

WORKING
GROUP 01

C H A P T E R

5

Human flourishing in schools

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Education for human flourishing needs to foster a range of human capacities. Three relationship levels are emphasized: 1) relationships with other people; 2) relationships with ourselves; and 3) relationships to knowledge or subject matter. In doing so, we argue that education for 2030 and beyond cannot focus solely on maximizing individual cognitive potential, or simply imparting the technical know-how to be successful in the labour market. Schools and educators have a responsibility and important role in promoting values of inclusion, equality, participation and democracy through cultivating capacities at each of these three levels. These relational capacities support the capacity to make ethically informed decisions and actions that improve individual and collective flourishing, and include being able to: tune in to one's own emotions, thoughts and feelings; understand others' perspectives; develop compassion for self and others; resolve conflicts peacefully; and engage critically with subject matter.

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5.1

Overview and orientation of chapter

Education and, by extension, schools have traditionally embraced a Cartesian view of

the self; in other words, a sense of self as fully autonomous, rational, self-contained and largely





separable from the social and physical environment. With this assumption of the fundamental separateness of human beings, a primary goal of schooling was to support students to ‘think for themselves’; the individual mind was primary and relations between people were secondary or optional. Moreover, traditional schooling has tended to privilege cognitive advancement (rationality) over emotions, feelings and personal experiences. Curriculum content has tended to be taught objectively – at arm’s length from students’ own lives and experiences (**Palmer, 1983; Zajonc, 2009; Barbezat and Bush, 2014**). All of this has served to reinforce a range of fundamental separations, including between self and other, reason and emotion, mind and body, and so on (**O’Toole and Simovska**).

Yet, it is our embodied engagement with the world that orients us and gives meaning to the situations that we encounter. In this chapter, we draw on a range of perspectives that recognize the profoundly interdependent, dynamic and emergent nature of human development and interaction. As shown in **WG1-ch3**, it is increasingly

recognized that human beings exist intrinsically as embodied beings, and mental functions such as perception, cognition and emotion cannot be fully understood without reference to the physical body as well as the social and material environment in which they are experienced (**e.g. Gibson, 1979; Varela et al., 1991; Damasio, 2000; Linell, 2009; Cromby, 2015**). Our being in the world is thoroughly interdependent with the existence of others, in that our experiences, actions, thoughts and utterances are bound up with those of other people and shaped by our perceptual grasp of what the physical and social environment affords. Thus, when students and teachers are engaged in thinking, talking, reading or trying to understand, they are interacting with each other, but also with the contributions and knowledge of other people, contexts and cultures. We include a vignette toward the end of this chapter that demonstrates the impact of a relational orientation in the real-life experiences of students and their community.

In line with the definitions of education and flourishing set out

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in previous chapters, we argue that schools seeking to promote human flourishing need to place relationships at their centre. In the following section, we highlight the importance of relationships at three intertwined levels: 1) relationships with ourselves (or intrapersonal relationships); 2) relationships with other people (or interpersonal relationships); and 3) relationships to knowledge, subject matter or curriculum content. These three relationship levels dovetail with those discussed in **WG1-ch4**. Specifically, **WG1-ch4** highlights six curricular domains for flourishing: environment, culture, society, technology, interpersonal and self. Our ‘Relationships with Others’ and ‘Relationships with Ourselves’ align perfectly with their fifth and sixth domains respectively. However, we have collapsed their first four curricular domains (environment, culture, science and technology) and we deal with these together under ‘Relationship to Curriculum Knowledge’. In doing so, we do not suggest each element is unimportant in its own right; however, we are

interested in exploring curriculum domains in a more holistic way. We seek to explore the nature of students’ relationships with subject knowledge broadly, in ways that can be applied across subject areas. By emphasizing three relationship levels, we argue that education for 2030 and beyond cannot just be about maximizing individual cognitive potential, or about imparting the technical know-how to be successful in the labour market. At the school level, education for human flourishing needs to foster a range of additional capacities, such as the capacity to tune in to one’s own emotions, thoughts and feelings, to develop compassion for self and others, to understand another person’s perspective, to resolve conflicts peacefully, to engage critically with subject matter and for ethically informed decisions and actions to improve individual and collective flourishing. These capacities are crucial for supporting students to respond to the question of how human beings can live well together on the planet with its finite resources.



5.1 .1

INTRAPERSONAL RELATIONSHIPS (RELATIONSHIP WITH OURSELVES)

Traditional classrooms tend to engage students in knowledge about the world outside of themselves (Ergas, 2017). They are educated about mathematics or history, but have little opportunity to engage with how their minds actually work (Ergas, 2017). Gilbert and Choden (2015) note that our minds are often ‘tricky, troublesome’ and difficult to cope with. The human mind has evolved over millennia to respond to threats and challenges to survival; that we sometimes have trouble coping with the demands of contemporary living is to be expected. Yet, in traditional classrooms, academic achievement takes precedence over emotional awareness and self-regulatory skills (Davidson et al., 2012). Gilbert and Choden (2015) argue that, given

what is now known about the human mind, this is nothing short of a tragedy and highlights just how much we orient education towards fulfilling the needs of the economy and society.

More broadly, many of our decisions and actions are guided not by pure rationality (if there is such a thing), but significantly influenced by non-conscious processes, emotions, feelings and sensations, and by our perceptual grasp of what the social and material world affords (Gibson, 1979; Varela et al., 1991; Damasio, 2010). This is not entirely problematic since it is well documented that people often make good decisions without conscious deliberation (Kahneman, 2003; Dijksterhuis et al., 2006). Nevertheless, our non-conscious decision-making is susceptible to powerful biases and social conditioning. For instance, how we interact with others is influenced by a large array of biases associated with gender, race, accents, attire and so on. Moreover, the setting of the interaction (formality, design, familiarity, etc.) will bring its own

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set of biases, and the concerns and emotions one is experiencing at the time of the interaction will also play an important role. Thus, our decisions and actions are powerfully shaped by often unquestioned and unconscious habitual ways of thinking. Rather than being governed by mind/body processes about which we are unaware, learning something about how the mind/body shapes subjective experience and influences our actions in the world is an important component of education for the future (WG1-ch4; WG3-ch2; WG3-ch4).

Ergas (2017) discusses this in terms of the importance of an ‘inner curriculum’ in education, which might involve tending to students’ subjective present moment experience, thereby facilitating a sense of integration between mind and body, between knowing and being, and between self and other. An education that invites students to attend to the undercurrent of subliminal thoughts/feelings/sensations offers them greater understanding of human frailties and possibilities for greater agency

over decisions and actions in their personal and civic lives.

There is now growing awareness that the cultivation of emotional balance and attentional skills is fundamental to successful learning and an increasing body of research showing that mindfulness and other contemplative methods can be effective in developing these attributes (Greenberg and Harris, 2012; Roeser and Pinela, 2014). The potential of mindfulness, social and emotional learning (SEL) and other mind/body approaches will be reviewed in section 5.4. Such approaches are not merely focused on individual skill sets or dispositions, but can also enhance empathy and compassionate connection to others, helping to foster ethical actions in the social and physical world (Zajonc, 2009).

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5.1 .2

INTERPERSONAL RELATIONSHIPS (RELATIONSHIPS WITH OTHERS)

Interpersonal relationships

incorporate the multiple human-to-human interactions between school personnel, between teachers and students, between students themselves, and at broader levels between school, family and community. The complexities that exist in the formation and maintenance of these relationships require recognition of the interrelatedness of individual, social and ecological

... care theory broadly suggests the need to understand that the emotional and rational dimensions of our being are intertwined rather than dichotomized or separated, thus challenging the dominant understanding of the fully autonomous self.

systems (Pianta, Hamre and Allen, 2012). Nevertheless, as highlighted in WG1-ch4, strengthening the capacity for positive interpersonal relationships has not traditionally been prioritized as a central goal or purpose of schooling (Davidson et al., 2012; Schonert-Reichl and Roeser, 2016). We review extant research evidence in section 5.2 below. Firstly, we present some philosophical perspectives to inform our thinking about interpersonal relationships within the school context.

There are numerous philosophical perspectives on the nature of interpersonal relationships. Nel Noddings (2012, 2013) highlights the universal and inalienable need for care throughout one's life span. Along with other feminist and multicultural theorists (e.g. Gilligan, Walker), she asserts that children, women and men exist in relationships, but that dominant Western culture tends to underemphasize relationships and overemphasize independence and separation. She sees education as being central to the cultivation of caring in society. The teacher

as the carer is concerned with the expressed needs of the cared-for child, rather than the assumed needs of the school or the prescribed curriculum of study (Noddings, 2012). Moreover, care theory broadly suggests the need to understand that the emotional and rational dimensions of our being are intertwined rather than dichotomized or separated, thus challenging the dominant understanding of the fully autonomous self. Care theory thus recognizes the significance of students' emotional or affective development in schools, and challenges the traditional (over-)emphasis on academic achievement.

Martin Buber's (1962) dialogical philosophy provides an orientation for exploring the nature of interpersonal relationships in his famous I-Thou and I-It relational orientations. I-thou is a relation of subject-to-subject, while I-it is a relation of subject-to-object. As human beings, we strive for interpersonal relationships where I is understood in relation to You and vice versa. I-it involves



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distancing, whereby we separate ourselves from the other. Buber (1962, p. xiv) says, 'I-Thou is a relationship of openness, directness, mutuality, and presence' while 'I-It is the typical subject-object relationship, in which one knows and uses other persons or things without allowing them to exist for themselves in their uniqueness'. It is all too easy for human relationships to be characterized by I-It interaction (Morgan et al., 2015) and this is something that needs to be carefully attended to, especially within the school context.

The term intersubjectivity is often used to refer to shared experiences between individuals or groups. It is a fundamental component of social communication and the new experiences that result from a shared experience (Linell, 2009). However, other people often come with a perspective that is different from one's own. That is, in addition to the emphasis on mutuality and reciprocity, relationships are often characterized by strains and tensions, differences between

people and traditions, and boundaries between communities, knowledge, norms and expectations. Buber concentrates on the close relationship between I and thou and their possibly communion-like interaction. In contrast, Bakhtin (1986) introduces the notion of alterity to acknowledge what is strange, unknown or different about the other. Communication requires respect for different, sometimes even alien, points of view, prompting reflection and thereby possibly enriching collective knowledge. This focus on alterity is important in school contexts as they provide a space for acknowledging differences of perspective and opinion, asymmetries, and argumentation, competition and conflict, misunderstandings and misalignments.

Others focus more explicitly on power differentials within relationships. When teachers and students engage in interaction, their contributions do not carry the same weight; there is a power differential. Power is not always



negative as is evident in the case of scaffolding – when the more knowledgeable teacher supports the less knowledgeable student within their zone of proximal development – thereby, in effect, empowering them. However, Freire (1970) highlights that in traditional classrooms students can be ‘dehumanized’ and treated

as objects, as vessels to be filled, rather than human beings in their own right. Paulo Freire’s critical pedagogy explores the socio-political context where equality and de-socialization are foundational values. For Freire and other critical educational theorists (e.g. hooks, 1994; Giroux, 2020), education should foster



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democratic dialogue situated in the learner’s reality, supporting the development of a critical consciousness, whereby learners become aware of the world they live in, critically consider the forces that vie for power, and discover how they can participate in the transformation of their world.

