.

Data Analysis

Data analysis was performed through an adaptation of qualitative content analysis: interpretative phenomenological analysis (IPA, Smith 1996). Framed through an IPA perspective, the procedure for qualitative content analysis included a fluid and iterative data

reduction sequence, in which transcriptions of interviews were collected for reading and rereading; data reduction occurred through the categorisation of themes and patterns (open coding); coherent categories were created and compared to patterns, interrelationships, and matching themes back to data (axial coding); and broad subthemes were determined in order to structure the framework for analytical discussion (selective coding) (Miles & Huberman, 1984). NVivo qualitative data analysis software was used to support the sorting and categorisation of interview and journal transcriptions. Table 1 outlines the qualitative content analysis and data reduction.

Table 1

Data analysis and framework conceptualisation

Coding Procedures	Theme 1	Theme 2	Theme 3	Theme 4
Open Codes <ul style="list-style-type: none"> • Assign preliminary codes • Compare the data across articles and reorganise codes when necessary 	Rhythm Brainbreaks Heartrate Physical activity Patterned and repetitive Yoga	Self-regulation tools Stress Defining stress Stress in body	Mindfulness Breathing Noticing Being present, centred, and grounded	De-escalation Escalation Maps Calmer students Safety Plans
Axial Codes <ul style="list-style-type: none"> • Examine relationships between codes • Categorise codes into themes • Match themes back to data 	Rhythm	Self-regulation	Mindfulness	De-escalation
Selective Code <ul style="list-style-type: none"> • Core variable that includes all data in set 	Repairing regulatory abilities			

Results and Discussion

According to the TIPE model, the first priority of teacher focus is to ensure a predictable classroom environment that nurtures strong regulatory capabilities for trauma-affected students. As such, the present findings and discussion maintain specific focus on the first TIPE domain, increasing regulatory capacities within students. These qualitative data are from the first 13 weeks of the school year, and thus represent the first developmental TIPE task of a teacher with a

new group of students at the start of the academic year: establishing a regulated classroom of strong student (self-)management to set clear expectations for safe and successful learning. From the appreciative inquiry action research data, four subthemes describe teachers' learning about creating, implementing, and reflecting on classroom interventions that potentially regulate trauma-affected students for effective learning: rhythm, self-regulation, mindfulness, and de-escalation. Findings within each of these four subthemes will be explored in the following discussion.

Rhythm

As a specific focus for classroom action research, teachers narrowed their practice to three strategies that incorporated rhythm throughout the school day: (a) proactively using rhythm in the form of “brainbreaks”; (b) applying rhythm as a form of triage intervention to address heightened or resisting students; and (c) specifically focusing on heart rate as a rhythmic form of body regulation. Trauma and chronic stress exposure for children can have significant impacts on the body's ability to regulate the arousal response, including the basic body functions of blood pressure, body temperature, and heart rate. Children who have experienced acute trauma may have a resting-heart rate that far exceeds the desired 60 to 80 beats per minute as a result of continuous activation and re-activation of their stress response systems (Perry, Pollard, Blakely, Baker, & Vigilante, 1995; Perry & Szalavitz, 2006). Effective classrooms that help students to build stamina for self-regulation can employ ‘bottom-up’ regulation opportunities to give students opportunities to physically strengthen their body's capacity to regulate (ACF, 2010; Cole et al., 2009).

First, teachers learned about, then designed, short-burst opportunities for students to physically regulate. They named these brainbreaks. Brainbreaks were both time-tabled in lesson plans and called on in an impromptu manner when teachers judged that students were unable to concentrate or their students were showing decreased capacity for effective learning in a given lesson. Sometimes teachers introduced these brainbreaks after transition from lesson to lesson or coming in and out of the classroom during the day.

Brainbreaks lasted between two and five minutes and incorporated physical movement including: “silent ball” (e.g., a game where a ball was thrown from student to student, using non-verbal cues such as eye-contact and hand gestures; students compete as a class to beat their prior score of successful ball-passes without the ball dropping to the floor); clapping call-and-response games; Brain Gym physical activities (Dennison & Dennison, 1989); and mindfulness breathing exercises or visualisations (see following section).

