

School Improvement Tool Elaborations

Student engagement and wellbeing

**Background report and
literature review**

School Improvement Tool Elaborations: Student engagement and wellbeing. Background report and literature review
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Introduction

The critical importance of supporting student engagement and wellbeing is widely and increasingly recognised as a key facet in improving student learning. Although there was a clear focus on student engagement and wellbeing in the *National School Improvement Tool* (NSIT; Masters, 2016a), the Queensland Department of Education identified the need for more specific evidence-informed guidance for school leaders and teachers in 2018. This explicit focus on student engagement and wellbeing is particularly important to achieving equitable outcomes for all students – an issue amplified by the Covid-19 pandemic.

The Queensland Department of Education engaged the Australian Council for Educational Research (ACER) to “elaborate” the evidence underpinning the *National School Improvement Tool* as it relates to student wellbeing and engagement. The intended outcome was to produce a resource that describes the related practices or “elaborations” to support schools to improve their practice. This report provides an overview of the background for developing the elaborations and presents key findings from the literature review that informed the development of this resource.

The development of the elaborations coincided with the development of the *School Improvement Tool* (SIT), as the second iteration of the NSIT. A comprehensive literature review (Van der Kleij et al., 2023) was undertaken to inform revisions from NSIT to SIT. The elaborations were developed using key insights from this literature review. Although the resource is entitled *School Improvement Tool Elaborations: Student engagement and wellbeing*, the first edition of this resource retains some features of the NSIT, notably the domain names and visual design. This is reflective of the fact that the elaborations were published in 2022, before the SIT had been fully developed (published and officially launched mid-2023; ACER, 2023). Nevertheless, the elaborations are based on the same contemporary evidence base and have been developed to be used alongside the SIT. The updated domain names in this document reflect this alignment.

The overarching research questions were:

- How do student engagement, wellbeing and learning outcomes relate?
- What is the evidence relating to whole-of-school approaches to student engagement and wellbeing?
- What are the evidence-based practices that lift student engagement and wellbeing, alongside academic gain, as aligned with each of the 9 *National School Improvement Tool* domains?

A focus on student wellbeing is embedded throughout the (*National*) *School Improvement Tool*. This focus is grounded in the research which supports the view that all students are capable of success in supportive circumstances. The basis for this focus comes from positive psychology research, and is associated with positive mood and attitude, resilience, satisfaction with self and relationships, and experiences at school (Dix et al., 2020; Durlak et al., 2011; Noble & McGrath, 2010; O’Flaherty & McCormack, 2019). Overall, a positive psychology approach framed the development of the elaborations, taking a holistic and preventative rather than remediation orientation to supporting student engagement and wellbeing (Gersch, 2009).

The literature review outlines the evidence that underpins the development of a set of evidence-informed elaborations, or specific practices, that support student engagement and wellbeing across the 9 domains of the SIT. These observable, measurable practices to support student engagement and wellbeing have been developed from a review of relevant literature in the areas of socio-emotional learning (SEL), health and wellbeing, student engagement and a sense of belonging, and motivations for engagement. They also take account of commissioned research reports by the Queensland Department of Education and the Department’s (2018) approach to student learning and wellbeing across the whole school: creating safe, supportive, and inclusive environments; building the capability of staff, students, and the school community; and developing strong systems for early intervention. Although the elaborations were developed in the Queensland context, they draw upon contemporary international research, and are broadly applicable across diverse contexts.

Methodology

The elaborations were developed using a design research methodology (McKenney & Reeves, 2012), which incorporated iterative rounds of literature review, stakeholder consultation and co-construction. Initial stages of development involved an extensive review of international evidence in the areas of school improvement, socio-emotional learning, health and wellbeing, student engagement and a sense of belonging, and motivations for engagement. This literature review built on the comprehensive review of research (Van der Kleij et al., 2023) that underpins the *School Improvement Tool* (ACER, 2023). Findings from a commissioned report by the Queensland Department of Education were also reviewed (Deloitte Access Economics [DAE], 2018).

Following this initial examination of key evidence, multiple rounds of literature review and stakeholder consultation were undertaken. Consistent with a qualitative research methodology, literature was sourced and read to saturation (Saunders et al., 2018), that is, until no novel themes were evident. Targeted searches were conducted to retrieve relevant literature whenever gaps were identified. The elaborations were iteratively refined and co-constructed in several rounds of consultation with key Queensland Department of Education stakeholder groups representing a broad range of voices, including Aboriginal and Torres Strait Islander voices. All revisions following consultation took account of relevant research evidence.

The characteristics of the *School Improvement Tool* (ACER, 2023) make explicit the measurable, observable practices that impact on improved student outcomes across 9 interrelated domains. Care has been taken in drafting these elaborations to ensure that they are drawn directly from the research evidence and written with the clarity and precision to drive improvements in practice. In developing the elaborations, careful attention was paid to ensure close alignment with the SIT and broader evidence base, as well as cohesion across elaborations for each of the domains, which at times required extrapolation. For example, consultation feedback highlighted various gaps in Domain 4, targeted use of school resources. Consequently, further elaborations were developed to ensure a coherent representation of effective practices across the tool. In addition, stakeholder consultations identified the need to ensure a consistent focus on engagement and wellbeing throughout. Given their interrelatedness, this consistent focus was adopted. The literature review

reported here provides an overview of key insights specific to student engagement and wellbeing. To fully understand the broader evidence base from which the elaborations were developed, interested readers are referred to the *School Improvement Tool* literature review (Van der Kleij et al., 2023).

