

Learning is an inherently social activity, which relies on the activation of prior knowledge and experiences for new learning to occur. Recent developments in neuroscience and educational psychology have highlighted the relationship between emotion and cognition in learning, which means that attending to students' social and emotional needs is not just important for their wellbeing but also a prerequisite for academic learning. Social emotional learning (SEL) describes the mindsets, skills, attitudes, and feelings that help students to succeed in school but also in work and life. These include motivation, self-regulation, self-efficacy, growth mindset, grit, and social connection or sense of belonging at school. Research shows that supporting these types of needs leads to higher academic achievement and a more positive sense of wellbeing: indeed, there is evidence to demonstrate that SEL is a better predictor of later life success than grades.

## The state of the evidence

The evidence to support social emotional theories of learning comes from neuroscience, psychology and education. While the overall evidence base is fairly unequivocal in its findings about the importance of SEL in learning, it can be difficult to navigate due to the proliferation of terminology, conceptual definitions and frameworks for organising the precise nature of and interrelationships between the many aspects of SEL. For example, some researchers argue for the use of the term 'noncognitive' to describe SEL, while other insist that SEL is inherently cognitive as well as noncognitive. Similarly, there is argument over whether the term 'factors' or 'skills' should be used – the OECD calls them skills because they can be learned, while the UChicago Consortium on School Research calls them factors because skills cannot be noncognitive.

There is a similar lack of agreement over how the terminology for particular aspects of SEL is used, and, while some terms are more stable than others, it is not uncommon to find that the same term has been used by different theorists and researchers in ways that are conceptually and empirically different. Some terms, such as self-efficacy, have a relatively long evidence base, whereas other concepts, like grit or growth mindset, are more recent. This lack of consistency and conceptual clarity across the field in general as well as in relation to individual aspects can make it difficult to pin down specific causal findings related to SEL. However, the evidence is consistent on the broad relevance of SEL for academic and later life success.

## What do teachers need to know about SEL?

SEL both supports success at school and is an outcome of it. One point on which the research is clear is that SEL is malleable in children and young adults – in other words, teachers can support their students to develop their motivation, self-regulation, growth mindset, and other aspects of SEL. While different aspects of SEL develop and vary with age and may be more or less malleable at different ages, teachers can incorporate strategies into their practice to promote the development of SEL at all levels of schooling. It is important to note that these strategies should not be taught in isolation from academic skills and concepts but integrated into all learning programmes.



Some aspects of SEL such as self-efficacy tend to be domain specific – for example, a student may have high self-efficacy in literacy but low self-efficacy in maths. Other aspects tend to be characteristics of the individual and more stable across domains – for instance, a student with high self-regulation will bring those habits to bear across all their academic and extra-curricular activities at school. Another important point for teachers to note is that, while the various aspects of SEL can be thought of and discussed individually, in practice they are deeply interrelated and interdependent.

A good place to start learning about SEL is to consider three of the core components of SEL that have a powerful impact on learning: social connection, motivation and self-regulation. These components of SEL are interrelated and dynamic so, while they are discussed separately below, in practice teachers will need to be aware of and take into account their interrelatedness.

## Social connection

Social connection refers to the interpersonal and interdependent closeness between people, resulting in a sense of belonging. It is essential both for academic learning and for physical and mental health and wellbeing.

### **Academic impact**

The feeling of belonging and connection with others is a necessary condition for learning. Researchers find evidence of this connection between social support and learning in the first months after birth. There is an important relationship between social connection and executive function, which impacts students' working memory, attention and ability to plan and organise their learning. Executive function is also essential for the flexible transfer of skills and knowledge from one context or learning area to another. Strong social connections at school also contribute to students' higher competency beliefs. Students who have a secure system of support from teachers and peers will be more likely to challenge themselves academically and have the confidence that they can meet their goals if they work hard. In addition, a sense of belonging tends to give at-risk students an important reason to be at school1. Students who feel that they belong at school are much less likely to drop out and are more engaged in school while they are there. Social connection has the ability to transform a student's academic achievement.