One example of using physical rhythm as a form of regulation within a student-intervention was presented by a teacher who explained that, when disruptive students are asked to leave the classroom, this teacher employs a strategy of using physical rhythm as a form of regulation before directly talking to the student or asking the student to express themselves

verbally. Once removed from the classroom, the teacher walks the student directly to the sport oval. The teacher recounts:

I gauge on the way to the oval what their pace is. So when we get to the oval, I get how heightened they are. Sometimes I will take control, and I will set the pace for them and say, “I think you need to get a few things out of your system.” But then once I sense them drop a notch, I let them take their pace because then they can self-regulate better. So I gauge their levels. And that’s if I know the student well.

Here, the teacher is adapting the principles of rhythmic regulation to behaviour intervention in a heated moment with a student who is struggling with emotional regulation. Within the action research discussions, teachers acknowledged that lecturing students on their behavioural choices did not promote the desired effects. Often, these kinds of lectures elevated both the stress-arousal of both teachers and students. Instead, teachers tried strategies such as these to reinforce a sense of physical rhythm when students presented symptoms of restlessness or frustration. Additionally, this teacher is employing relational attachment principles, remaining side-by-side with the student in order to co-regulate the student by matching or directing the student’s rhythms (Crittenden, 2008).

Within the subtheme of rhythm towards increased regulation for trauma-affected classrooms, teachers also learned about the specific effects of trauma-exposure on heart rate. They brainstormed ways to teach students about their own heart rates, how to measure heart rate in a variety of ways, and to notice the effects of heart rate throughout the day and in specific situations. One teacher reflects:

I mean they’re right on-board with doing their heartbeat. They love that and in numeracy they’re graphing them. They get that when your heart rate is up, you’re stressed out and so on.

Within their discussions, teachers noted the importance of using heart rate as a rhythmic strategy in a proactive way. Accurately measuring one’s heart rate requires a certain amount of careful attention, which might be hard for the student to access in a heated moment of behaviour triage. In order that students should frame their learning about heart rate in a positive and proactive way, the teachers agreed that they would not use heart rate on such occasions. Rather, they introduced the concept within wellbeing, numeracy, and science contexts, which they aim to refer back to for the rest of the school year.

The theme of rhythm can be seen in adaptations that incorporate brainbreaks, use physical activity proactively and as triage, and teach about heart rate. Teachers voiced value in re-visioning student struggles in regulation as opportunities to increase the frequency of bringing a strong sense of rhythm to their pedagogical practice. In this way, rhythm as a form of intervention can frame student-teacher interactions to better decrease the arousal response, build

stamina for learning, and nurture the body's capacity for sustained concentration. Teachers can apply this suggestion by planning these classroom interventions in a regular and predictable way. Likewise, these data suggest that, when used as an intervention strategy, teachers will want to build consistent expectation for physical, rhythmic, and relational contact when resistant students require one-on-one attention to regulate and return to the classroom.

Self-regulation

The second subtheme arising from the data was self-regulation. Specifically, the explicit teaching of self-regulation to students in two forms: teaching students about their own stress-response with strategies to shift their arousal; and using specific self-regulation tools to help students identify their own ability to self-regulate and identify their readiness for learning. Within the initial meetings of the action research cycle, teachers were exposed to the literature on self-regulation and the stress-response, with particular focus on the adverse developmental effects of trauma on the child's stress-response.

The trauma-informed literature suggests that self-regulation can be defined as the domains of sensory processing, executive functioning, and emotional regulation (Hughes, 2004, 2006; Perry, 2006; Bath, 2008). An important aspect of self-regulation learning for adolescent students is psycho-education. Teachers shared that students needed more knowledge on specific regulation of their own stress-response and prior to this action research, they had not taught or discussed these lessons with their students. Thus, in the action research planning and reflection meetings, teachers were provided with materials (based on the above studies) and participants incorporated their own ideas along with the group's suggestions to best embed learning about self-regulation and the stress response into their curricular unit plans. The following reflection comes from a group interview:

It's been quite interesting and fun to get the kids to be able to articulate their physical responses to stress, and what it looks and feels like to them. We've focused a lot on the body with questions like, "What are you physically feeling or noticing in your bodies?" And yes, the stress triggers ... and drawing pictures of where on their physical bodies they feel their physical response. They've loved doing that.