Consistent with ACER's approach to developing improvement tools and resources, the elaborations present evidence-based practices in optimising student engagement, wellbeing and learning outcomes. Evidence-based in this instance is not to say that these elaborations are to be mechanistically implemented without agency or regard of evidence more broadly (an unproductive stance as per evidence-based education paradigm; McKnight & Morgan, 2020). Rather, the elaborations were developed in a way that is context-neutral and encourages tailored solutions as appropriate to the school context. It recognises the unique challenges within diverse contexts, as well as varying levels and complexity of student need. The 9 SIT domains and underpinning evidence review (Van der Kleij et al., 2023) provided the overarching framework for identifying, selecting, and synthesising research evidence.

The remainder of this document provides a synthesis of research evidence that informed the development of the elaborations in relation to student engagement and wellbeing for each SIT domain respectively.

Student engagement

Student engagement was conceptualised following Fredricks et al. (2004), who distinguish cognitive, emotional and behavioural dimensions of engagement. Cognitive engagement relates to motivation to learn, as well as persistence and resilience in learning. Emotional engagement is about a students' relations with learning and others. Behavioural engagement captures the participation in various areas of schooling, including academic and social activities. This section provides a narrative overview of the research evidence specific to student engagement as aligned to each of the SIT domains.

Domain 1 Driving an explicit improvement agenda

In recent decades, there has been a shift from a focus on school improvement focused on academic attainment to a focus on more holistic outcomes which underpin students' potential to contribute to society (Robinson, 2007). Given the interconnectedness of student engagement, wellbeing and academic outcomes (Centre for Education Statistics and Evaluation [CESE], 2015b), a school's improvement agenda needs to articulate with all of these outcomes. Specific to student engagement, research highlights the importance of a shared school-wide commitment to enhancing student engagement (Fullan & Hargreaves, 2016; Houghton & Anderson, 2017), high expectations for student attendance (Epstein & Sheldon, 2002) and clear behavioural expectations and rules (CESE, 2017). This extends to responsibilities of families in optimising student engagement (Hancock & Zubrick, 2015). Monitoring student engagement is the responsibility of every educator. In addition, schools need to have effective internal collaborative structures and have appropriate systems in place for referral to internal and external support providers (DAE, 2018).

Harris et al. (2013) highlighted the importance of students' voices in shaping a school improvement agenda. They identified that student voices are often absent in school improvement discussions. However, considering voices of "those most directly affected by school change" (p. 1) can provide highly valuable insights for school improvement. This requires a shift in mindset, where students are viewed as "legitimate, crucial contributors to school improvement" (p. 2).

Domain 2 Analysing and discussing data

The importance of data use for the school-wide monitoring of student outcomes is widely acknowledged (Goss & Hunter, 2015; Hattie, 2012; Robinson et al., 2017; Schildkamp, 2019; Yoon, 2016). Yet, research suggests that schools tend to place a strong focus on analysing and discussing standardised assessment data (Datnow & Park, 2018). If data are to genuinely guide improvement, educators need to look beyond achievement outcomes and consider data more broadly, including data about student attendance levels (Hattie et al., 2015; Masters, 2016b) as well as student engagement more broadly, for example by capturing student voice (Queensland Department of Education, 2019; Taylor & Parsons, 2011) as well as anecdotal evidence (DAE, 2018). In addition, data needs to capture engagement holistically to enable inclusion of those who may be quietly disengaged rather than only those who display disruptive behaviour (Goss & Sonnemann, 2017). Student engagement is best measured using multiple data sets that draw upon quantitative and qualitative indicators of engagement (Queensland Department of Education, 2019; Taylor & Parsons, 2011). Importantly, data from different sources need to be triangulated to enable effective data use (Lai & Schildkamp, 2013; Schildkamp, 2019; Thessin, 2015).

Domain 3 Promoting a culture of learning

Creating a school-wide learning culture is one of the most important mechanisms through which school leaders can have a positive impact on student achievement (Day et al., 2016). “Successful principals build cultures that promote both staff and student engagement in learning” (Day et al., 2016, p. 253). Perhaps not surprisingly, there is an extensive body of research that links school culture and student engagement.

Key research themes in relation to school culture and student engagement are an inclusive and orderly environment, high expectations, and strong interpersonal relationships. For example, evidence from student surveys suggests that effective schools are more likely to have an environment where students feel included, actively participate in the academic program as well as in extra-curricular activities, feel appropriately challenged, exhibit positive behaviour and positive attitudes to academic work, and have good relations with their teachers (CESE, 2015a). Research highlights the importance of whole-school strengths-based approaches (Noble & McGrath, 2010) and school-wide expectations for student engagement (Hattie et al., 2015) and behaviour (CESE, 2017; Cole, 2012; Leithwood, 2011; Taylor & Parsons, 2011), high expectations for student success (McAleavy & Elwick, 2016; Rodríguez, 2008; Taylor & Parsons, 2011) and an orderly school and classroom environment (CESE, 2017; Hattie, 2009, 2012; Korpershoek et al., 2016; McAleavy & Elwick, 2016; Noble & McGrath, 2010; Sammons et al., 1995; Taylor & Parsons, 2011). Specific school-wide student belonging and engagement programs were found to have substantial impact on academic achievement (Dix et al., 2020).