#### **Wellbeing impact**

As a basic psychological need, social connection is an integral part of students' ability to flourish. On the other hand, a lack of relationships at school can cause depression, anxiety, and aggression. Students who feel a sense of belonging at school are more likely to adopt school values (such as responsibility or respect) and integrate them into their own sense of self, which can create an upwards cycle of positive self-image and belonging at school. Strong social connection among students helps to minimise bullying and physical violence and supports students' mental health. Medical research has also found a relationship between strong social connection and lowered rates of chronic conditions like obesity and heart disease in later life.

### Strategies for supporting social connection

Students who have a network of trusted adults at school are more likely to step outside of their comfort zone socially to form healthy bonds with their peers<sup>2</sup>. Students, especially young students, adopt many of their beliefs about how to build and sustain social connections from others, so encouraging prosocial behaviour in the classroom explicitly or through modeled behaviour has a deep impact. You can support and promote positive social connection by:

• Expressing that you value the students and know they are competent



- · Sharing ways that you and the individual students are similar
- Making sure to circle back to students who are confused or ask questions that cannot be answered right away
- Acknowledging students' emotions: when a student is frustrated, concerned, or proud of their work, recognising how they feel can help them feel seen and know that they are valued
- Allowing opportunities for self-reflection: written or verbal forms can help students learn to
  articulate their emotions, and reviewing past self-reflections can also be a positive way to mark
  progress in academic or social-emotional learning
- Sharing your mistakes and how you learned from them, as vulnerability tends to lead to a sense of mutual trust<sup>3</sup>
- Using extrinsic rewards or punishments minimally: external rewards and punishments depress
  motivation but they also weaken social relationships, as they cause students to focus on
  competition rather than collaboration and the end goal rather than the process

# **Motivation**

The concept of motivation has been explored extensively in the fields of psychology and sociology, and the theories of motivation that have emerged from these fields have been adopted and adapted by education researchers. While there are commonalities among the various motivation theories, researchers differ in their identification of the belief systems underlying motivation. Some theorists emphasise ability beliefs, others prioritise goal orientation or the perceived value of the task, and a third group argues that the difficulty of the task or the expectation of success shapes individual motivation. In other words, in order to be motivated students must believe that they have the ability to do a task, expect that if they do the task they will produce the desired outcome, and feel that the outcome is worth the effort. For example, in order to be motivated to learn the quadratic formula, a student must think that they can learn it if they put in the effort, expect that learning the formula will allow them to understand higher level maths, and feel that learning higher level maths is worth the effort. These forms of motivation are far more effective in promoting and academic and later life success than the more purely extrinsic forms of motivation such as threats and rewards.

## **Academic impact**

While the benefits of motivation to academic outcomes may seem self-evident, it is important to recognise that as students become more intrinsically motivated, they also become higher level thinkers. This is because high level thinking like creativity and critical thinking resemble play - the ultimate intrinsically motivated activity. When a student is intrinsically motivated to engage in a task, the mind becomes increasingly flexible and dynamic. Rather than sticking with the minimum level of cognitive energy required to complete a task, intrinsically motivated students will take their time, work through obstacles that arise, and think through the task from different angles. By contrast, extrinsically motivated students tend to perform tasks out of fear of punishment or in pursuit of a reward. Once the goal of receiving a good grade on a test or avoiding a reprimand from their parents has been met, their interest in the learning may quickly dissolve.

#### **Wellbeing impact**

When students are intrinsically motivated towards a particular subject or skill, they enter a state of 'flow' as they work in that domain<sup>4</sup>. During flow, students feel a sense of absorption and enjoyment in their work. The sense of flow helps to reduce feelings of self-consciousness, which otherwise are often especially heightened and damaging in adolescents, and increase feelings of pride. Over a long period



of time, this sense of pride slowly becomes more integrated into how students view themselves (as someone who works hard, is competent, and produces good work), and this belief has a positive effect on a student's overall sense of well-being.