5.1 .3

RELATIONSHIPS WITH CURRICULUM KNOWLEDGE / WORLD KNOWLEDGE

Education remains heavily biased toward third-person learning, such that students learn about subject matter in an objective way, as though the knowledge is ‘out there’, separate from themselves (Barbezat and Bush, 2014). Palmer (2017) asserts that traditional pedagogies keep students at arm’s length from the subject matter they study, creating a wall of

separation between the knower and the known. This, in turn, creates an ethical gap between the educated person and the world that is inevitably impacted by their actions. First-person and contemplative pedagogies can begin to bridge this rift between knower and known. We explore first-person approaches and the wider contribution of curriculum and pedagogy to human flourishing in section 5.3 below. Having provided a tentative orientation for this chapter, throughout the following sections we review literature and discuss how education can enhance these fundamental relationships.

This section addresses interpersonal relationships with a focus on proximal relationships including teacher–student relationships and peer relationships. It also discusses broader school, family and community relationships. We consider the school as a complex dynamic system, emphasizing whole school approaches and the transformative potential of schools.



5.2

Relationships with others: school relationships for flourishing

5.2 .1

TEACHER-STUDENT AND PEER RELATIONSHIPS

In most of the world, children and young people spend a large proportion of their waking hours at school. Their relationships with teachers are crucial not only for their engagement in

school, but also for their well-being outside of school (**Eccles et al., 1993**). A robust body of literature highlights that teacher–child relationships influence socio-emotional and cognitive development as early as preschool and continue to influence students’ social and intellectual capacities throughout childhood and adolescence (**WG3-ch4**). Students who report better quality teacher–student relationships are more likely to have higher levels



of psychological engagement, academic achievement and school attendance and reduced levels of disruptive behaviours, suspension and dropout (**Lan and Lanthier, 2003; Lee and Burkam, 2003; Barile et al., 2012**).

Researchers in this area demonstrate that through their day-to-day interactions, teachers influence the quality of students' social, emotional and intellectual experiences by addressing children's need to belong (**Pianta, 2006; Wentzel, 1997, 1998**) by providing classroom contexts that stimulate children's motivation and learning (**Barile, et al., 2012; Quin, 2017**), by fostering a social identity (**Whitaker, 2020**), and by supporting the development of children's emotional regulation, behavioural and academic skills (**Hughes, 2012; Wang, Brinkworth and Eccles, 2013; Yowell and Smylie, 1999**).

Furthermore, positive relationships matter, not just for students, but for teachers as well (**Claessens et al., 2017**). Positive relationships with students, in which high levels of affiliation prevail, afford teachers internal rewards and give meaning

to their work. Indeed, they are mentioned as one of the primary reasons for teachers to stay in the profession (**O'Connor, 2008; Veldman et al., 2013**) and one of the most important sources of enjoyment of, and motivation for, teaching (**Hargreaves, 2000**).

There are numerous theoretical perspectives on student–teacher relationships, including attachment, motivation and systems perspectives, although many of these ways of thinking about the nature and impact of student–teacher relationships share a great deal of conceptual overlap and should not be considered mutually exclusive (**Pianta, 1999**). For instance, attachment perspectives suggest that, as the interim adult caregiver, a teacher's relationship with their students is one of providing a secure base for exploration of the school environment (**Ainsworth et al., 1979**). In this way, a feeling of mutual affection between teacher and student may promote student engagement and buffer against negative emotions such as boredom, frustration and anxiety (**Wentzel, 1997**). Teachers may also

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serve as significant attachment figures for students who have experienced relational trauma or instability in family life (Bergin and Bergin, 2009). Attachment theory highlights how students' relationships in school may be influenced by their attachment histories with primary caregivers, which shape students' beliefs about the nature of interpersonal interaction. These beliefs may in turn shape students' engagement and participation in the classroom.

From a motivation perspective, both Maslow (1954) and Deci and Ryan (2001) highlight that relatedness or social belonging is a basic psychological need, which influences intrinsic motivation, self-regulation and well-being (Deci, 2009; WG1-ch3). The more that teachers are able to meet students' interpersonal need for relatedness – such as ensuring students feel cared for, supported and emotionally connected – the more they are likely to simultaneously support students' intellectual and academic needs (Allen and Kern, 2017; Wentzel and Wigfield, 1998).

Relationships with peers are also

of central importance to children throughout childhood and adolescence (Wentzel, 2017). They provide a source of companionship and entertainment, help in solving problems, personal validation and emotional support, and a foundation for identity development. Children who enjoy positive relationships with peers appear to experience levels of emotional well-being, beliefs about the self and values for prosocial forms of behaviour and social interaction that are stronger and more adaptive than do children without positive peer relationships. An additional finding is that children who enjoy positive relationships with their peers also tend to be engaged in, and even excel at, academic tasks more than those who have peer relationship problems. For instance, Ladd and Coleman (1997) find that the number of mutual friendships children have in their classrooms predicts changes in school attitudes (gains) over time.

An important factor in fostering positive peer relationships is promoting respect for diversity within the school environment.



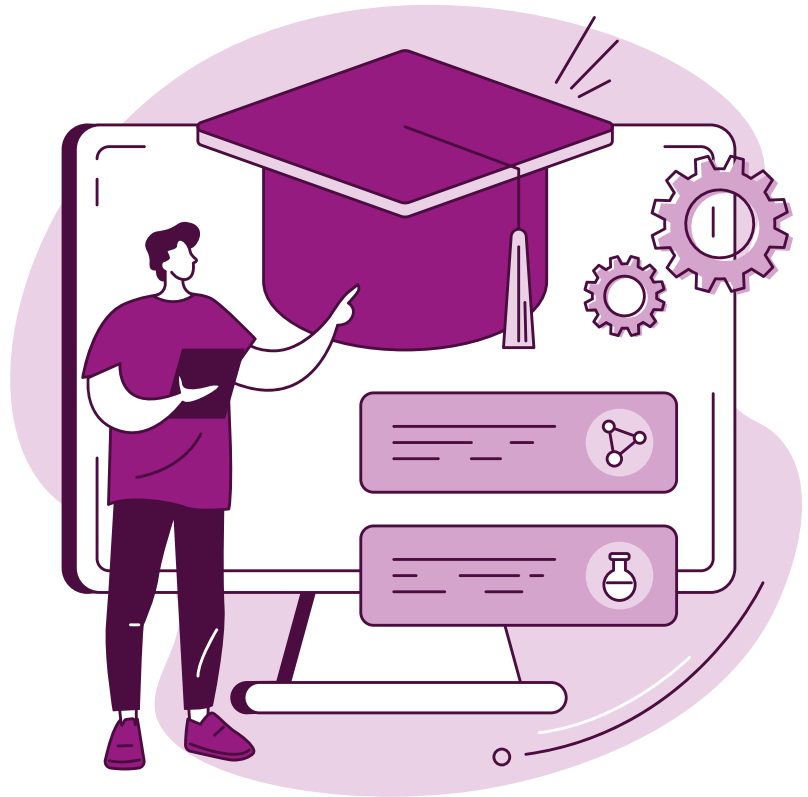
Strengthening the capacity for meaningful relationships needs to be a central goal of schooling for 2030 and beyond. This means placing compassion and connection at the centre of school practices.

Craggs and Kelly (2018) link students' sense of school belonging and acceptance of individual identity by the school community. A feeling on the part of young people that their individual identities (including ethnic, cultural and religious identities) are known, understood and accepted prompted a wider sense of peer acceptance and 'fitting in' at school. For instance, Booker's (2007) investigation of sense of belonging for African-American high school students examines the extent to which students 'felt that they could freely be themselves at their school and at the same time be a welcome member' (p. 310).

Irrespective of the different theoretical positions, what is apparent from the above overview is that there exists a consilience of empirical and conceptual literature from across diverse fields, which attests to the centrality of relationships for both student and teacher well-being. The basic desire for relatedness, recognized in educational research, corresponds with the stance that human beings are fundamentally relational

beings. There are many important implications for school practices. Strengthening the capacity for meaningful relationships needs to be a central goal of schooling for 2030 and beyond. This means placing compassion and connection at the centre of school practices, nurturing empathy and trust, creating a felt sense of safety and belonging at school, and responding to problems by using restorative and relationship enhancing approaches, rather than relying on coercive or controlling disciplinary approaches.

In this section, the relationship to knowledge is explored, highlighting the connection that invariably exists between school and society. As Feinberg and Soltis (2004, p. 10) note, 'Schools are a human invention. They have a history. They change forms either in reaction to social forces or because of our conscious attempt to change them'. This suggests the powerful influence of social context on how schools are structured and how they



5.3

Relationships with knowledge: flourishing through what and how students learn in school

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divergent, ways toward previously unimagined futures. To the latter point, Vinson and Ross (2001, p. 52) argue 'the key to the curriculum experienced in the classroom is the teacher'.

In light of the influence of social context on education, individuals have sought to explain and understand the relationship between school and society in disparate ways, including:

- functionalism, wherein schools are viewed as the primary instruments for meeting the demands of modern political, social and economic life;

- conflict theory, wherein schools are viewed as important instruments in the never-ending struggle between different groups to hold power and status; and

- interpretivism, wherein global arguments about the role of schools in society are discarded in favour of culture-bound frameworks of particular schools that influence how and why

individuals act in certain ways in those contexts.

Interestingly, despite the widely varying nature of these understandings of the purpose of schools, each shares certain commonalities. For instance, there is always a curriculum to be taught, usually rooted in academic disciplines. There is also invariably a hidden curriculum (Jackson, 1968; Longstreet and Shane, 1993), wherein the emphasis of instruction and the ways in which students are taught or treated take on immense significance. Student learning, consequently, takes place both directly and indirectly.

5.3 .1

ON SCHOOLS AS A CONDUIT OF STUDENT RELATIONSHIPS WITH KNOWLEDGE

Bruner (1996, p. 27) notes how

... in order to effectively teach for human flourishing, teachers must consider the appropriate subject matter for their lessons, the most beneficial pedagogical methods in which to engage their students and how to manage their classrooms in relation to their purpose.

‘School curricula and classroom “climates” always reflect inarticulate cultural values as well as explicit plans; and these values are never far removed from considerations of social class, gender, and the prerogatives of social power’. Drawing from Dewey’s (1923, 1938) work around experience and education, Singer (2003, p. 69) notes how students learn ‘from the full spectrum of their experiences in school, not just the specific thing they are studying in class. They learn from what they are studying, how they are studying, who they are studying with, and how they are treated’. Hence, in order to effectively teach for human flourishing, teachers must consider the appropriate subject matter for their lessons, the most beneficial pedagogical methods in which to engage their students and how to manage their classrooms in relation to their purpose.

As established in the previous chapter, curriculum is a broad term that can engender a wide range of meanings. At the narrow end of the spectrum,

formal schooling usually involves an overt, explicit or written curriculum. This is the intentional instructional agenda that primarily draws from subject areas to provide students with knowledge and skills deemed important. There is often an imbalance here in terms of the degree to which this curriculum focuses on the transmission of standard and socially acceptable views, attitudes and behaviours in any given society, and the degree to which the focus is on the transformation of the learner through critical thinking, reflective inquiry and questioning and critiquing the status quo.