CESE (2017) identified that the recent international literature promotes whole-school preventative approaches to student behaviour. Ideally, these preventative approaches include all relevant stakeholders in the school community, including parents. Specific to the Australian context, research highlights the importance of considering Indigenous voices in policy development and implementation to optimise a school’s learning culture (O’Brien & Trudgett, 2018). A productive school climate is nurtured by creating a sense of belonging and participation (Allen et al., 2018; Sammons et al., 1995). In addition, research demonstrates the influence of classroom management on students’ feeling of connectedness in the school (CESE, 2015b). Further, empirical studies consistently show positive associations between classroom management, student engagement and positive student behaviour, and learning outcomes (Oliver et al., 2011). Caring school leadership has been associated with an increased sense of belonging of students within the school community. Caring school leadership is characterised by a core focus on enabling personal growth to optimise the broad educational outcomes of schools in the broadest sense through provision of targeted support and building of productive relationships. A large-scale analysis of teacher survey and student achievement data showed significant positive relationships between caring principal leadership, student academic support and teacher collective responsibility, and student achievement outcomes (Louis et al., 2016).

In addition, research shows strong associations between fair student treatment and student engagement. Importantly, what is considered to be fair by students may differ from what teachers consider to be fair. From the perspective of students, being treated fairly includes treating all students respectfully and with dignity in social interactions (Gibbs & Poskitt, 2010).

Although student attendance does not equal engagement, research suggests that student attendance levels are significantly associated with academic outcomes (Leithwood, 2011). Based on a quantitative analysis of student survey data and assessment data, CESE (2017) identified a statistically significant relation between 3 indicators of student engagement and achievement outcomes. The indicators of engagement are *positive student behaviour*, *student attendance* and *academic interest and motivation*. Evidence-informed strategies to improve student attendance include: (1) setting high expectations for attendance; (2) listening to student perspectives to understand reasons for non-attendance; (3) promoting social and emotional engagement to support student wellbeing and a sense of belonging to the school community; (4) promoting positive and caring relationships with teachers; and (5) increasing collaboration with and participation of parents/families (CESE, 2017).

The implications of managing a lack of student engagement and/or a lack of positive student behaviour must be carefully considered. Whenever students display disruptive behaviours, it is vital to consider reasons for these behaviours considering students’ histories and contextual factors (McGrath & Van Bergen, 2015). Further, caution must be taken in implementing exclusion-focused strategies. Recent research into behaviour management, attendance and suspensions has highlighted an overrepresentation of marginalised groups of students (such as

students who have experienced trauma or students with disability) amongst suspended students (McCluskey et al., 2016; O'Brien & Trudgett, 2018). Such use of suspension and exclusion increasingly places students at risk of disengagement and reduced wellbeing (McCluskey et al., 2016).

Research overwhelmingly demonstrates the importance of relationships and interpersonal trust in building a productive learning culture (Day et al., 2016; Dinham, 2016; Hancock & Zubrick, 2015; Hattie et al., 2015; Leithwood et al., 2004; Leithwood, 2011; Louis et al., 2016; Miles & Ferris, 2015; Robinson, 2007; Rodríguez, 2008; Sammons et al., 1995; Taylor & Parsons, 2011). These relationships can extend to others beyond the school (Hancock & Zubrick, 2015; Scott, 2015). Evidence from students highlights the importance of personalised and trusting teacher-student relationships to students' schooling experience and engagement (Hancock & Zubrick, 2015; Rodríguez, 2008). Students specifically identified the importance of teacher support for academic as well as non-academic individual needs. A school culture where teachers 'looked out for students' and made students feel they were there to help them realise their potential was associated with higher student success (Rodríguez, 2008). Positive teacher-student relationships have also been found to be associated with student engagement and achievement. Specifically, meta-analytic evidence from primary and secondary schools suggests that teacher-student relationships directly impact student achievement, with student engagement identified as a mediating factor (Roorda et al., 2017). Research shows that strengthening positive teacher-student relationships appears especially important for students at risk of disengagement (McGrath & Van Bergen, 2015; Roorda et al., 2011).

The role of school leaders in developing and maintaining a productive school culture is critical. This requires building of trusting relationships, both within and beyond the school (Harris et al., 2013). School leaders can use a variety of creative ways to build a productive culture and enhance student engagement. For example, the Sadadeen primary school case study described by Hattie et al. (2015) shows the powerful impact of a school garden on student interest, engagement and attendance, which in turn fostered productive community partnerships. Research also highlights the importance of mutual respectful relationships between teachers and students from different cultural and linguistic backgrounds (Hattie et al., 2015). Use of culturally appropriate approaches to communication, including use of language spoken by families of students, is a useful way to cultivate parental trust and engagement in their child's schooling (Garza et al., 2014). Consistent with a positive approach to enhancing student engagement, research highlights the importance of celebrating publicly student success in a broad range of domains including behaviour in fostering a learning culture (Dinham, 2016).

Research in relation to school culture and student engagement also highlights the importance of student voice. Attending to student voice can have many benefits, including enhancing student feelings of belonging and connectedness to the school (Dinham, 2016; Harris et al., 2013; Hattie et al., 2015; Rodríguez, 2008; Taylor & Parsons, 2011), students feeling increasing ownership of their learning and reduced dependence on teacher guidance, as well as improved pedagogical practice (Hattie et al., 2015).