These teachers continued to describe their particular adaptations of the stress-response research to their classroom curriculum including: student brainstorming on the stressors most relevant to student experiences; the effects of stress on the body; specific student reflections on experiencing stress; and different coping strategies both in and out of school. Teachers reflected that they were able to connect the students' learning responses to other areas of the curriculum, notice improvements in their cohort's readiness to learn, and increase their knowledge about individual students themselves (e.g., their triggers, their stressors, and environmental threats/supports).

Due to the enthusiastic responses of the students, teachers saw value in taking academic-instruction time to teach students about self-control in the face of stressors and adversity. They voiced throughout the interviews that students did not have, and desperately needed, strategies for coping with stressors throughout their day. Teachers also experienced a dialogue opening between students and teachers about topics that had not been previously a part of the classroom domain. Teachers saw great value in this dialogue as a way to encourage student voice and student advocacy for their own needs within the classroom setting.

Another area of self-regulation was the use of self-regulation tools within the classroom. One such tool was a *self-regulation rubric* which allows students to self-identify where they are on a ready-to-learn scale. One teacher discussed her classroom *ready-to-learn rubric* that coordinated emotional states with colours. Her students each had their name on a moveable icon to place or move during different time-points throughout the day. Their teacher recounts:

With self-regulation, initially the boys couldn't even tell when they were angry. So we talked about being angry, what behaviours they showed, how they felt, and now they're able to actually self-regulate and say, "I need to get out, I need a drink." Once the boys are ready, I will go around one at a time and ask where they are, and accept their answer no matter what.

Here the teacher is emphasising both the importance of unconditional positive regard (Rogers, 1961) and attachment (Bowlby, 1971; Crittenden, 2008) as a regulatory strategy as the students enter the classroom. Her willingness to "accept their answer no matter what" expresses a patience and desire to encourage the students to express their affective state, along with their self-perceived readiness for learning. She continues:

In our classroom, we made a "Ready-to-Learn" chart where students place themselves in the morning. Sometimes, one of the boys wants [his name card] placed off the chart. Okay, that's fine, I'll put it on the wall next to the chart until you're ready to actually articulate how you're feeling.

This teacher reflected that she is ready for the potentially disruptive answer (e.g., the student has placed himself off the rubric chart) and allows the icon to be placed off the chart; then reinforces the expectation by moving the icon when the student begins to regulate and shows learning readiness.

Even if I don't ask them, I'll sometimes find they'll take their name and will have repositioned their name card on the rubric by 10 o'clock. They'll tell me, "Miss, I want the shift or I want it moved into the red zone or the blue zone."

This quote illustrates the teacher's reflection on the importance of using tools like this self-regulation rubric in a consistent and predictable manner. This suggests that once the students

in this class came to understand and to employ such tools, they recognised and sought positive attention when they were ready to shift their icon into a new regulatory zone which signalled increased readiness to learn.

Mindfulness

The third subtheme arising from the data was mindfulness. Coding in this subtheme clustered around labels such as: breathing, noticing, present, centred, and grounded. Activities that teachers developed or adapted for their specific classroom contexts included introducing mindfulness concepts through brainbreaks or through short mini-lessons.