Since disciplinary knowledge represents the bedrock for much of the overt, explicit or written curriculum, the concept needs to be unpacked. To that end, disciplinary knowledge is often thought to refer to the unique ways disciplinary experts ‘create, disseminate, and evaluate knowledge’ (Shanahan and Shanahan, 2008, p. 48). As the de facto ‘gold standard’ for addressing and solving various societal problems,



As the de facto 'gold standard' for addressing and solving various societal problems, many think an important aim of schooling is to provide students with scaffolded practice in 'saying(writing)-doing-being-valuing-believing' (Gee, 1996) like recognized members of a discipline.

many think an important aim of schooling is to provide students with scaffolded practice in 'saying(writing)-doing-being-valuing-believing' (Gee, 1996) like recognized members of a discipline.

This belief in the power of disciplinary knowledge leads students to study subjects like mathematics, science, history, literature and languages from early on in their formal schooling. There is general consensus that these disciplines must be simplified for younger students to be able to engage, but even that concern has been addressed through concepts like the spiral curriculum bolstered by Bruner's (1960, p. 33) assertion that 'any subject can be taught effectively in some intellectually honest form to any child, at any stage of development,' and that schools waste time by postponing 'difficult' topics. Embedded in the study of these disciplines seems to be the assumption that students will actively approach societal and even global problems and issues using disciplinary tools and concepts to produce knowledge,

reach conclusions and make judgement, while also formulating their own stance on these issues. But such assumptions about the place of schools in helping students to form relationships with disciplinary knowledge – and how it is constructed – often do not seem to have a firm basis in what actually goes on in many contemporary schools, as will be discussed in the next section.

ON HOW WELL SCHOOLS ARE FACILITATING STUDENT RELATIONSHIPS WITH KNOWLEDGE

Education remains heavily biased toward third-person learning, such that students learn about subject matter in an objective way, as though the knowledge is 'out there', separate from themselves (Palmer, 1983). This in turn may create an ethical gap between the educated person and the world that is inevitably impacted by their actions. Framed another way, Newmann (1990, p. 44) describes the problem of authenticity and thoughtfulness, or the lack thereof, in school classrooms as

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follows: 'At best, much classroom activity fails to challenge students to use their minds in any valuable way; at worst, much classroom activity is nonsensical or mindless'. Essentially, Newmann (p. 44) argues that this situation is unacceptable precisely because it does little to guide students in how to apply knowledge, or how to be thoughtful, when faced with non-routine challenges. Similarly, other researchers find that students often report feeling bored and unmotivated to participate in the learning opportunities typically provided to them in school (Eccles, Lord and Midgely, 1991; Eccles et al., 1993; Jackson and Davis, 2000; Macklem, 2015; Cappella, Aber and Kim, 2016).

Further, there is evidence that the growing, seemingly global, emphasis on standards and standardized testing tends to foster acceptance of the notion of instruction as knowledge transmission, while the emphasis on accountability tends to compel teachers to engage in broad superficial content coverage (Darling-Hammond, 2004;

NRC, 2012). Wineburg (1997) claims that this emphasis is problematic because both are based on a view of knowledge that has its roots in behaviourism. This view of knowledge rests on two increasingly controversial assumptions. The first, 'decomposibility', views knowledge as an aggregation of independent units, or 'bonds,' between a stimulus and a response' (Wineburg, 1997, p. 256). This assumption bolsters support for misguided 'banking' models of learning, whereby knowledge can simply be deposited with students (Freire, 1970, 1993). The second behaviourist assumption regarding the nature of knowledge, 'decontextualization', centres on 'the notion that the skill or knowledge one learns remains constant regardless of context' (Wineburg, 1997, p. 256). As such, once something is learned, it can supposedly be recalled and successfully employed in any other situation. Both of these behaviourist assumptions regarding the nature of knowledge encourage teachers to think of instruction as the simple



transmission of information as opposed to deeper, more meaningful inquiries with their students.

At the broader end of the curriculum spectrum, how

teachers engage their students in learning and how they treat them as individuals also matters. Standards basically assert what is important to know without taking into consideration why it is important to know it. Westheimer and Kahne (2004)

effectively demonstrate that the ways in which curriculum is taught can send messages to students that reinforce the relative importance of certain values, such as being personally responsible, participating in one's community to effect change or taking a justice-oriented stance to work to change unjust social, political and/or economic systems. This is also true in how teachers approach diversity in their curriculum and/or via the classroom and school environment. For instance, Nieto (1994) identifies four possible visions for multicultural education, including those grounded in monoculturalism, tolerance, acceptance, respect, and affirmation, solidarity and critique. By providing vignettes that describe how a school embracing each vision would actually look, distinctions become evident in several important areas, including the extent to which content is inclusive of the contributions, perspective and talents of women or those outside the cultural mainstream; pedagogy is flexible and marked by active methods that provide for

student choice; fair and equitable disciplinary policies are developed; and governance structures are shared and allow for community involvement. The choices teachers and schools make along these lines can send implicit messages to students about what matters, and the roles they are expected to play within societal structures. Nieto (1994, p. 69) calls for providing students with apprenticeships 'in democracy and social justice' noting how it would be unrealistic to expect students 'to be able to function in a pluralistic society if all we give them are skills for a monocultural future' (p. 69). Finally, even the absence of topics or various methods of learning can send messages to students via the null curriculum (Eisner, 1994).

CURRICULUM AND PEDAGOGY FOR FLOURISHING

All of this begs the question of what kind of curriculum and pedagogy ought we consider to further human flourishing. Dewey (1938/1997) argues that one of the central problems in formal



The goal here is to help students understand that flourishing is not something that is simply achieved; 'one works at it continually (path), in concert with others (participation), and intentionally with others who are of different ideology, perspective, or culture (pluralism)'.

education is that it usually fails to consider that the world that existed for one generation is not the same world that will exist for the next generation. According to Dewey (1923), 'Each generation is inclined to educate its young so as to get along in the present world instead of with a view to the proper end of education: the promotion of the best possible realization of humanity as humanity (p. 91)'. Rejecting clear distinctions between content as curriculum and pedagogy as teaching methods (Segall, 2004), which can lead to a passive education that seems largely detached from experience, below are holistic recommendations of emphases that might guide a curriculum for flourishing. The goal here is to help students understand that flourishing is not something that is simply achieved; 'one works at it continually (path), in concert with others (participation), and intentionally with others who are of different ideology, perspective, or culture (pluralism)' (Parker, 2008, p. 68).

To that end, mounting evidence

suggests that students, at any level of their schooling, are capable of engaging in tasks that require them to interpret, analyse, evaluate and synthesize knowledge (Bloom, 1956). This ability can be harnessed toward prompting students to actively engage in socially relevant tasks like crafting position papers on foreign policy (King et al., 2009), discussing controversial public issues (Hess, 2002) and constructing historical arguments and interpretations based on primary source evidence (Levstik and Barton, 1996; VanSledright, 2002). Engaging in these kinds of tasks, especially while working with others who may have varying perspectives, emphasizes critical thinking 'designed to promote a transformation of some kind in the learner' (Thornton, 1994, p. 233). Still, Banks (2001, p. 74) maintains:

Academic knowledge and skills are essential in today's global society, but they are not sufficient. Students must also develop the knowledge, attitudes, and skills needed to interact positively with people from diverse groups and to participate



in the nation's civic life.

Stanley and Nelson (1994, p. 267) suggest the emphasis here might be more on facilitating 'the content, behaviours, and attitudes

that question and critique standard and socially accepted views'.

Further to this, as discussed above, much of the overt,





Academic knowledge and skills are essential in today's global society, but they are not sufficient.

explicit or written curriculum of formal schooling is derived from disciplinary content and knowledge. Although the term 'discipline' suggests that clear fields of study exist and each is defined by its own discrete methods of inquiry, this is not always the case. Nelson (2001, p. 22) argues that 'those experienced in academic politics and those with intellectual interests beyond any individual topic of study recognize that academic disciplines are not obviously distinct areas of knowledge with clear boundaries and unique bodies of literature or modes of scholarly inquiry'. Foucault (1972, p. 224) went so far as to claim that 'disciplines constitute a system of control in the production of discourse, fixing its limits through the action of an identity taking the form of a permanent reactivation of the rules'. Regardless, one thing is clear. Individuals do not go out into the world and interact or try to engage with situations by only drawing from a single discipline or field of study at a time. Our engagement is holistic and not able to be predicted in advance.

For this reason, educators increasingly cite the value of interdisciplinary approaches to education. As established in **WG1-ch4**, six curricular domains seem particularly relevant for students as they relate to the concept of human flourishing. These domains include environment, culture, society, technology, interpersonal and personal. Interdisciplinary instruction accounts for the overlapping nature of these domains insofar as it involves presenting knowledge of constituent disciplines and their relations, connections to other domains and uses in the everyday world. Generally intended as a complement to specialization, this kind of instruction is often justified as a preparatory method for people to consider factors together that are usually treated in isolation (Bailis, 2002). According to Haynes (2002, p.xv), the nature of these approaches requires one to 'move away from an absolutist conception of truth to a conception of truth that is situated, perspectival, and discursive and that informs and is informed by the investigator's own



sense of self-authorship (p. xv)'. Interdisciplinary instruction, then, is not synonymous with a single process, set of skills, method or technique. Instead, 'it is concerned primarily with fostering in students a self-authorship and a situated, partial, and perspectival notion of knowledge that they can use to respond to complex questions, issues, or problems' (Haynes, p. xvi).

Closely related to interdisciplinary instruction, inquiry based, problem based and project based approaches represent student-centred approaches to holistic learning that offer choice and encourage meaning-making through active exploration, investigation and application of knowledge to new situations and problems. According to Darling-



Service learning typically involves a reciprocal relationship that meets or addresses a community need, purposefully integrates academic content into the experience, prompts students to question, explain and co-construct solutions to various societal issues, and encourages participants to reflect and connect understandings to their personal perspectives.

Hammond et al. (2020, p. 100), the kind of learning that flows from these approaches requires ‘strong self-regulation, executive functioning, and metacognitive skills; resourcefulness, perseverance, and resilience in the face of obstacles and uncertainty; the ability to learn independently; and curiosity, inventiveness, and creativity’. These approaches support higher-order thinking and the application of intrapersonal and interpersonal skills that are broadly applicable and relevant into adulthood (NRC, 2012). Shared learning approaches such as these provide opportunities for students to collaborate and learn from peers.

In keeping with the theme of being able to work together to respond to complex questions, issues or problems, there might also be good reason to think about how students can apply developing their knowledge and skills in the community outside of the school walls. One increasingly popular approach to this can be found in service learning. Service learning typically involves a reciprocal relationship that meets

or addresses a community need, purposefully integrates academic content into the experience, prompts students to question, explain and co-construct solutions to various societal issues, and encourages participants to reflect and connect understandings to their personal perspectives (Novak et al., 2009). A major benefit of service learning is that it places teaching and learning directly in a social context, facilitating socially responsive knowledge (Conway, Amel and Gerwien, 2009). This can encourage metacognition and the development of transferable knowledge and skills to other kinds of contexts.



5.4

Relationship to self: support for learners’ social emotional well- being as a necessary condition for flourishing

In this section we turn to the intrapersonal level, with close attention to SEL and mindfulness as vehicles for flourishing. This inner dimension connects to both of the other levels of relationship,

affecting relationships with others, as well as with knowledge and subject matter.