Domain 4 Targeting school resources

How school physical and human resources are allocated and used is of critical importance to student engagement, wellbeing, and learning. Resources need to be allocated in a differentiated way to enable equitable access to the full curriculum for all students, regardless of their needs, background or the school's location (Jackson, 2019). Research suggests that novice teachers are more often assigned to disadvantaged or lower-achieving students than their more senior colleagues, which may be detrimental to both teacher retention and student learning. More effective schools tend to be more strategic in assigning teachers to classes where they can have maximum impact and provide most benefit to the school (Loeb et al., 2012). Research in the Queensland context (DAE, 2018) shows that how school leaders allocate resources is influenced by the school's vision for student engagement and achievement, as well as contextual factors. Schools allocated resources in proactive and reactive ways to optimise student engagement. Research suggests that a proactive allocation of resources is more efficient, given the resource-intensive nature of addressing disengagement through remediation programs (Hancock & Zubrick, 2015). Whenever schools more clearly defined strategic priorities for student engagement, resources were allocated more effectively (DAE, 2018).

Glover and Levačić (2020) outline key principles for the use of resources in schools, which are relevant to optimising student engagement and wellbeing. These include:

- *Adequacy*: resources need to be adequate to enable schools to meet minimum standards as prescribed by different levels of the education system, ensuring equality of opportunity by accounting for students' differential needs.
- *Effectiveness*: the extent to which a school is successful in meeting its objectives.
- *Efficiency*: the extent to which a school can successfully meet its objectives at minimum cost.
- *Value for money*: the combination of effectiveness and efficiency and careful management of resources to ensure best-value.
- *Transparency*: clarity on how resources have been allocated, which play an important role in accountability.
- *Equity*: fair treatment given the school's context and student needs. For example, students from disadvantaged backgrounds may require additional support.

Domain 5 Building an expert teaching team

Student learning is maximised in classrooms where teachers use lesson time, resources, and space efficiently, and manage student behaviour. These aspects provide necessary conditions for good learning, but only have an indirect impact on student outcomes (Coe et al., 2014). Research overwhelmingly shows the importance of teacher professional learning for student engagement, defined as “the formal and informal learning experiences undertaken by teachers and school leaders that improve their individual professional practice and the school's collective effectiveness as measured by improved student engagement and learning outcomes.” (Cole, 2012, p. 6). Teachers also need to be able to confidently implement teaching strategies for vulnerable students or students who have fallen behind (Sonnemann & Goss, 2020). Handling disengaged students was identified as a top challenge for beginning teachers. This suggests that teacher capability in maximising student engagement is a critical area for teacher professional learning (DAE, 2018; Goss & Sonnemann, 2017). Beginning teachers require targeted support for developing the nuanced skills required to engage and manage students, which can be developed in collaboration with more expert colleagues. For example, formalised support through collaboration, mentoring, coaching, peer observation and feedback are impactful ways to enhance teacher capability in supporting student motivation and engagement. Research has also demonstrated the potential of building teacher leadership for enhancing student engagement (Campbell et al., 2015).

Domain 6 Leading systematic curriculum implementation

Research shows the importance of allowing sufficient time for covering curriculum content, thus providing opportunity to learn. Yet, the amount of time students engage in learning is a much stronger predictor of achievement outcomes (Leithwood, 2011). Sufficient time needs to be allocated to ensure students can engage in learning foundational subject knowledge and skills as well as explore their (extra-curricular) interests (Miles & Ferris, 2015). Moreover, engaging curricula focus on cross-curricular connections and 21st century skills (Taylor & Parsons, 2011). This is critical as research highlights that the holistic development of students occurs through extra-curricular and co-curricular offerings (O'Flaherty & McCormack, 2019). Leithwood et al. (2004) warned that there is a tendency for schools to narrow curriculum delivery for disadvantaged students, focusing on 'the basics'. However, access to the curriculum on the exposure to the full curriculum is essential to student engagement in learning and their future

participation in society. Further, research highlights the importance of valuing student success beyond academic and sporting achievements (Noble & McGrath, 2010).

Ensuring that the curriculum is relevant to learners and resonates with their day-to-day life experiences appears critical to student engagement in their learning (CESE, 2015a; Colao et al., 2020; Gettinger & Walter, 2012; Gibbs & Poskitt, 2010; Taylor & Parsons, 2011). For example, teachers may focus on topics that interest students, build on prior knowledge, provide opportunities for collaborative learning and engage students in case studies or problem-based learning (Colao et al., 2020; Gibbs & Poskitt, 2010). For example, solving authentic problems or community issues engages students and builds a sense of purpose for learning (Dunleavy & Milton, 2009). Teachers can also make curricular content more relevant and engaging for students by clarifying short-term as well as long-term learning goals (Gibbs & Poskitt, 2010; Scott, 2015). Flexible programming may be beneficial to sustain student engagement across the school year. Curriculum flexibility is also associated with other benefits that are not directly reflected in student achievement outcomes. For example, greater curriculum flexibility affords students more opportunity for agency, deep learning and can greatly enhance their overall motivation to learn (Jackson, 2019). Research has also demonstrated the positive impact of providing opportunities for social and emotional learning on student engagement, behaviour and attendance (CESE, 2015b).

Teachers may tailor curriculum content to be inclusive of students' various cultural backgrounds. In addition, implementing curricula in a way that draws cross-disciplinary connections can make learning more meaningful for students. Secondary students reported that cross-disciplinary learning resulted in higher student engagement and more learning. This finding was particularly evident in cases where curriculum was planned in a way that was compatible with specific student needs and strengths, for example by using group work to help boost confidence of students for whom English is not a first language (Moss et al., 2019).