#### Strategies for supporting motivation

A student's emotional state is closely linked to their level of motivation, so employing strategies that build students' self-efficacy and academic self-concept while providing an appropriate level of challenge will motivate students more effectively than external sources of motivation such as rewards or threats of punishment or failure. You can positively support students' motivation by:

- Challenging students through 'just-manageable' tasks: when students are puzzled by a problem that is just within their skill level, they will be especially motivated to discover the answer
- Working with students to set clear, proximal goals: weekly and quarterly goals can help guide students in the same way that a marathon runner may set their sights on the 'next tree,' and then the next one
- Connecting classroom learning with inherently interesting or relatable content, and being explicit about the value or utility of the learning
- · Providing choice, where possible and appropriate, to generate interest
- · Highlighting student progress, particularly in areas in which they struggled previously
- Encouraging a growth mindset through modeling, thinking out loud, and pointing out when a student accomplishes a difficult task through perseverance
- Supporting students to adopt positive competency beliefs into their self-identity: students that believe they are competent are much more motivated to tackle challenges head-on than their peers

# **Self-regulation**

Self-regulation refers to the process by which students monitor, control and adapt their cognition, motivation, and behaviour in order to achieve identified goals. Self-regulation is usually conceptualised by theorists and researchers as a series of stages involving forethought or planning, performance, and reflection.

#### **Academic impact**

A clear connection between self-regulation and academic achievement is evident in terms of a student's ability to concentrate on the task at hand. The less a student is distracted by other influences, the more careful and reflective they will be in their studies. In a similar way, the more students are able to manage feelings of frustration, the better they will be able to persevere through challenging assignments without becoming overwhelmed.

Setting goals and monitoring progress is integral to self-regulation. Students who are able to able to use the metacognitive self-regulation strategy of visualising positive outcomes in tandem with articulating potential obstacles are much more likely to reach their goals and achieve academic and later life success.

#### Wellbeing impact

The ability to manage one's emotions supports academic learning but also leads to healthier, stronger personal relationships. Rather than reacting to one's anger impulsively, students who can self-regulate will be more able to thoughtfully consider a positive response to their feelings. These students are not only able to manage their thinking and behaviour in order to deal with negative emotions but also to



focus on more prosocial feelings such as gratitude, empathy and friendship. Managing one's attention is also an essential part of interpersonal interactions.

### Strategies to support self-regulation

Self-regulation can be developed and strengthened by focusing on the different steps that make up selfregulation as well as by providing opportunities for students to exercise self-regulation. Teachers can support their students to become self-regulating learners by:

- Explicitly teaching students how to select learning strategies that are appropriate to the activity and the desired outcomes
- Allowing choice in assignments whenever possible: self-regulation and intrinsic motivation are closely linked, so the more students are invested in their work the easier it is to regulate their attention
- Developing spaces for students who have trouble focusing in open classroom layouts: this
  is particularly important for students with Autism Spectrum Disorder or Attention-Deficit
  Hyperactivity Disorder
- Promoting capacity beliefs about self-control, and sharing evidence of progress in the development of self-regulation with students
- · Providing consistently (but not exclusively) positive feedback substantiated by success
- Working with students to carefully construct manageable goals and explicitly teaching students how to monitor their progress towards them
- Encouraging students to reflect on the conditions under which they focus best so they are able to make positive choices for their learning
- Modelling and being explicit about self-regulation techniques to help students develop them into habits
- Explicitly teaching students to visualise their goals in tandem with potential obstacles: carefully planning out solutions to potential obstacles engrains them in memory, and helps them to become automatic and effortless

# Interweaving SEL into daily practice

It is important to establish a common definition of SEL among parents, students, teachers, and school leadership. Oftentimes various stakeholders may have different understandings of what SEL means and looks like. Articulating a clear definition can be a positive first step in becoming a more SEL supportive school.