The potential for flourishing





applies to all children, and schools play an essential role. However, we must acknowledge the disparity in access to resources and exposure to trauma that are a reality for many. Sadly, not all children enter school with their basic needs – like food and shelter – met on a regular basis. And some children experience a lack of physical and/or psychological safety in their community and/or home. It is very challenging for a student to focus on learning when they have not eaten a nutritious meal or their family faces housing insecurity. Similarly, emotional and psychological distress also interfere with learning (**Shankar and Park, 2016**). The first step in closing the gaps is to ensure that these basic needs for food, shelter and safety are met through school and community resources.

Schools are a microcosm of the macrocosm of society that can disrupt or perpetuate inequities (**Shedd, 2015; WG2-ch5**). Educating children who will enter a world fraught with disparities and challenges requires a reimagining of what is possible. We talk about

modelling for children – but, to varying degrees in the United States (USA) and other developed countries, it is worth asking what we are modelling when we look at the budget for education compared to defence, the drastic difference in per pupil spending between affluent and impoverished communities, the global climate crisis, a prison system overcrowded and overrepresented by people of colour, a health care system that many have no access to, and a pharmaceutical industry that profits from people. We need to truly value education, not as a means of producing workers to feed the economy, but as humans who each have value and the potential to disrupt and reimagine a deficient system. Just as we track GDP, we can examine gaps in health and well-being, across racial groups and the socio-economic spectrum, as benchmarks of a nation's success.

To promote flourishing in children requires attending to their development holistically. Children's development is multifaceted, encompassing many

The potential for flourishing applies to all children, and schools play an essential role.

To promote flourishing in children requires attending to their development holistically.

distinct yet related areas, including cognitive, physical, social, emotional and spiritual. Growth and development in any one area necessarily impact upon every other area (Diamond, 2007). Given the complex and interrelated nature of the development of this biopsychosocial organism that is a human being, it is to be expected that no single approach holds all the answers. In this section, we review approaches that address multiple dimensions of children's growth, with particular attention to social emotional capacities. These skills are sometimes referred to as non-academic or co-cognitive skills. We prefer the latter and will use the term co-cognitive where relevant, because these skills are inextricably linked to the process and outcomes of learning (WG3-ch4).

SEL offers a powerful tool to promote flourishing in education. It encompasses a host of co-cognitive capacities essential to learning and well-being. These skills, including self and other awareness, responsible decision-making and relationship skills, are embedded and reinforced

across domains from classrooms and schools to the home and community (CASEL, n.d.). SEL is taught in a variety of ways, including through explicit instruction, teacher modelling of behaviour and skills, and integration with academic subjects. According to a landmark meta-analysis that aggregated findings across 213 studies of universal schoolbased SEL programmes involving over 270,000 K-12 students, SEL instruction is most effective when taught by the classroom teacher and programme activities are sequenced, active, focused on social or personal skills and explicit in targeting SEL rather than general positive development (following the acronym SAFE; Durlak et al., 2011). SEL programmes showed benefits across a range of social and emotional outcomes and increased students' academic performance by 11 percentile points. A meta-analysis of follow-up effects from six months to eighteen years later found lasting benefits of SEL programmes in social-emotional skills and well-being that held across differences



in students' racial and socio economic background (Taylor et al., 2017).

The Collaborative for Social and Emotional Learning (CASEL) curates a clearinghouse of SEL programmes for different grades that are informed by research (CASEL, n.d.). Programmes tend to be more widely available for elementary age students, with fewer stand-alone SEL programmes available for upper grades. However, there is a recognition that SEL can and should be woven into academic instruction. For example, empathy can be practised through literature by understanding and taking on the perspective of different characters. Subject matter curricula like Facing History and Ourselves can promote greater social and personal awareness through exploring connections between historical and modern day events, in addition to empowering students to become advocates for social change. It is possible and necessary to cultivate SEL outside of formal programmes, a topic that will

be further explored later in this chapter.

A related emerging area is transformative SEL, which intersects with social justice and is concerned with advancing equity in access to resources and outcomes in education. Transformative SEL competencies focus on identity, intersectionality, agency, belonging and engagement as central to furthering social-emotional development and achieving equity in education (Jagers, Rivas-Drake and Williams, 2019). Strategies identified as promoting these transformative social and emotional competencies are culturally infused SEL skill development, project based learning and youth participatory action research. Also relevant to a discussion of equity are disciplinary approaches. Restorative practices for resolving conflict and behavioural issues offer an inclusive approach to counteract exclusionary, punitive measures that disproportionately marginalize students of colour. Research evidence suggests that restorative approaches

Transformative SEL competencies focus on identity, intersectionality, agency, belonging and engagement as central to furthering social emotional development and achieving equity in education.

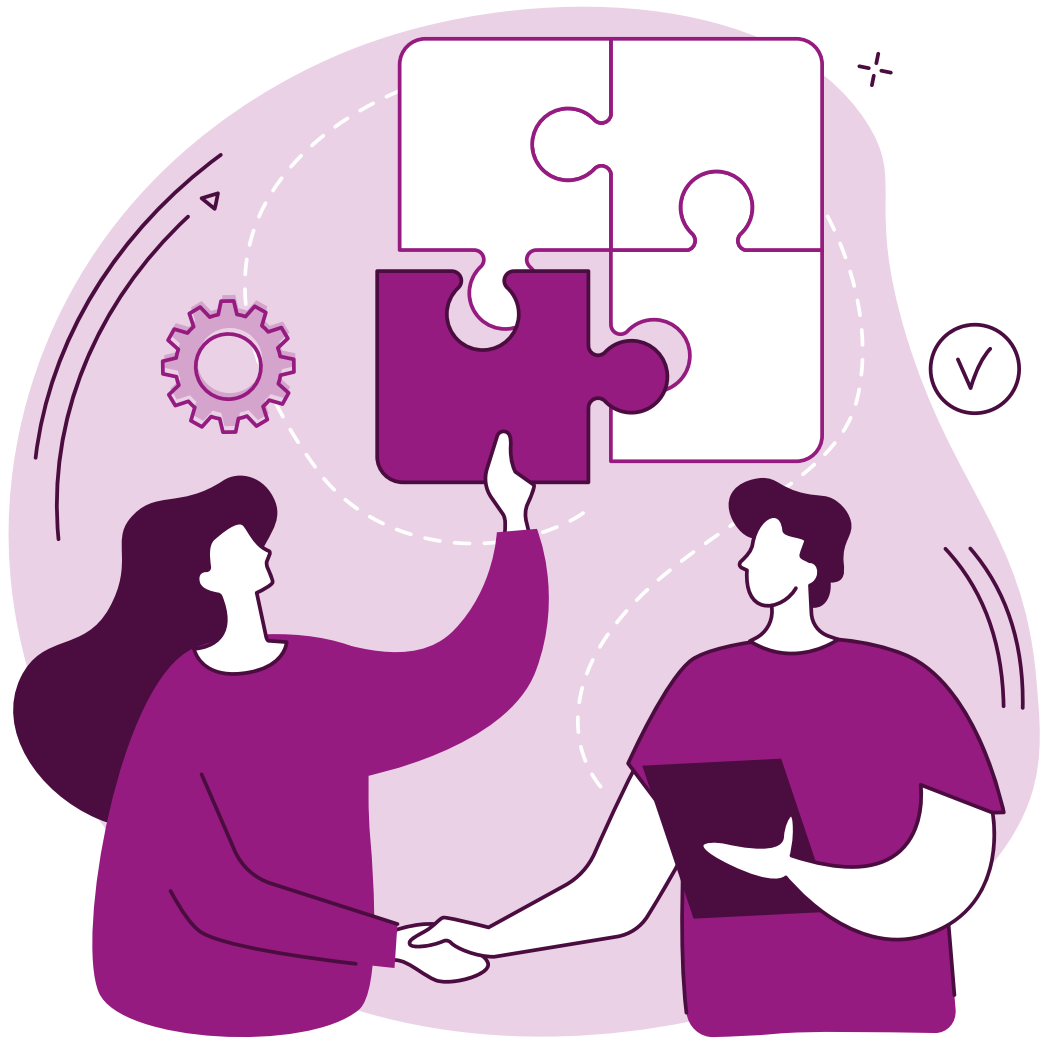
teach students skills for conflict resolution and help students become better integrated into the school community (**Wearmouth, McKinney and Glynn, 2007; Morrison, 2013**).

Closely linked to a discussion of SEL is recognizing the relevance of emotion for learning and creating space for emotions like joy, interest and engagement to promote flourishing through education. The role of emotion in cognitive processing and behaviour is supported by multiple lines of research, including evidence from neuroscience and social and cognitive psychology (**Immordino-Yang, Darling-Hammond and Krone, 2019**). Positive emotion facilitates memory and learning (**Fredrickson and Branigan, 2005; Fredrickson, 2013**). Therefore, creating conditions that allow for enthusiasm and curiosity to emerge is essential, for example, through interest driven learning (**Edelson and Joseph, 2004**). Another finding highlights the salience of interpersonal relationships for learning and eliciting positive affiliative emotions – as such, educators can cultivate

relationships with students and facilitate peer groups to deepen learning and social connections (**Christenson and Havsy, 2004; Lieberman, 2012; Wentzel and Watkins, 2011**). A third finding is that self-transcendent emotions like compassion, gratitude and awe are linked to prosocial behaviour (**Bai et al., 2017; Stellar et al., 2017**) – finding ways to bring these emotions into the classroom may play a role in fostering a positive classroom climate. Another line of research from educational neuroscience posits that learning environments optimize social and emotional development by engaging students in three types of activities, each linked to a specific neural network: 1) attention and productivity on tasks; 2) reflection and meaning-making; and 3) making learning emotionally relevant (**Immordino-Yang, Darling-Hammond and Krone, 2019**).

Another potential approach for cultivating flourishing in education informed by neuroscience is mindfulness. Recognized for its impact on cognitive as well as affective

Closely linked to a discussion of SEL is recognizing the relevance of emotion for learning and creating space for emotions like joy, interest and engagement to promote flourishing through education.



dimensions of well-being, mindfulness has burgeoned over the last several decades in both the mainstream and as a topic of scientific inquiry (Ergas

and Hadar, 2019). Mindfulness is sought after for its stress reducing and wellness enhancing effects. Mindfulness practices tap cognitive processes (attention and

In terms of research evidence, meta-analyses of mindfulness in school settings indicate beneficial impacts for students across cognitive, social and academic areas of functioning ... While research on mindfulness in education is still at a relatively early stage, the evidence base is growing.

executive functions) as well as social-emotional skills (prosocial behaviour, emotion awareness). The promise of mindfulness approaches recognizes that these are fundamental capacities for human flourishing. Furthermore, mindfulness and SEL can be applied in complementary ways (Schonert-Reichl, Hanson-Peterson and Hymel, 2015). A distinction that has been made is the relative emphasis on training inner capacities with mindfulness and outer capacities with SEL (Lantieri and Zakrezewski, 2015).