Extra-curricular programs can have a small positive impact on student achievement ($d = 0.17$) and appear important to student engagement and behaviour in school (Hattie, 2009). For example, studying creative drama or arts was associated with slightly improved student achievement in other curriculum areas. It seems that the involvement in these curricular areas is beneficial to student engagement in schooling overall, which in turn positively affects their achievement (Hattie, 2009). A challenging curriculum and the opportunity to engage in extra-curricular activities has also been associated with improved student feelings of connectedness to school (CESE, 2015b).

Domain 7 Differentiating teaching and learning

Research shows the importance of providing differentiated opportunities for learning as important to student engagement, wellbeing, and achievement (CESE, 2015b). Given the diverse nature of students within a classroom, proactively tailoring curriculum and instruction to students' "readiness, interest and learning profile" (p. 121) is critical to ensure all students can progress and experience success. Effective differentiation is particularly important to adequately address the needs of students for whom the language of instruction is a second language, students with disability, and gifted students (Tomlinson et al., 2003). Nevertheless, it must be acknowledged that differentiation has been conceptualised and operationalised in a variety of ways, not all of which align with core tenets of inclusive education (Deunk et al., 2018; Graham et al., 2021). Consequently, empirical evidence on the impact of differentiation on student engagement and achievement is conflicting.

Rather than reactively adjusting curriculum and instruction when issues arise, teachers need to plan for the needs of various learners (Tomlinson et al., 2003). Research highlights the need for teachers to take a strengths-based approach to differentiation, where teachers set high expectations and take responsibility for each student's progress (Tomlinson et al., 2003). In differentiating teaching and learning, teachers need to draw positively on the full range of information they have about students (Queensland Department of Education, 2019). This may require differentiating assessment to enable students to demonstrate their capability (Sonnemann & Goss, 2020; Tomlinson et al., 2003), and to best enable teachers to ascertain gaps in learning and plan for targeted interventions (Sonnemann & Goss, 2020). Teachers may modify curriculum content and learning activities to suit learners' needs and interests (Hancock & Zubrick, 2015; Scott, 2015). Such personalisation of teaching and learning in a way that makes it meaningful is critical to student engagement and motivation (Scott, 2015). Ensuring that all students are appropriately challenged

and engaged and receive the necessary support to achieve the best possible outcomes is vital (Hattie, 2012). This is closely related to setting high expectations for all students, regardless of their starting points (CESE, 2015a; Hattie, 2012; Masters, 2013). In addition, the pace of instruction and curriculum coverage may be differentiated (Tomlinson et al., 2003). Research shows that differentiating instruction and assessment to meet individual student needs is critical to student engagement (CESE, 2015a). Teachers reported using ability groupings, individualised learning plans, extension activities and modified assessment tasks as approaches to differentiation. It must be noted that research highlights the criticality of not using fixed ability grouping as an approach to differentiation, which is not considered to be inclusive (Graham et al., 2021). In addition, research highlights the importance of implementing additional support/preventative interventions for students who are disengaged (CESE, 2017).

Importantly, teachers need to take a student-centred approach to differentiation (Tomlinson et al., 2003) to ensure students are actively involved in and can regulate their learning, which has been associated with increased levels of engagement and learning outcomes (Gibbs & Poskitt, 2010). This requires (co-)articulation of appropriately challenging learning goals and success criteria that provide opportunity for each student to achieve success (Gettinger & Walter, 2012; Gibbs & Poskitt, 2010; Tomlinson, 2008), which helps students monitor their progress towards learning goals (Gibbs & Poskitt, 2010; Tomlinson, 2008).

Some have argued that strong interpersonal relationships between students and teachers are necessary for teachers to be able to respond appropriately to students' needs (Hattie et al., 2015; Taylor & Parsons, 2011). For example, Dinham (2016) emphasised that teachers need to personally know their students and pay careful attention to individual student needs, as evidenced by, for example, changes in levels of engagement or health. Taylor and Parsons (2011) claimed that teachers need to have a "spirit of caring, empathy, generosity, respect, reciprocity and a genuine desire to know students personally" (p. 10).

Domain 8 Implementing effective pedagogical practices

The nature of teachers' pedagogical practices makes a critical difference when it comes to student engagement (Taylor & Parsons, 2011). Research evidence shows that while instructional time per se is moderately associated with student achievement outcomes, there is a strong association between the amounts of time spent engaged in learning by students and their academic outcomes (Leithwood, 2011). Evidence from the CESE (2017) analysis found that effective learning time was the most important facilitator of student achievement.

Effective pedagogy includes creating an environment in which students are engaged and motivated (Masters, 2011). Teachers can foster student engagement in learning by using learning tasks that are challenging, interesting, authentic and relevant to learners (Hattie, 2012; Scott, 2015; Taylor & Parsons, 2011). Consistent with research discussed in relation to other domains, research shows the importance of teachers setting high expectations for students, which has been linked to enhanced engagement and achievement (CESE, 2017). Using a range of pedagogical practices is a key mechanism to ensure that students are challenged, engaged, feel safe to expose their understandings and misunderstandings, and receive the necessary support to achieve the best possible outcomes (Hattie, 2012). Pedagogies need to focus on fostering student motivation, for example by ensuring learning tasks resonate with students or provide realistic or real-life scenarios (Scott, 2015). In addition, research highlights the importance of enabling learning through social interaction (Taylor & Parsons, 2011).

Pedagogical strategies need to foster students' sense of self-efficacy (CESE, 2017). Offering opportunity for goal setting, practice, revision and feedback help foster student interest and motivation. Feedback needs to be provided regularly, be timely, help students see their progress, and foster student confidence in their capability to continue to make progress (Masters, 2013).