Strategies to teach SEL should be consistent throughout the school. While text-based programmes are valuable, they tend to relegate SEL to a one-hour time block, once or twice a week. The situations in these lessons often feel contrived and out of context. As a result, students tend to disengage from them, and fail to transfer the skills learned in the lessons to their own lives. However, when SEL is connected to real-world contexts, through teachable moments in the classroom or the playground, or within the regular academic curriculum, students are more likely to practise social-emotional skills on their own. SEL lessons from a curriculum can feel scripted and unrelatable, but skills that are taught within the context of a teacher-student relationship are much more memorable. Students who are taught strategies in this way are more likely to adopt these practices and use them in their own relationships.



In addition, short-term interventions tend to yield short-term results, but SEL that is embedded in the culture of the school tends to have staying power, so it is important to share SEL strategies and their underlying goals throughout the school community. School cultures that actively encourage ongoing discussion and reflection around SEL among teachers within communities of practice, between teachers and students, and among students set the stage for more intentional interactions between teachers and students.

# **Measuring SEL**

Tracking student progress in SEL should happen on both an individual and a school-wide basis. Formal school-wide social-emotional assessments are valuable for collecting comprehensive data and provide a common measure of SEL against which teachers can discuss how to achieve widespread improvement. In order to support valuable discussions about school-wide improvements, school leaders should define their SEL learning targets and choose an assessment tool. One reliable measure with strong evidence of validity for these formal assessments is the Panorama Social-Emotional Learning Survey.

Teachers should also supplement this data by informally evaluating their individual students' levels of social connection, motivation, and self-regulation. This form of data collection is valuable as it allows for deeper personal conversations and builds teacher-student relationships. Periodically evaluating students' social-emotional learning serves to inform the teacher of their students' progress and ongoing needs as well as prompting students to practise self-awareness. On a fortnightly or monthly basis, teachers can informally gauge SEL by asking the following questions:

- Overall, how well do your learning strategies help you learn and focus more effectively? (Not at all well/Quite well/Well/Very well)
- · The last time you experienced a setback in school, how did you respond?
- · How often do you pay attention and resist distractions? (Never/Sometimes/Quite often/All the time)
- Do you look forward to going to school? (Never/Sometimes/Quite often/All the time)
- Do you tend to hurry through assignments? (Never/Sometimes/Quite often/All the time)
- Do you choose to work above and beyond what is expected in assignments? (Never/Sometimes/ Quite often/All the time)
- Do you feel you are accepted for who you are at school? (Never/Sometimes/Quite often/All the time)
- How sure are you that you can complete all the work that is assigned in your classes? (Not at all sure/Somewhat sure/Sure/Very sure)
- When complicated ideas are presented in class, how confident are you that you can understand them? (Not at all confident/Somewhat confident/Confident/Very confident)
- How confident are you that you can do the hardest work that is assigned in your classes? (Not at all confident/Somewhat confident/Confident/Very confident)
- When you get stuck while learning something new, how likely are you to try a different strategy? (Not at all likely/Quite likely/Very likely)
- Before you start on a challenging project, do you think about the best way to approach the project? (Never/Sometimes/Quite often/All the time)
- · How much effort do you put into your homework for class? (None/A little/Some/A lot)



- When your teacher is speaking, how much effort do you put into trying to pay attention?
   (No effort/A little effort/Some effort/A lot of effort)
- Can you name at least two adults at this school that care about you? (Yes/No)

# References

Ainsworth, M. D., & Bell, S. M. (1970). Attachment, exploration, and separation: illustrated by the behavior of one-year-olds in a strange situation. Child Development, 41, 49-67.

Ames, C. (1990). Motivation: What teachers need to know. Teachers College Record, 91(3), 409-421.

Anderman, L. H., & Midgley, C. (1997). Motivation and middle school students. In J. L. Irvine (Ed.), What current research says to the middle level practitioner (pp. 41-48). Columbus, OH: National Middle School Association.

Bandura, A. (1991). Social cognitive theory of self-regulation. Organizational Behavior and Human Decision Processes, 50(2), 248-287.

Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. New York: Plenum.

Denham, S. A., & Brown, C. (2010). "Plays nice with others": Social-emotional learning and academic success. Early Education and Development, 21(5), 652-680.