In terms of research evidence, meta-analyses of mindfulness in school settings indicate beneficial impacts for students across cognitive, social and academic areas of functioning. In a meta-analysis that included 24 studies in school settings, of which 13 were published, the largest effect sizes emerged for cognitive performance ($g=.80$), stress ($g=.39$), and resilience ($g=.36$) (Zenner, Herrnleben-Kurz and Walach, 2014). Another meta-analysis that included 76 school based studies examined follow-up results and

found that effects were stronger at follow-up than at post-test with estimates of effects ranging from $g=.31-.32$ at post-test and $g=.40-.46$ at follow-up (Klingbeil et al., 2017). This meta-analysis found the strongest effects for mindfulness ($g=.51$), meta-cognition and cognitive flexibility ($g=.40$), followed by emotion regulation ($g=.32$) and attention ($g=.29$) among factors categorized as process variables, and outcomes variables yielded the largest effects across academic achievement and school functioning ($g=.39$), internalizing problems ($g=.39$) and social competence and prosocial behaviours ($g=.37$). While research on mindfulness in education is still at a relatively early stage, the evidence base is growing.

Mindfulness has as its foundation awareness of breath, body, mind (thoughts and emotions) and phenomenal experience. The seven attitudes of non-judgement, patience, openness, trust, non-striving, acceptance and letting go support mindfulness (Kabat-Zinn, 2013). Considerable research evidence has documented an



Mindfulness has as its foundation awareness of breath, body, mind (thoughts and emotions) and phenomenal experience.

array of physical and mental health benefits, which has led mindfulness and its extensions to be applied in virtually every sector, including the field of education. Mindfulness programmes in school settings have been investigated across a range of ages from Pre-K to high school. Of 447 empirical and theoretical papers published on mindfulness in education between 2002 and 2017, 37 were empirical studies of K9–K12 students, 40 of K5–K8 students, 40 of K1–K4 students and seven of Pre-K students (**Ergas and Hadar, 2019**). While there is variability in programme structure, prototypical offerings for students are held in the classroom from one to four times per week for 20–30, 40–60 or 90 minutes per session over 8–12 weeks (**Mendelson et al., 2010; Flook et al. 2015; Schonert-Reichl, Hanson-Peterson and Hymel, 2015; Bluth and Eisenlohr-Moul, 2017**).

Programmes typically include movement practices as a key activity along with awareness to the breath and body as anchors. Although practices are applicable across development, the length

and emphasis on specific practices can be adapted for particular groups of students. For example, it may be appropriate to increase the length of practices as students mature (in terms of age and developmentally), and certain practices like noticing thoughts may resonate more with older students as their cognitive processing and mental world becomes more complex. Physical props and visual aids can assist younger students in practising, for example, by drawing attention to the breath through blowing on a pinwheel or placing a light object on the abdomen to notice how the belly moves up and down with in and out breaths (**Kaiser-Greenland, 2010; Center for Healthy Minds, n.d.**). In general, practices can be adapted and are relevant across development considering that the basic capacity of attention spans developmental stages. Complementary practices invoking care for oneself and others, such as loving kindness and compassion practices, explicitly address prosocial skills. Such kindness practices promote a sense of connection



and can be particularly helpful for teenagers who may be prone

to self-judgement and self-criticism. Mindfulness and caring





It is not only a question of what children learn but how they apply that knowledge and skill in their lives and the world beyond school.

practices are wholly compatible and reinforce one another. In addition, teacher modelling and direct experience with training is recommended as a component of classroom mindfulness (Hulburt, Colaianne and Roeser, 2020).

In addition to facilitating academic learning, social-emotional skills are valuable in and of themselves. Rates of mental health afflictions surge in adolescence, and the experience of stress is reported even among elementary age students – these indicate a need for attending to well-being early on in life (Deighton et al., 2019; Wagner et al., 2017). Learning to manage difficult emotions, forming and maintaining healthy relationships, and caring for oneself and an ever-widening circle of others are essential to flourishing. Ideally, approaches to fostering flourishing will be able to grow with children, and have applicability in their lives both in and outside of school, with skills being reinforced and modelled by adults at school, home and in the community.

It is not only a question of what children learn but how they apply that knowledge and skill in their lives and the world beyond school. How does their emotional well-being and the well-being of others figure into their choices as they go through life? We can have the same knowledge but apply it in vastly different ways. Preparing children to thrive in a global and interconnected world requires more than rote learning. Co-existing and caring for ourselves and others is necessary for thriving. We are surrounded by reminders that living in ways that are self-focused is not sustainable. We need a more well-rounded education to live and fulfill our potential as human beings, recognizing and honouring our interdependence on each other and the earth. Education for flourishing is not complete without an inner education.

Finally, we round out this review by stepping back to look at the broader context in which flourishing for children is fostered. Supporting the educators who work with children on a daily



5.5

The importance of
educators in creating
a climate that
promotes flourishing
in educational spaces
through social and
emotional learning
approaches



SEL interventions and skill development should occur within supportive classroom and school environments, as well as help to create such a climate.

basis is fundamental to creating an environment in which students can flourish. Classrooms and schools operate as systems, and decades of research suggest that the unique culture and climate of classrooms and schools affects how and what students learn (Thapa et al., 2013). Whereas school culture refers to a general set of norms, beliefs and practices or 'the way things are done around here' (Hemmelgarn, Glisson and James, 2006), school climate 'is based on patterns of people's experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures' (National School Climate Council et al., 2007, p. 4). Culture and climate in combination influence the interactions and relationships among administrators, teachers, school staff and students, and of their approaches to teaching and learning (Gottfredson et al., 2005). Therefore, any approach to promoting SEL needs to take into account both school culture and climate and systematically and intentionally embed SEL into the

fabric of a school.

SEL interventions and skill development should occur within supportive classroom and school environments, as well as help to create such a climate. Additionally, successful SEL-related school and classroom activities foster active student voice in decision-making, problem-solving and engagement for lifelong learning. Researchers also have shown that effective programmes provide repeated opportunities to practise new skills and behaviours within the programme structure and beyond to real-life situations. That is, providing opportunities to practise within classroom lessons is important, but actual opportunities to practise in real-life situations are likely to have even more impact (Nation et al., 2003; Durlak et al., 2011; Weare and Nind, 2011).

Systemic SEL is an approach to create equitable learning conditions that actively involve all Pre-K to Grade 12 students in learning and practising social, emotional, and academic competencies.

5.5 .1

SYSTEMIC SEL

Educators are a central component of a systemic approach to promoting SEL in schools as a means to advance human flourishing in the education system. Consistent with WG1-ch4, which highlights education as a dynamic system, recently researchers have shown that promoting the social and emotional competencies and flourishing of students is most effective when explicit attention is given to all levels of the system, including educator SEL (Mahoney et al., 2020). As recently espoused by Mahoney et al. (2020, p. 1),

‘Systemic SEL is an approach to create equitable learning conditions that actively involve all Pre-K to Grade 12 students in learning and practicing social, emotional, and academic competencies. These conditions require aligned policies, resources, and actions at state

and district levels that encourage local schools and communities to build the personal and professional capacities of adults to: implement and continuously improve evidence-based programmes and practices; create an inclusive culture that fosters caring relationships and youth voice, agency, and character; and support coordinated school-family-community partnerships to enhance student development.’

Especially noteworthy in the above description of systemic SEL is that any approach to promote social and emotional competence in students must consider the interpersonal and intrapersonal capacities of the adults in the education system.

Several organizing frameworks have been proposed for systemic SEL, each one outlining a variety of components that influence SEL, such as school culture and climate, or teachers’ pedagogical skills. Each framework identifies similar student outcomes, such as greater academic achievement and improved social-emotional

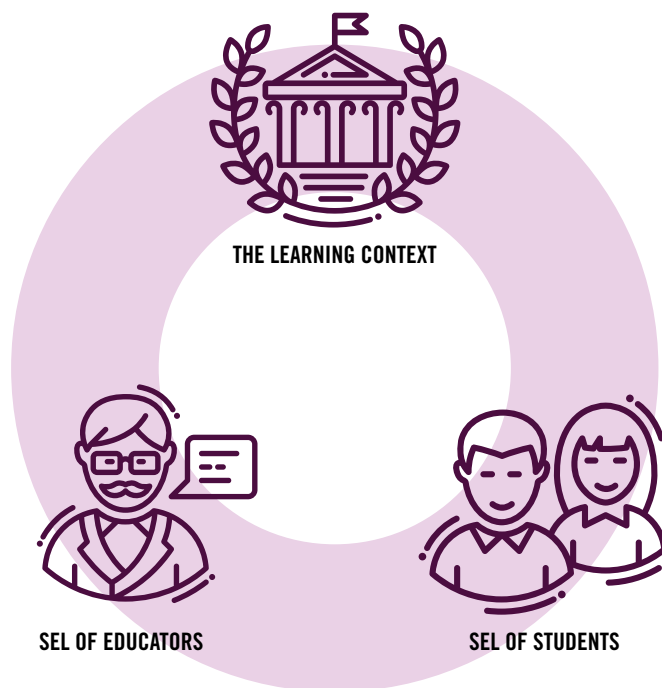


Figure 1. Three essential ingredients of systemic SEL

competence. Many of these frameworks share three distinct and interrelated dimensions – the learning context, students’ SEL and teachers’ SEL – and any discussion of SEL needs to include all three. In Figure 1, these three dimensions are portrayed in a circle to illustrate their interconnectedness and to highlight that each dimension influences, and is influenced by, the others.

THE LEARNING CONTEXT

To be effective, SEL interventions and skill development should occur in a safe, caring, supportive,

participatory and well-managed environment – that is, an environment that supports students’ development and lets them practise the skills they learn. The learning context encompasses such factors as communication styles, performance expectations, classroom structures and rules, school organizational climate, commitment to the academic success for all students, district policies, and parental and community involvement.

TEACHERS AND SEL

A confluence of research has emerged in recent years

contending that teachers are the engine driving SEL programmes and practices in classrooms and schools (**Schonert-Reichl, Kital and Hanson-Peterson, 2017**). Yet until recently, their role in explicitly promoting SEL, as well as their own social and emotional competence and well-being, have received scant attention (**Hadar et al., 2020**). What do we know about the well-being of teachers? How does teachers' social-emotional competence influence students' SEL, and how can we promote it? And do prospective teachers receive any information about SEL and their own social and emotional competence in their teacher preparation programmes? The importance of these questions should not be underestimated. If we do not accurately understand teachers' own well-being and how teachers influence students' SEL, we can never fully know whether and how to promote SEL in the classroom. Such knowledge could not only guide theory, it could also give us practical information about how teachers can set students on a trajectory toward being socially skilled and well-

rounded citizens who are ready to responsibly navigate their personal and professional pathways to adulthood. Given recent empirical evidence demonstrating the strong association of teachers' well-being with students' well-being (**Braun, Schonert-Reichl and Roeser, 2020**), to promote flourishing in students, it is essential to first identify the ways to cultivate flourishing in teachers.

Effective SEL interventions and skill development occurs when teachers have the requisite social and emotional skills to create an environment that is safe, caring, supportive and well-managed, and have the competencies and knowledge to effectively implement SEL programmes. Teachers' own SEL competence and well-being play a critical role in influencing the learning context and the infusion of SEL into classrooms and schools (**Jones, Bouffard and Weissbourd, 2013**). As stated earlier in this chapter, classrooms with warm teacher-child relationships facilitate deep learning among students (**Merritt et al., 2012**), and when children feel



... when teachers poorly manage the social and emotional demands of teaching, students demonstrate lower levels of performance and less on-task behaviour.

comfortable with their teachers and peers, they are more willing to grapple with challenging material and persist at difficult learning tasks. Conversely, when teachers poorly manage the social and emotional demands of teaching, students demonstrate lower levels of performance and less on-task behaviour (Marzano, Marzano and Pickering, 2003; Braun, Schonert-Reichl and Roeser, 2020). Hence, it is essential that efforts are made to support the development of teachers' SEL competencies in order to optimize their classroom performance and their ability to promote SEL in their students (Jennings and Frank, 2015). Similarly,

Jennings and Greenberg's (2009) Prosocial Classroom Model suggests that teachers' social-emotional competence and well-being affect the classroom management strategies they use, the relationships they form with students and the quality with which they implement SEL programmes and practices. These factors, in turn, can contribute to a healthy classroom climate that then leads to students' social, emotional, and academic success.