Pedagogical approaches that foster student autonomy and voice have also been associated with increased interest and motivation (Hopkins, 2013). For example, teachers can engage in dialogues with students and use problem-based teaching strategies. Pedagogical practices that draw upon the potential powerful benefits of peer support, for example through peer feedback and providing motivational support, appear particularly beneficial for student engagement and achievement (Hattie, 2012). Research suggests that giving students some control over their learning is important for their motivation, but the direct effects on achievement outcomes appear minimal (Hattie, 2009).

Mourshed et al. (2017) conducted a large-scale quantitative analysis of PISA (Program for International Student Assessment) science data gathered in 72 countries across the world to identify which factors are most strongly associated with student achievement. Two findings were consistent across all regions in the world:

- 1 Students' mind-sets (including motivation and self-belief) were the strongest predictor of academic achievement
- 2 The best achievement outcomes were achieved in classrooms which were dominated by teacher-directed instruction and used some inquiry-based instruction.

Further, research shows that the purposeful use of technology for instruction can have positive effects on student achievement as well as engagement and attitudes (Hattie, 2009).

When used in a meaningful way, technology can provide many affordances for teaching 21st century skills in a way that is engaging for students (Scott, 2015; Taylor & Parsons, 2011). For example, it can enable opportunities for learning outside of the school context, draw on various types of resources from different platforms, or enable students to produce something new or share their learning, such as through social media (Scott, 2015).

Domain 9 Building school-community partnerships

Research has demonstrated many benefits of school-community partnerships for enhancing student engagement (Garza et al., 2014; Otero, 2016; Scott, 2015). School-community partnerships can have many benefits to either or both parties, depending on the purpose and nature of the partnership. Importantly, there needs to be a shared understanding about the partnership purpose and shared commitment to addressing barriers to student engagement. Benefits may relate to "social, intellectual, financial, psychological and performance" aspects (Lonsdale & Anderson, 2012, p. 2). For example, social benefits include stronger support networks, better understanding of student community contexts and improved connections between students and their families, community groups, and the school. An example of intellectual benefit is improved knowledge of stakeholders through sharing of expertise. In both these examples, students are likely to gain indirect benefit from the partnership, for example, through greater cultural awareness and modification of curricula and pedagogical approaches to be responsive to student needs or fostering parental support for students.

Numerous studies highlighted the importance of caring relationships and partnerships with others beyond the school, including with parents/carers and community organisations (DAE, 2018; Louis et al., 2016; Otero, 2016). Such relationships and partnerships can enhance students' feelings of connectedness at school (CESE, 2015b). For example, a study by Cole-Henderson (2000) amongst principals of high-performing schools serving disadvantaged student populations in the US highlighted the value of *site-based management* teams to meaningfully connect schools with their communities. These groups, consisting of "parents, community representatives, and administrators as well as instructional and noninstructional staff, both professional and nonprofessional" (p. 85) were typically involved in making a range of school policy decisions, including the creation of special programs or promotion of parental involvement. In addition, involving parents and the community in the school's change journey can help foster desirable student behaviours and study habits. Community members or groups may also play an important role as role models and in resolving conflicts (Jensen & Sonnemann, 2014). A study by Epstein and Sheldon (2002) highlighted the importance of family and community involvement in supporting student school attendance, one facet of student engagement. They highlighted the value of communication with families, assigning a school contact person to discuss attendance or other matters, family home visits, and attendance-related parent workshops.

Student wellbeing

Student wellbeing was conceptualised as “a sustainable state of positive mood and attitude, resilience, and satisfaction with self, relationships and experiences at school” (Noble et al., 2008, p. 7). This definition covers a holistic range of psychological, physical, social, spiritual and cognitive dimensions. Elements of students social and emotional wellbeing are self-awareness, self-management, social awareness, relationship skills, responsible decision making and resilience (Bernard et al., 2007; Durlak et al., 2011). Research shows that “Improved outcomes in all aspects of student wellbeing are positively associated with improved outcomes in all other aspects of schooling” (CESE, 2015b; Dinham, 2016; Dix et al., 2020; Durlak et al., 2011; Fraillon, 2004, p. 12; O’Connor et al., 2019; Otero, 2016). A successful whole-school model in social and emotional learning requires the SAFE principles of sequential, active, focused and explicit to be enacted for the curriculum and professional learning (Durlak et al., 2011; Vaughan, 2019). A strong implementation of SEL programs has been shown to be important for improving student outcomes (Dix et al., 2020; Durlak et al., 2011; Vaughan, 2019). This section provides a narrative outlining the research evidence specific to student wellbeing as aligned to each of the SIT domains.

Domain 1 Driving an explicit improvement agenda

Research overwhelmingly shows that a whole-of-school approach is “vital in effectively promoting emotional and social competence and student wellbeing” (CESE, 2015b; Dix et al., 2020; Fraillon, 2004; Hattie et al., 2015; Houghton & Anderson, 2017; Weare & Gray, 2003, p. 6). Schools need to have an articulated vision for student safety and wellbeing (Noble & McGrath, 2010; Roffey, 2012) and have appropriate systems in place, including mechanisms for communications and referral to internal and external support providers (Miles & Ferris, 2015). Whole-of-school positive behaviour management programs and pro-social values are highly recommended practices throughout the wellbeing literature (Dix et al., 2020). Such a whole-school approach should focus on strengthening of protective factors, as well as teaching students how to enhance their wellbeing (CESE, 2015b). Specifically, the development of “a shared vision of high standards and behaviours for the school” (CESE, 2015b, p. 6) was associated with improved student wellbeing. For example, whole-school programs that target development of social-emotional skills were found to be particularly effective for promoting student wellbeing, as well as literacy outcomes (Dix et al., 2020). The impact of such programs needs to be implemented and monitored over time. Research suggests that students from disadvantaged backgrounds particularly benefit from implementation of whole-school programs complemented by targeted programs (Dix et al., 2020). Importantly, supporting student wellbeing is the responsibility of every educator, and should not be seen as an add-on or an external expert’s responsibility (Currie et al., 2012).