Duckworth, A. L., & Carlson, S. M. (2013). Self-regulation and school success. Self-regulation and Autonomy: Social and Developmental Dimensions of Human Conduct, 40, 208.

Duckworth, A. L., Kirby, T., Gollwitzer, A., & Oettingen, G. (2013). From fantasy to action: Mental contrasting with implementation intentions (MCII) improves academic performance in children. Social Psychological and Personality Science, doi:10.1177/1948550613476307

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta analysis of school based universal interventions. Child Development, 82(1), 405-432.

Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. Annual Review of Psychology, 53(1), 109-132.

Farrington, C.A., Roderick, M., Allensworth, E., Nagaoka, J., Keyes, T.S., Johnson, D.W., & Beechum, N.O. (2012). Teaching adolescents to become learners. The role of noncognitive factors in shaping school performance: A critical literature review. Chicago: University of Chicago Consortium on Chicago School Research.

Gehlbach, H., & Artino Jr, A. R. (2018). The survey checklist (manifesto). Academic Medicine, 93(3), 360-366.

Gehlbach, H., Brinkworth, M. E., King, A. M., Hsu, L. M., McIntyre, J., & Rogers, T. (2016). Creating birds of similar feathers: Leveraging similarity to improve teacher—student relationships and academic achievement. Journal of Educational Psychology, 108(3), 342.

Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H., & Elias, M. J. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. American Psychologist, 58(6-7), 466.



Hausmann, Schofield, & Woods (2007). Sense of belonging as a predictor of intentions to persist among African American and white first-year college students. Research in Higher Education, 48(7), 803-839.

Lee, R. M., Draper, M., & Lee, S. (2001). Social connectedness, dysfunctional interpersonal behaviors, and psychological distress: Testing a mediator model. Journal of Counseling Psychology, 48(3), 310.

Nakamura, J., & Csikszentmihalyi, M. (2014). The concept of flow. In M. Csikszentmihalyi, Flow and the foundations of positive psychology, pp. 239-263. Dordrecht: Springer.

National Scientific Council on the Developing Child. (2018). Understanding motivation: Building the brain architecture that supports learning, health, and community participation: Working Paper No. 14. Retrieved from www. developingchild.harvard.edu

Panorama Education (2015). Social/emotional learning. https://www.panoramaed.com/social-emotional-learning-sel

Rempel, J, K., Holmes, J. G., & Zanna, M. P. (1985). Trust in close relationships. Journal of Personality and Social Psychology, 49(1), 95-112.

Rosen, J. A., Glennie, E. J., Dalton B. W., Lennon, J. M., and Bozick, R. N. (2010). Noncognitive skills in the classroom: New perspectives on educational research. RTI Press publication No. BK-0004-1009. Research Triangle Park, NC: RTI International

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist, 55(1), 68.

Ryan, R. M., Koestner, R., & Deci, E. L. (1991). Ego-involved persistence: When free-choice behavior is not intrinsically motivated. Motivation and Emotion, 15(3), 185-205.

Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. Contemporary Educational Psychology, 25(1), 68-81.

### **Endnotes**

- <sup>1</sup> Hausmann, Schofield, & Woods (2007).
- <sup>2</sup> Ainsworth & Bell (1970).
- <sup>3</sup> Rempel, Holmes, & Zanna (1985).
- <sup>4</sup> Nakamura & Csikszentmihalyi (2014).

# PREPARED FOR THE EDUCATION HUB BY



## Claire Chuter

Claire is a Ph.D. student at Johns Hopkins University - School of Education. Her primary interest lies in improving students' empathy through virtual reality perspective-taking activities. Previously, Claire conducted research as a consultant for the non-profit organization Opportunity Education, as well as teaching in K-12 settings for four years. She holds a B.A. in Italian Studies, a B.S. in Human Development, and an M.A. in Education from the University of California, Davis. Claire enjoys developing guides with The Education Hub for teachers as they support students in their personal and academic lives.