In the context of education, teachers can experience stress when they appraise a situation as threatening and yet have limited ability to change or improve it.

5.5 .2

TEACHER WELL-BEING: THE PATHWAY TO PROMOTE FLOURISHING IN CLASSROOMS

‘Classroom teaching . . . is perhaps the most complex, most challenging, and most demanding, subtle, nuanced, and frightening activity that our species has ever invented. In fact, when I compared the complexity of teaching with that much more highly rewarded profession, “doing medicine,” I concluded that the only time medicine even approaches the complexity of an average day of classroom teaching is in an emergency room during a natural disaster’ (Shulman, 2004, p. 504).

Why is it important to consider teacher well-being in discussions of the promotion of flourishing in students? If teachers support SEL,

what might prevent them from implementing SEL strategies and programmes in their classrooms? Decades’ of research shows that teaching is one of the most stressful professions in the human service industry (**Montgomery and Rupp, 2005**). Work-related stress encompasses the detrimental physical and emotional responses that arise from a mismatch between a job’s requirements and a worker’s capabilities, resources or needs (**Kyriacou, 2010**). In the context of education, teachers can experience stress when they appraise a situation as threatening and yet have limited ability to change or improve it. Take, for instance, the case of teacher autonomy. Among professional occupations, teachers rate lowest in feeling that they have a say in what happens in the workplace (**Gallup, 2014**). The percentage of teachers who report low job autonomy increased from 18 per cent in 2004 to 26 per cent in 2012 (**Sparks and Malkus, 2015**). The proportion of teachers who report significant levels of on-the-job stress is also rising. In a recent Gallup Poll (**2014**) on occupational



stress, 46 per cent of teachers reported high daily stress – on par with nurses and just above doctors. Teachers and nurses had the highest levels of reported stress among all occupational groups.

Why does teacher stress matter for our understanding of SEL? High levels of chronic stress can lead to occupational burnout – characterized by emotional exhaustion, depersonalization and a low sense of accomplishment in one's work (**Maslach, Schaufeli and Lieter, 2001**). Teacher stress has also been linked to decreased job satisfaction, poor instructional practices and poor student outcomes (e.g. **Schwarzer and Hallum, 2008**). Taken together, there is evidence that the occupational stress of teachers can thwart efforts to promote flourishing in students.

Chronic work stress and exhaustion among teachers is also associated with negative changes in biological indicators of stress. Recent research has found that teachers who report chronic stress demonstrate atypical patterns of

physiological stress reactivity, as assessed via daytime levels of the stress hormone cortisol (**Katz et al., 2016; Wolfram et al., 2013**).

Recent research also shows that, like other emotions, stress is contagious and can spill over into the classroom. That is, when teachers are stressed, students are the collateral damage. Evidence of this comes from a recent large-scale study examining the relationship between classroom environments and students' mental health in over 10,000 first grade students and their teachers. More specifically, **Milkie and Warner (2011)** find that, in classrooms in which teachers reported higher levels of stress in the form of not having access to material resources and not feeling respected by their colleagues, higher numbers of students experienced mental health problems. That is, when teachers did not have access to key ingredients for teaching, ranging from basic resources such as paper and pencils and heating to child-friendly furnishings and computers – students experienced

Recent research shows that, like other emotions, stress is contagious and can spill over into the classroom.



higher levels of externalizing problems (e.g. arguing, fighting, impulsivity), interpersonal issues (e.g. expressing emotions, resolving conflicts) and internalizing problems (e.g. anxiety, sadness, low self-esteem). Additionally, when teachers did not receive the support of colleagues, students also suffered.

More recent research lends

support for stress contagion in the classroom and the potential detrimental role of teacher stress in predicting student well-being (**WG2-ch5; WG2-ch10**). Drawing from the stress-contagion framework, Oberle and Schonert-Reichl (**2016**) examined the link between teacher burnout and student stress in a sample of fourth and seventh grade children in Canada. To assess teacher burnout,



Research on teacher attrition provides some interesting insights into the value of understanding the ways in which social and emotional teaching and learning dimensions affect teachers.

teachers completed the Maslach Burnout Inventory modified for teachers (Maslach et al., 1996). To assess student stress, students' salivary cortisol was collected as a biological indicator of students' stress reactivity. Biological stress reactivity is frequently assessed via the reactivity of the hypothalamic-pituitary-adrenal (HPA) axis, a homeostatic system that follows a circadian rhythm and is activated in response to cognitive (e.g. fear, excitement, anxiety) or non-cognitive (e.g. infections) stressors (Jessop and Turner-Cobb, 2008). Cortisol levels found in saliva or blood can be used as an indicator for HPA axis activity. The integrity of the HPA axis is essential to human health. In a typical diurnal HPA-axis regulation pattern, cortisol levels rise within 20–45 minutes after waking and then gradually decline across the day. Inappropriately low or elevated levels of cortisol can compromise HPA axis functioning (Jessop and Turner-Cobb, 2008). Students' salivary cortisol was collected from children at 9 a.m., 11.30 a.m., and 2 p.m. in the classroom setting. Analyses revealed that, after

adjusting for differences in cortisol levels due to age, gender and time of waking, higher morning cortisol levels in students could be significantly predicted from higher levels of self-reported burnout of classroom teachers. Although these findings were correlational, the research conducted by Oberle and Schonert-Reichl (2016) was the first to show that teachers' occupational stress is linked to students' physiological stress regulation. What is not yet known is the direction of the stress contagion. That is, does teachers' burnout lead to higher levels of stress in students? Or do students who enter the classroom with higher levels of stress lead to increased teacher burnout? Only future research determining this causal relationship will lend further clarity to this relationship.

Research on teacher attrition provides some interesting insights into the value of understanding the ways in which social and emotional teaching and learning dimensions affect teachers. The evidence is now clear that teacher burnout and attrition

... empirical evidence has emerged suggesting that when teachers receive training in the behavioural and emotional factors that impact teaching and learning in the classroom, they feel better equipped to propose and implement positive, active classroom management strategies that deter students' aggressive behaviours and promote a positive classroom learning climate.

is a major problem that poses a threat to efforts to improve teacher quality. According to a report from the National Commission on Teaching and America's Future (**Barnes, Crowe and Schaefer, 2007**), teacher turnover costs the USA up to \$7 billion a year, with the negative impact of teacher turnover being greatest at low-performing, high-poverty, high-minority schools. Stress and poor emotion management rank as the primary reasons why teachers become dissatisfied with the profession and leave their positions (**Darling-Hammond, 2001**). Another contributing factor is student behaviour (**Ferguson, Frost and Hall, 2012**). One study, for instance, indicated that of the 50 per cent of teachers who leave the field permanently, almost 35 per cent report reasons related to problems with student discipline (**Ingersoll and Smith, 2003**). Problems with student discipline, classroom management and student mental health emerge at the beginning of teachers' careers, and first-year teachers feel unprepared to manage their classroom effectively and are unable to recognize

common mental health problems such as anxiety (**Siebert, 2005; Koller and Bertel, 2006**). On a more positive note, empirical evidence has emerged suggesting that when teachers receive training in the behavioural and emotional factors that impact teaching and learning in the classroom, they feel better equipped to propose and implement positive, active classroom management strategies that deter students' aggressive behaviours and promote a positive classroom learning climate (**Alvarez, 2007**).

As can be surmised, the majority of extant studies have focused on teacher well-being through a deficit lens by examining teacher stress and burnout (**Spilt, Koomen and Thijs, 2011; Collie et al., 2015**). This research has been in concert in showing a general lack of teacher well-being among teachers across the globe (**Kyriacou, 2011**). Moreover, the research has shown that higher levels of teacher stress and burnout is associated with concomitant levels of student problem behaviour (**Hoglund, Klinge and Hosan, 2015**) and lower student



academic achievement (e.g. McLean and Connor, 2015; Herman, Hickmon-Rosa and Reinke, 2018). Although these findings are valuable, one criticism of examining teacher well-being through a deficit lens is that it fails to identify the influential factors within a school system that serve to strengthen teacher well-being (Collie et al., 2015).

Reviewing the evidence linking teachers' social and emotional competence and student outcomes, Jennings and Greenberg (2009) point to the importance of quality teacher–student relationships and effective student and classroom management skills (as well as implementation dosage and fidelity) in obtaining the best outcomes for students. Accordingly, they recommend the development and implementation of interventions designed to specifically address teachers' SEL competencies, reduce teacher stress and burnout, and improve teacher well-being. The past few years have seen the emergence of interventions specifically targeted at improving teachers' SEL and

stress management, although these are limited. For example, two programmes designed to promote teachers' SEL competence by incorporating mindfulness based approaches are CARE (Cultivating Awareness and Resilience in Education) and SMART-in-Education (Stress Management and Resiliency Training). Mindfulness is typically described as an attentive, non-judgemental and receptive awareness of present moment experience in terms of feelings, images, thoughts and sensations/perceptions (e.g. Kabat-Zinn, 2013). Both programmes aim to increase teachers' mindfulness, job satisfaction, compassion and empathy for students, efficacy for regulating emotions, and decrease stress and burnout. Initial research to date has supported the effectiveness of both the CARE (Jennings et al., 2011, and SMART-in-Education (e.g. Benn et al., 2012; Roeser et al., 2013) programmes in promoting teacher SEL competence and well-being. Nonetheless, further research is needed to examine whether such positive changes in teacher well-being spill over into the classroom

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Mounting research points to why and how teachers must develop solid social and emotional competence in order to foster SEL effectively and positively impact the well-being of their students.

and lead to improvements in students' SEL competence.