Domain 2 Analysing and discussing data

Research increasingly recognises the importance of using a range of data for improving practices within the school, including in relation to student wellbeing (Datnow & Park, 2018; Hattie et al., 2015; Lai & Schildkamp, 2013; Renshaw et al., 2015). This requires a broad conceptualisation of data which goes beyond student achievement on formal tests (Lai & Schildkamp, 2013; Renshaw et al., 2015), and may require collection of data that is harder to collect (Schildkamp, 2019). Further, it is important that examination of data focuses on moving beyond pre-existing beliefs of student capability, emphasizing capacity for all students to progress and teacher responsibility for student progress. To overcome equity issues, fruitful discussions of student achievement data should emphasize strengths and potential for improvement (Datnow & Park, 2018) to inform setting of realistic goals for every student (CESE, 2016).

Another key consideration in data use is student voice and agency (OECD, 2019b; Vaughan et al., 2019). Student agency can be defined as: “the capacity to set a goal, reflect and act responsibly to effect change. It is about acting rather than being acted upon; shaping rather than being shaped; and making responsible decisions and choices

rather than accepting those determined by others". (OECD, 2019b, p. 2). Agency can be thought of occurring in degrees that range from silence to that of shared decision making with adults (Department of Education and Training [Victoria], 2019; Hart, 1992; OECD, 2019b). Measuring student voice over time can help examine whether strategies have led to changes as perceived by students (CESE, 2016). Students can be involved in discussion, analysis and setting direction based on whole-school data sets (Vaughan et al., 2019).

Specific to research on the use of data walls, Adie et al. (2020) highlighted limited consideration of student agency. More broadly, Schildkamp (2019) highlighted the need for attention to the student role in data use. In addition, research highlights that schools need to carefully consider the ethical implications, privacy issues and psychological implications of publicly displaying student achievement data (Adie et al., 2020). In a more generic sense, research emphasises the importance of using data in ways that respect student and family privacy (CESE, 2016).

Domain 3 Promoting a culture of learning

Numerous studies highlighted the importance of the school culture in supporting student wellbeing and learning. A healthy balance between focusing on academic aspects of learning and student wellbeing and personal welfare appears critical (Dinham, 2016). A school culture that fosters student wellbeing is characterised by collective responsibility for student wellbeing across the school (Cole, 2012; Dinham, 2016) and strong relationships within the school and with the broader school community, including families (CESE, 2015b; Garza et al., 2014; Hattie et al., 2015; Otero, 2016; Roffey, 2012). This enhances students' sense of belonging, which functions as a critical protective factor to their health, wellbeing and engagement in education (Allen et al., 2018; CESE, 2015b). Specifically, teacher support has been highlighted as a critical mechanism for influencing student feelings of belonging and wellbeing in schools (Allen et al., 2018). In addition, a sense of shared responsibility amongst school staff can be developed by fostering positive relationships where colleagues provide emotional and practical support to deal with diverse and overwhelming issues (Roffey, 2012).

Student wellbeing is fostered by school cultures which are emotionally safe. This means that they are free from negative behaviours (such as bullying) and promote positive behaviours that are associated with improved mental wellbeing, including a focus on healthy lifestyle choices (CESE, 2015b). Setting and communicating school-wide expectations for student success was identified as one important approach to shaping a school's culture (Garza et al., 2014). Classroom management strategies or programs and interventions focused on student social-emotional development can enhance students' academic, behavioural and social-emotional outcomes (Korpershoek et al., 2016). Further, research highlights the importance of creating physical and virtual environments where students feel they are safe and belong as foundational to successful learning (Matthews & Lippman, 2016).

Domain 4 Targeting school resources

In addition to the evidence for Domain 4 discussed in relation to student engagement, research specific to student wellbeing is discussed briefly next.

A key research finding is the need to implement long-term preventative wellbeing programs, which are more effective compared to remediation programs that are only implemented for 'at risk' students (Noble et al., 2008). Such universal programs reduce stigma associated with wellbeing interventions (Dix et al., 2020). A meta-analysis of 213 school-based initiatives identified that adequate program implementation of universal programs is essential to see improved student outcomes (Durlak et al., 2011). As such, research highlights the importance of supporting school staff in implementing wellbeing programs (Durlak et al., 2011; Evidence for Learning, 2020, p. 35).

Domain 5 Building an expert teaching team

Professional learning is a key mechanism to build an expert teaching team. Professional learning, sometimes referred to as professional development, is effective to the extent that it results in great pedagogy, which in turn can result in improved student outcomes, including higher achievement and improved wellbeing (Stoll et al., 2012). The key focus of professional learning should therefore be on making a difference to student outcomes in the broadest sense, including student wellbeing. Teachers' capability in supporting student wellbeing can effectively be enhanced by implementing opportunities for professional learning such as through mentoring, coaching and feedback on practice. As such, research highlights the importance of school leader roles in facilitation of building an expert teaching team, by ensuring opportunities are provided for observation, collaboration and feedback (Goss & Sonnemann, 2017). A systematic review of wellbeing programs suggested that those delivered by well-trained teachers were more impactful than those delivered by external facilitators (Dix et al., 2020). This highlights the importance of teacher professional learning in supporting student wellbeing. Importantly, some students may require access to expert support, requiring schools to have appropriate structures and processes in place (Queensland Department of Education, 2019).