Within TIPE, mindfulness is positioned as a specific pathway towards mind-body regulation (e.g., autonomic nervous system control of the parasympathetic branches) that in turn can improve attuned communication (Hassed, 2008; Siegel, 2009; Thompson & Waltz, 2007), cognitive functioning, and emotional regulation (Waters, Barsky, Ridd, & Allen, 2014). After learning about these clear benefits for students and their classroom learning, teachers discussed how mindfulness crosses over to foci such as rhythm and self-regulation; and they hoped to interweave these concepts to increase student understanding throughout the school year. The initial mindfulness classroom adaptations included: teaching about the benefits of focussing attention on a single point such as their breath; listening to the sounds of the classroom; or short visualisations of a favourite location (e.g., the comfort of their own bedroom, a beach or forest). Additional activities within this suite of mindful minibreaks included visualisations around colours, emotions, gratitude; and bringing mindfulness to simple actions such as conversation, walking, or playing games (Brunzell et al., 2015).

In a recent evidence-based review, Waters et al. (2014) discuss the statistically significant effects of mindfulness and meditation interventions in schools and conclude that meditation positively increases student success by increasing cognitive functioning and emotional regulation. However, their review was conducted in mainstream student samples, and there are few studies on teaching and learning mindfulness in the context of trauma-affected or flexible learning classrooms. These data suggest that teachers have to introduce mindfulness in a purposeful way to establish clear classroom expectations of mutual respect and safety; and to explain the benefits of mindfulness practices in relation to the daily stressors of secondary school and life beyond.

In the current study, the teachers mutually agreed that incorporating mindfulness was the beginning of a journey. They voiced commitment to the idea of mindfulness as an intervention worth pursuing throughout the balance of the school year, and hoped to co-create strategies for whole-group and individualised student need. Due to its flexibility and multiple uses, teachers felt that teaching mindfulness held great potential for some of their students with severe regulatory challenges — once they were able to get student buy-in and establish safe and respectful routines.

De-escalation

The fourth and final subtheme arising from the data was that of de-escalation. Within their action research groups, teachers assisted students to de-escalate by specifically (a) learning about de-escalation, (b) creating and using de-escalation maps, and (c) designing individualised safety plans with and for students.

In the context of the TIPE classroom, de-escalation refers to a suite of mindsets, strategies, and interventions that instil a strong self-regulatory student capacity. Put simply, encouraging a calm, ready-to-learn affective state is the goal of these interventions. The present data suggest that teachers, as classroom mediators, have a great deal of agency in this regard. Teachers set the tone and must model de-escalation when student adversity arises in the classroom. Teachers reflected that their own escalation can definitely escalate a student in a negative way.

A teacher can make proactive steps towards de-escalation by creating a calm, routine, and predictable environment; consistently monitoring and identifying aroused stress states; and implementing interventions to maintain optimal states (Brunzell et al., 2015). Employing such strategies for classroom de-escalation fosters nuanced understandings of individual student needs and specific triggers or arousal stress responses. In the action research planning meetings, teachers discussed their own strategies to properly assess a difficult situation: maintaining a calm demeanour, leading with empathy, and offering choices. They also discussed the triggers that trauma-affected students can bring to the classroom. These triggers often have nothing to do with the teacher, and students can enter the classroom angry and upset about situations outside the school or in the past.

Teachers also shared how understandings of de-escalation improved their knowledge of particular students and how they can best learn. One teacher explains a specific adjustment for a student below:

After finding out [a specific student] becomes stressed during most classes, I provide him with stress balls, goo and his required toy that makes him safe.

This teacher continued to explain that learning about, and implementing, de-escalation strategies has allowed her to notice and adjust stress-management strategies for students. As shown above, creating a differentiated safe-space for students to learn helps to de-escalate the entire cohort to stay on track for successful learning.

I have one particular student for whom it is a struggle just to sit down and have a conversation with him, and he said, “I just want my own space.” So coming from a traumatic background, he’s very distracted all the time, he’s very anxious, and you can tell that by his movements. [The co-teacher] said, “This is your table, this is your space,

you can go there whenever you like. We'll give you your own books; this is your space.” This has stopped the whole class from being off task because of this one student.

Teachers reported that this, in part, gave students ownership within the classroom — something that the teachers had not previously considered until speaking individually with the student.