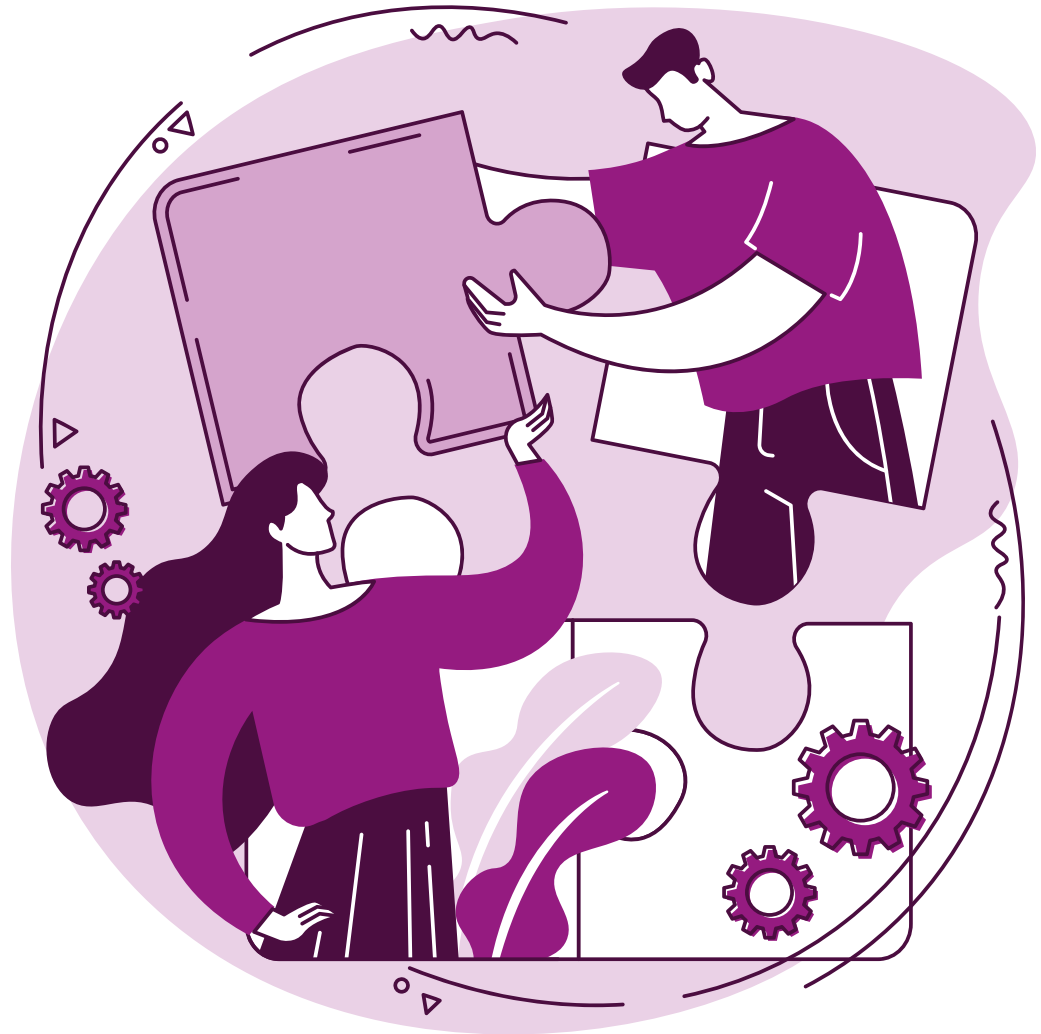
Recent evidence from recent research on the CARE programme provides evidence that a programme focusing on promoting teacher well-being has spillover effects for students. Specifically, a randomized controlled trial was conducted to evaluate the CARE programme with 224 teachers who taught at urban elementary schools within a high poverty region of New York City (Jennings et al., 2017). Participants were randomly assigned to the intervention group (CARE) or a waitlist control group. The study revealed that those in the CARE group showed greater improvements in self-reports of adaptive emotion regulation and mindfulness, as well as greater reductions in psychological distress and feelings of time urgency than those in the control group. Additionally, observations revealed that teachers who received CARE training were better able to maintain levels of emotional support for students across the school year,

while those who did not receive CARE training declined in their level of emotional support. Taken together, programmes such as SMART-in-Education and CARE address the need for 'holistic' approaches to education because they address the importance of an ecological approach that considers both teachers and students.

5.5 .3

SEL AND TEACHER PREPARATION

In order to understand the conditions under which the effective promotion of students' SEL and development can occur, institutional factors that may impact SEL promotion need to be addressed. Therefore, an important issue is to what extent pre-service teacher education provides the necessary information, coursework and/or experiences that prepare teachers to address dimensions relevant to SEL, including information on



theories and research on the social and emotional development and the knowledge and skills necessary for creating classroom learning contexts that are well-managed (Hadar et al., 2020). Mounting

research points to why and how teachers must develop solid social and emotional competence in order to foster SEL effectively, and positively impact the well-being of their students (Jennings and

... caring classroom and school contexts can be created when explicit attention is given to implementing SEL programmes and practices for students and when teachers also attend to the development of their own social and emotional competence and well-being.

Greenberg, 2009; Roorda et al., 2011; Brackett et al., 2012). Yet, in the vast majority of teacher preparation programmes, SEL is marginalized, if addressed at all (Bridgeland, Bruce and Hariharan, 2013; Fleming and Bay, 2004).

Findings from a research scan – Social and Emotional Learning (SEL) and Pre-service Teacher Education: A Scan of SEL Content in Certification Requirements and Teacher Education Programs Across the U.S. and Canada – confirms that only a small handful of USA university based teacher education schools attempt to explicitly integrate SEL into their educator preparation programmes (Schonert-Reichl, Kitil and Hanson-Peterson, 2017). This phenomenon reflects how the current dominant systemic focus on metrics has mostly left social-emotional learning/development on the sidelines of education discussion, policy and practice.

5.5 .4

PROMOTING FLOURISHING IN SCHOOLS: THE STORY OF THE BREAKFAST CLUB

As can be surmised, caring classroom and school contexts can be created when explicit attention is given to implementing SEL programmes and practices for students and when teachers also attend to the development of their own social and emotional competence and well-being. Yet, promoting students' flourishing may sometimes occur outside a specific evidence based SEL programme. That is, students' flourishing can be fostered organically when teachers provide students with opportunities to have a voice in the creation of a caring classroom and school context. What does this look like in practice? The following vignette is illustrative of what can happen



when a teacher engages students in cultivating a caring classroom and school context and allows them the space to put theory into practice to promote flourishing in education.

In 2006 a group of teachers in Western Canada attended a session on social responsibility in which one of the authors (KSR) served as a facilitator. At the session, the teachers learned about the research on happiness (Lyubomirsky, King and Diener, 2005) and the ways in which it could be cultivated and promoted. One of the findings discussed with the teachers was from research that illustrated that when individuals engage in altruism – random acts of kindness – they become healthier and happier. Following the session, one of the teachers, who taught eighth graders in a school characterized as high risk, shared with her students the research on happiness. With their interest piqued, the students decided to conduct an experiment to determine if they could promote their own happiness by helping others. That school day they then

went on to engage in ‘random acts of kindness’ for their teachers; holding doors open, offering compliments and helping teachers with various projects. At the end of the school day the students returned to their classroom with great excitement and reported to their teacher that performing random acts of kindness ‘was fun!’

The students wanted to continue their ‘experiment’ and perform even more acts of kindness anonymously. They decided to name themselves The Breakfast Club and proceeded to do many more acts of kindness for the teachers and staff at their school, beginning first with writing an anonymous letter to all of the teachers telling them how much they were appreciated. The students’ next random act of kindness came with the help of the community. The students asked, ‘what do all of our teachers really like? Starbucks coffee!’ The students then went to their local Starbucks and asked if they would donate coffee to all of their teachers. The Starbucks’ employees said yes. The students then placed

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a letter on the principal's desk indicating that coffee was in the staffroom for the teachers and signed it 'The Breakfast Club.'

Over the course of the school year, The Breakfast Club's enthusiasm and engagement for performing random acts of kindness for teachers, staff and

their peers blossomed. They continued to do random acts of kindness with the generous support of the community via donations (e.g. pizza, donuts, chocolates). Moreover, the local newspapers became aware of the activities and covered the story of The Breakfast Club in their papers. More donations from the



SEL can unfold when there is an explicit focus on creating the contexts and conditions in which students are given the power, love and support to follow their heart to make the world a kinder and more compassionate place in which we all can live.

community poured in, including several anonymous donations. All members of the school community – administrators, teachers, staff and students – were engaged in discussions in which they speculated about who the members of The Breakfast Club might be.

After the school holidays, The Breakfast Club decided to take their efforts further and have their classmates engage in random acts of kindness with them.

They assigned each classroom in the school to another as their ‘anonymous givers’ and gave each classroom a breakfast name (e.g. Cheerios, Blueberry Muffins). Shortly thereafter, anonymous acts of kindness were occurring all over the school.

A couple of months went by and the students from The Breakfast Club decided to take their acts of kindness even further. They wanted to spread their giving to the community. They decided to give a challenge to members of their school community: ‘Raise 1,300 food items for the local

food bank and we will reveal ourselves!’ The school far exceeded that goal – students from every classroom in the school donated items for the food bank. During the final assembly, the food was displayed and The Breakfast Club students stood up one by one to increasing applause from members of the entire school community. This joyous moment was captured on film and can be seen at: https://www.youtube.com/watch?v=0Lj5pWVA_MY&t=140s.

The story of The Breakfast Club illustrates an important lesson about SEL. That is, SEL is not only concerned with the promotion of students’ social and emotional competence through the implementation of school and classroom based programmes. SEL can unfold when there is an explicit focus on creating the contexts and conditions in which students are given the power, love and support to follow their heart to make the world a kinder and more compassionate place in which we all can live.



5.6

Conclusions

Relationships are at the heart of flourishing in education. Flourishing is promoted through multiple, interweaving relationships at the interpersonal, curricular and intrapersonal levels. Strengthening the capacity for positive interpersonal relationships with teachers and peers is consequential for students developing motivation, a sense of belonging and identity. As

put forth by care theory, teachers who act as carers, tending to the needs of their students, facilitate students' social and emotional development. Interpersonal relationships provide crucial opportunities for practising communication that entails respect for different points of view, prompting reflection, clarification and a shared understanding that enhances collective knowledge.





Pedagogy characterized by flexibility and active student engagement that allows for community involvement and shared governance is critical to engendering a global consciousness in students that enables ethically informed decisions and actions to improve individual and collective flourishing.

Systemic SEL takes into account the learning context and prioritizes teachers' SEL as a foundation for creating a safe, caring, supportive, participatory and well-managed environment to nurture students' SEL.

Disciplinary knowledge is a facet of relationship to curriculum and knowledge. Alongside content itself, the capacity to engage critically with subject matter is central and conveyed through how teachers engage students with the curriculum. The how and why of curricula are arguably as important as, if not more important than, the content itself. Instructional approaches like inquiry based, problem based and project based approaches engage learners in tasks that emphasize mastery and essential skills including interpretation, analysis, evaluation and synthesis of information. Pedagogy characterized by flexibility and active student engagement that allows for community involvement and shared governance is critical to engendering a global consciousness in students that enables ethically

informed decisions and actions to improve individual and collective flourishing.

Turning inward with mindfulness and compassion are ways to encourage self-knowledge. Students become students in the fullest sense, not just of academic subjects, but of themselves. Studying oneself allows for observing the patterns of mind and interrupting unconscious habits and biases. Through contemplative self-study students learn to be receptive to their embodied sensory experience, bringing together the mind and body, thus piercing Cartesian duality. A compassionate and mindful stance practised inwardly further enhances these qualities in relationship with others, honouring our fundamental interconnectedness as social beings. Further, critical pedagogy and transformative SEL empower students as agents of social change through developing critical consciousness to understand and transform societal inequities. Each aspect of this relationship triad reinforces the other, and

A transformation in education is unfolding across the globe catalysed by pioneering research demonstrating that a high-quality education should promote human flourishing and not only academic competencies of students.

collectively – relationships with others, knowledge and self – are crucial for supporting students to respond to the challenge of how human beings can sensibly live with purpose and meaning on this planet.