Domain 6 Leading systematic curriculum implementation

Research on curriculum implementation highlights the interrelatedness of student engagement, wellbeing and learning outcomes. For example, CESE (2015b) emphasised that providing differentiated opportunities for learning is important to foster student engagement in their learning, which is critical to their wellbeing and academic outcomes (CESE, 2015b). Accordingly, there has been a shift across curricula internationally reflecting a move away from a focus on academic outcomes, to a focus on processes of learning and wellbeing of students. A recent OECD publication articulated a vision for student learning in 2030 (OECD, 2019a, cited in OECD, 2020), emphasising the importance of student agency, physical wellbeing as a core foundation, and social and emotional skills such as resilience. In addition, the OECD (2020) highlighted the importance of parental support for student learning, attitudes and wellbeing, emphasising the need for schools to communicate curricular expectations to parents and involve them as partners in schooling of their children. In addition, there is increasing recognition that students progress through the curriculum in non-linear ways (OECD, 2020). This has resulted in another international trend of greater responsibility for curricular planning on schools and teachers, who are required to flexibly implement curriculum in a way that best meets the needs of their students. In addition, research highlights the value of integrating mental health education and student-centred health literacy to be integrated as part of the curriculum (Colao et al., 2020).

Effective in the implementation of wellbeing programs is the use of a SAFE curriculum: Sequential, Active, Focused and Explicit (Durlak et al., 2011; Evidence for Learning, 2020). This can be enacted through (Durlak et al., 2011; Vaughan, 2019):

- a sequential step-by-step-training approach
- active forms of learning
- a focus on skill development
- explicit learning goals.

To implement a systematic SAFE curriculum, there needs to be the sequential step-by-step building of skills across lessons and year groups (Durlak et al., 2011; Evidence for Learning, 2020). A balance of teacher-led active forms of learning such as discussion, small group work and role play to practice skills is important, and brief frequent instruction is more effective than infrequent long sessions (Durlak et al., 2011; Evidence for Learning, 2020). In a primary school setting a lesson of 30-60 minutes per week has been shown to be effective (Sanchez et al., 2018).

Domain 7 Differentiating teaching and learning

In addition to the evidence for Domain 7 discussed in relation to student engagement, research specific to student wellbeing is discussed briefly next.

Research on differentiation highlights the need to use a tiered approach in supporting students with their differing needs in wellbeing. A useful frame of reference when linking to wellbeing and learning and school improvement is the MTSS (Graham et al., 2020).

Essentially, this framework focuses on targeting instruction, intervention and school improvement to best address student academic, social/emotional and behavioural needs.

- Tier 1: Universal instruction and supports; these practices target all students; they need to be evidence-informed and high quality
- Tier 2: targeted or secondary supports that are provided for those who require additional support based on evidence of outcomes in response to Tier 1
- Tier 3: Only provided to a small number of students who continue to show a need for additional support. This is usually intense and highly individualised support, but the nature of the support will need to be informed by evidence on a case-by-case basis.

A key point in relation to Tier 2 is that these supports do not replace Tier 1 supports, but rather, are provided in addition to these supports.

Domain 8 Implementing effective pedagogical practices

See evidence for Domain 8 discussed in relation to student engagement.

Domain 9 Building school-community partnerships

Research on school-community partnerships has revealed many benefits associated with improved student wellbeing (Roffey, 2012). Reported benefits include improved lifestyle habits, improved confidence and self-esteem, a more positive mindset and increased awareness of community (Lonsdale & Anderson, 2012). Engagement of community partners to provide certain services at schools was identified as contributing to student wellbeing (CESE, 2015b). For example, integrated support initiatives may connect students, schools, families and support services to ensure the necessary prerequisites for successful learning are in place. As such, school-community partnerships can ensure students are provided with the necessary foundations, resources and supports for success in school and beyond (Moore et al., 2017). Importantly, there needs to be a shared understanding about the purpose of the partnership, as well as a mutual commitment to optimising student wellbeing.

Summary

The *School Improvement Tool Elaborations: Student engagement and wellbeing* were developed to describe the evidence-based practices that lift student engagement and wellbeing, alongside academic gain, as aligned with each of the 9 *School Improvement Tool* domains. The literature review that informed the development of the elaborations highlights the strong interrelatedness of student engagement, wellbeing and learning outcomes. Our synthesis succinctly outlines the evidence relating to whole-of-school approaches to student engagement and wellbeing as aligned with the 9 SIT domains.

A total of 88 elaborations have been developed across the 9 SIT domains. Each elaboration provides sufficient specificity to guide practice, whilst requiring tailored application within the relevant context. The elaborations are designed to be read in conjunction with the characteristics in each domain to provide further specificity about practices that promote student engagement and wellbeing.

The review of empirical evidence showed the following cross-cutting themes that support student engagement and wellbeing:

- A whole-of-school approach
- Caring school leadership
- Embedding programs, strategies and initiatives in the curriculum
- Listening to, and acting on, student voice
- Including families, carers and service providers in the design of programs and strategies
- Incorporating authentic learning to support positive experiences for all students.

The elaborations can support the work of systems, teachers, leaders and school reviewers internationally to optimise their support for student engagement and wellbeing in a targeted and coherent manner.

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