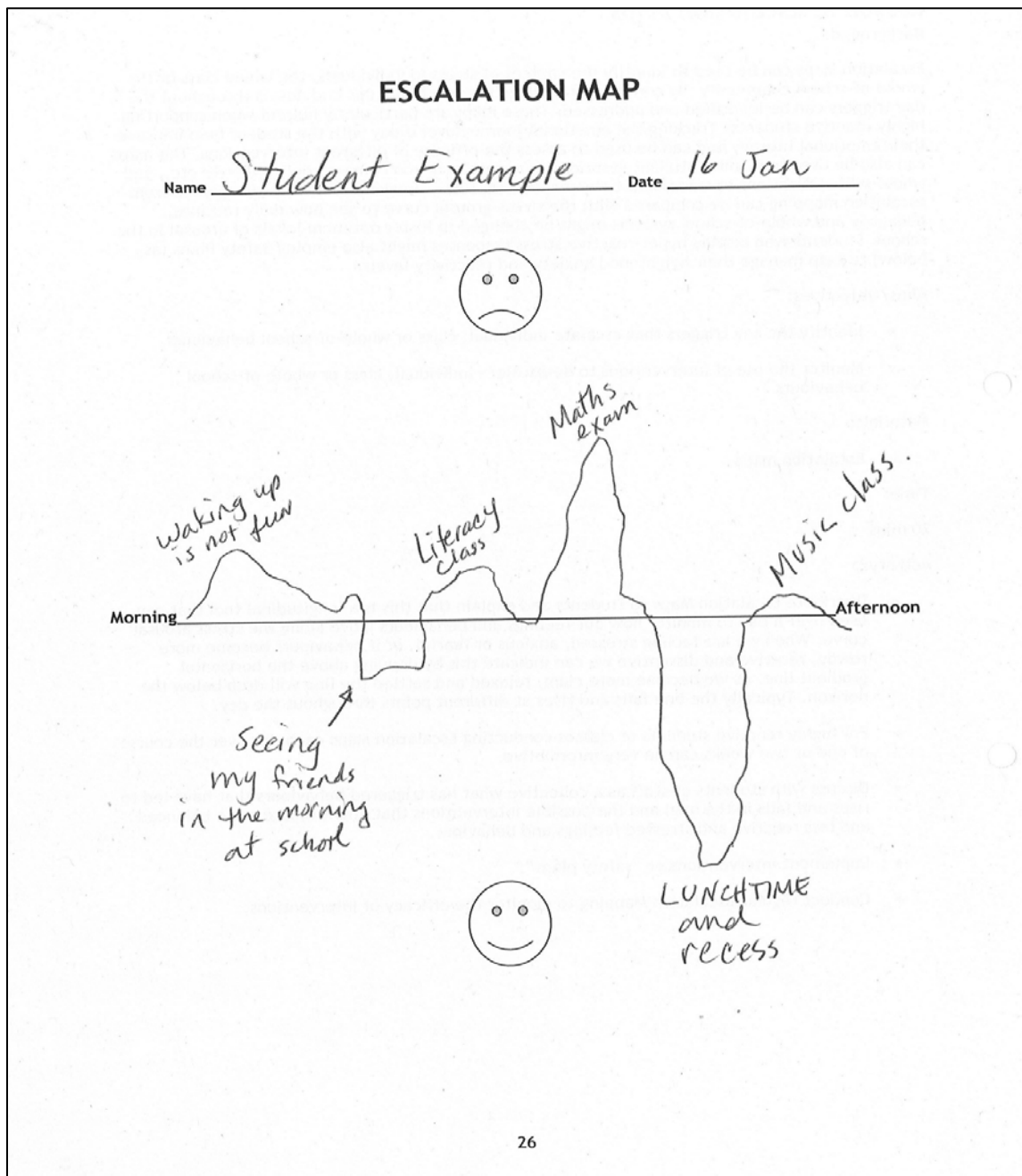


Figure 2. Example of escalation map.

One particularly helpful tool in the cluster of de-escalation strategies was the use of escalation maps. This simple one-page tool allows students to draw a line on a continuum to represent moments in their school day when they feel escalated and de-escalated, and to record why they felt a shift in their escalation, perhaps pinpointing a particular event that occurred (Brunzell et al., 2015).

Teachers shared their use of the maps and student responses when referring back to the maps throughout the day:

Using the de-escalation and escalation maps, the kids can graph where they're at through their day and how they're feeling; It's worthwhile because they straightaway realise, "Oh, this is the time of day that I'm always stressed and I don't want to be here, and this is the time of day where I'm happy or relaxed."

Teachers shared that tools like the escalation map assist in getting students to articulate information (e.g., their triggers, their emotions, outside contextual factors) that they may not share in daily student-teacher exchanges. Additionally, the tool gives valuable insight for setting up the classroom for optimal learning in a side-by-side relational manner.

In addition to escalation maps, teachers discussed the value of *safety-plans*. A safety-plan within a TIPE classroom is an individualised plan, co-created with the student which details: (a) the times when the student feels escalated; (b) the triggers or reasons for escalation that the student identifies; (c) words or actions that the student will share with the teacher when escalation occurs; (d) word or actions that the teacher can give to assist de-escalation; (e) strategies that the student determines will be helpful for de-escalation or calmness. The teachers agreed that the strategies must be determined with the student, and included only if the teacher deems the strategy as appropriate for use in the flexible learning unit setting. Strategies within the safety-plans at this flexible learning unit included: taking a short walk, requesting a friend for a brief talk, getting a drink of water, reading in the back of the classroom, using a fidget toy, listening to music on headphones, or seeking assistance from another adult. The plans were created on either forms created by the teachers or individual cards created by the students themselves and kept near or in the students' desks.

As mentioned above, a key benefit of creating safety-plans with students is alerting the teacher to particular self-identified triggers of the student. One teacher reflected that one of her students was able to articulate how he wanted to be treated in his safety-plan, even when he experiences rapid emotional dysregulation. She explains below:

Well, for some students, it's getting them to identify: "I do like to be on my own when I'm angry. Please don't follow me. Leave me alone, or please go away and let the other staff de-escalate the situation." So it's getting them to understand themselves; and without it we wouldn't know what triggers them, we wouldn't know how to help them.

This teacher's reflection is a reminder that often, trauma-affected students may not be able to communicate what they need or how best to support them. Throughout the action research, an ongoing discussion with teachers centred on how trauma-affected students have come to see themselves as failures in the classroom. In doing so, teachers shared how they believe this sense of failure masquerades as aggression, resistance, or refusal within the classroom. The quote above may also be interpreted as a reminder that students value being asked about what works for them; and once they answer, they have invited the teacher into a closer relationship — in itself a powerful form of regulation (Crittenden, 2008) — which helps them to take on the challenges required for new learning.

Conclusion

This paper explores the perspectives of teachers participating in an appreciative inquiry action research process in order to learn and to embed the first domain of the TIPE model, increasing regulatory abilities, within trauma-affected flexible learning cohorts. Particularly within flexible learning settings, teaching pedagogies must address the previously unmet developmental needs required for effective classroom learning.

The results of this study reveal how teachers integrated their own learnings about increasing regulatory capacities. The results emerged through four subthemes: rhythm, self-regulation, mindfulness, and de-escalation. Throughout this study, teachers incorporated interventions that showed promising classroom practice such as: strengthening the *rhythms* of students' bodies through brainbreaks, awareness of heart rate, and "bottom-up" physical regulation; increasing *self-regulation* through the use of psycho-education and tools for student self-monitoring; introducing and practicing *mindfulness* at various points in the school day; and placing particular focus on *de-escalation* in the classroom environment through the use of student-friendly tools and strategies.

Throughout the action research process, teachers reflected and actioned classroom interventions to promote an increase in student regulatory abilities and an increase in their own abilities to manage classroom behaviours. This study provides the basis for future investigation for the TIPE approach within flexible learning settings as teachers strive to meet their students' needs for both healing and growth.

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