A transformation in education is unfolding across the globe catalysed by pioneering research demonstrating that a high-quality education should promote human flourishing and not only academic competencies of students such as reading, writing, maths, social studies and science; schools today need to cultivate positive human qualities in students that will equip our future generation with the skills and competencies to thrive in an ever-changing world. Indeed, the past decade has witnessed a burgeoning empirical literature supporting the contention that a systemic approach and explicit integration of programmes and practices that promote students' social and emotional competencies and human flourishing into all levels of the education system can not only deter educational failure (e.g.

school dropout), and behaviour problems (e.g. aggression, mental illness), but can provide the conditions in which all students thrive.

Alongside this empirical evidence, there is also now widespread agreement among educators, parents, students and the public at large that schools should be a place that nurtures the development of positive human traits and human flourishing in all students – developing students' interpersonal and intrapersonal relationships (Greenberg and Turksma, 2015; Jazaieri, 2017; Roeser, Colaianne and Greenberg, 2018).

To create a world characterized by caring, cooperation, empathy and compassion among all people – one that has at its core the promotion of flourishing – it is essential that educators, parents, community members and policy-makers work together to promote students' personal and social competence, support educators' flourishing by supporting the development of their own social and emotional competencies,



Although much has been learned in the past decade about programmes and practices that promote human flourishing in schools, the field has much further to go before firm conclusions can be drawn about the specific ways in which a comprehensive and systemic approach to promoting flourishing in schools advances students' short-term and long-term school and life success.

create curriculum that is engaging and developmentally appropriate and embed a focus on flourishing and SEL into pre-service teacher education. Indeed, it is critical that we make intentional efforts to devise the most effective educational practices that promote flourishing at all levels of the system. Such efforts must be based on strong conceptual models and sound research.

Although much has been learned in the past decade about programmes and practices that promote human flourishing in schools, the field has much further to go before firm conclusions can be drawn about the specific ways in which a comprehensive and systemic approach to promoting flourishing in schools advances students' short-term and long-term school and life success, particularly in relation to ethical dimensions of development, such as compassion in relationships with themselves and others. Indeed, many questions remain regarding the ways in which programmes and practices designed to promote

students' social and emotional competencies and flourishing can forecast their future success. For example, what are the processes and mechanisms that lead to successful improvements in students' prosocial and kind behaviours across areas of the school curriculum? What role does context play? Which programmes and practices work best for which students in helping them flourish and thrive? What role do educators play and how does their own well-being influence the well-being of their students? And under what conditions optimal development fostered? What role does technology play, and what technological advances can foster or deter these efforts? These are the types of questions that are being asked among educators, researchers and policy-makers, and are the types of questions we need to answer in order to determine the factors that lead to the development of students' flourishing in schools.



5.6

Recommendations

Education for flourishing in schools should take into account three relationship levels: (1) relationships with other people; (2) relationships with ourselves; and (3) relationships to knowledge or subject matter. The traditional focus of schooling, on maximizing individual cognitive potential and imparting technical know-how needed for success in the labour market, is insufficient for

advancing human flourishing. Schools seeking to promote flourishing need to foster a range of additional capacities. These include, but are not limited to, the capacity to tune in to one's own emotions, thoughts and feelings, to understand another person's perspective, to resolve conflicts peacefully, to develop compassion for self and others, to engage critically with subject matter





Social and emotional learning (SEL) that helps students to manage difficult emotions, form and maintain healthy relationships, and care for themselves and an ever-widening circle of others is essential to flourishing.

and to make ethically informed decisions and actions that can improve individual and collective flourishing.

Based on evidence and examples reviewed in this chapter, we make the following assertions and recommendations for policies and practices to support human flourishing in schools.

1. Many educational policies across the world emphasize competitiveness, efficiency, accountability and rigorous academic testing regimes. As a result, the 'softer' aspects of flourishing and social-emotional learning/development are mostly sidelined. To promote human flourishing there is a need for greater systemic support for fostering social and emotional competencies in school.

2. Schools that seek to support flourishing need to incorporate an inner education. Students need to be supported to tune in to mind/body processes such as thoughts, feelings, perceptions

and sensations and recognize how these shape their choices and actions in the world.

3. Mindfulness is an important resource for cultivating flourishing in schools by engaging cognitive processes (executive functions and attentional skills), as well as social-emotional skills (prosocial behaviour, emotion awareness). Meta-analytic research on mindfulness in school settings indicates beneficial impacts for students across cognitive, social and academic areas of functioning.

4. Social and emotional learning (SEL) that helps students to manage difficult emotions, form and maintain healthy relationships, and care for themselves and an ever-widening circle of others is essential to flourishing. Approaches to fostering flourishing need to be able to grow with children and have applicability in their lives both in and outside of school, with skills being reinforced and modelled by adults at school, home and in the community.

Since the potential for flourishing applies to all children, it is necessary to acknowledge the disparity in access to resources and exposure to trauma that are a reality for many.

5. Since the potential for flourishing applies to all children, it is necessary to acknowledge the disparity in access to resources and exposure to trauma that are a reality for many. Not all children enter school with their basic needs, like food, security, safety and shelter, met on a regular basis. The first step in closing the gap is to ensure that students' basic needs are met through school and community resources.

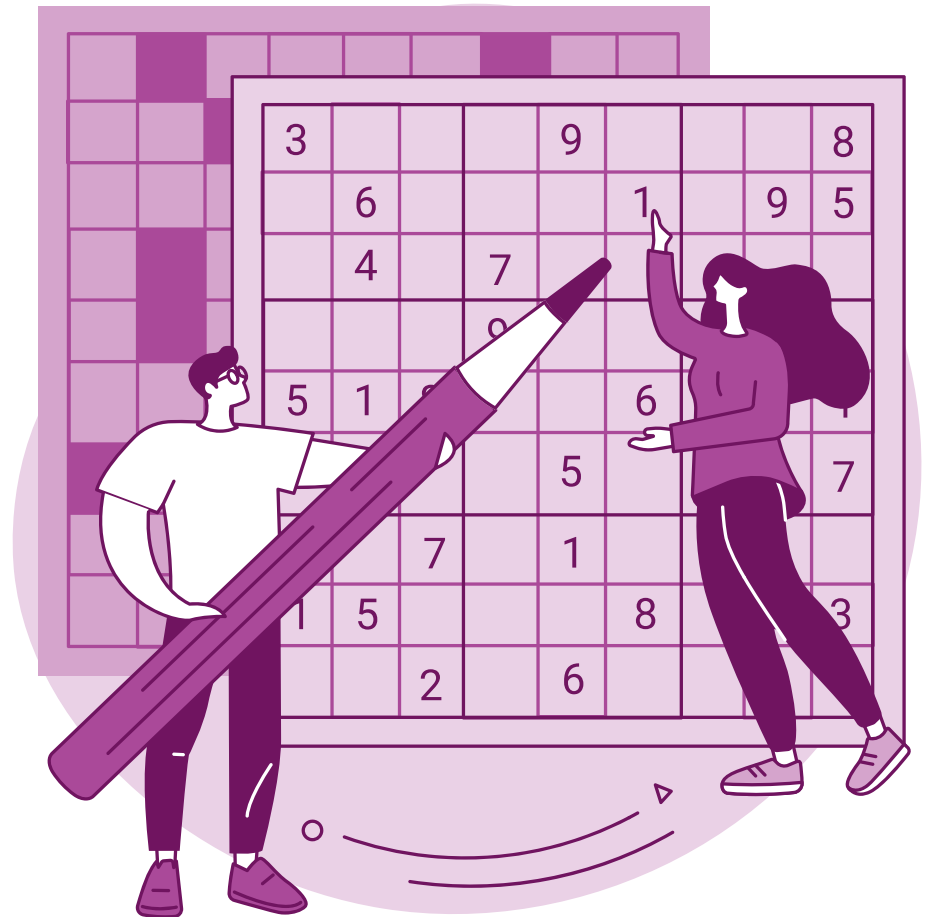
6. Schools have an important role in promoting values of inclusion, equality, participation and democracy. Transformative SEL that offers concrete strategies for advancing these values in school settings should be embraced.

7. To advance flourishing, active learning approaches that encourage meaning-making and 'first-person' engagement with curriculum content should be adopted. Examples include interdisciplinary instruction, service learning, and inquiry based, problem based and project based learning.

8. Most curricular knowledge is not absolute. It is, therefore, recommended that students in schools have opportunities to engage with different perspectives on 'truth' and knowledge; to appreciate perspectives and world views that are different from their own; and to participate in their communities to effect change, and consider their role in challenging unjust social, political and/or economic systems.

9. It is recommended that school and classroom activities foster active student voice and democratic participation. Promoting shared decision-making and democracy in the classroom can facilitate socially responsive decisions outside the classroom walls helping to promote the types of ethically informed actions that nurture individual and collective flourishing.

10. Teachers' well-being should be enhanced. When teachers themselves possess social and emotional skills, when they embody the values of mindfulness, and when they



appreciate the importance of self-compassion, they are better able to create school and classroom environments that are safe, caring and supportive. It is, therefore, required that teachers receive support through all stages

of professional development, from pre-service to in-service, that recognizes and prioritizes teacher well-being as an essential ingredient to flourishing in education.

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KEY ACRONYMS

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3D: Three-Dimensional

ABC

AAC: Augmentative and Alternative Communication

ABI: Acquired Brain Injury

ACC: Anterior Cingulate Cortex

ADHD: Attention Deficit Hyperactivity Disorder

AI: Artificial Intelligence

AIED: Artificial Intelligence in Educational Development

ALE: Activation Likelihood Estimation

ASC: Autism Spectrum Condition

ASD: Autism Spectrum Disorder.

AT: Assistive Technology

BDNF: Brain Derived Neurotrophic Factor

BMI: Body Mass Index

BPEB: Building Performance Evaluation

CA: Canada

CARE: Cultivating Awareness and Resilience in Education

CASEL: Collaborative for Academic, Social, and Emotional Learning

CBTS: Computer Based Tutoring Systems

CCA: Canadian Council for the Arts

CCE: Climate Change Education

CCL: Canadian Council on Learning

CD: Conduct Disorder

CDA: Cognitive Diagnosis Assessment

CNAT: Clasby Neurodiversity Assessment Tool

CPS: Collaborative Problem-Solving

CRPD: Convention on the Rights of Persons with Disabilities.

CSCL: Computer Supported Collaborative Learning

CVT: Control-Value Theory

DEF

DA: Dynamic Assessment

DBCFSN: Detroit Black Community Food Security Network

DESD: Decade of Education for Sustainable Development

DfE: Department for Education

DFID: Department for International Development

DH: Department of Health.

DI: Differentiated Instruction

DNA: Deoxyribonucleic Acid

DSD: Department of Social Development

DSM: Diagnostic and Statistical Manual of Mental Disorders

DSMMD: Diagnostic and Statistical Manual of Mental Disorders

DT: Design Thinking

DTI: Diffusion Tensor Imaging

DWCPD: Department for Women, Children and Persons with Disabilities

EBE: Evidence Based Education

ECCE: Early Childhood Care and Education

ECE: Early Childhood Education

EdTech: Education Technology



EE: Environmental Education

EEF: Education Endowment Foundation

EEG: Electroencephalography

EF: Executive Functions

EFA: Education for All

EFL: English as a Foreign Language

EfS : Education for Sustainability

EI: Education International

EN: Educational Neuroscience

ePEN: Electronic Performance Evaluation Network

ESD: Education for Sustainable Development

ESE: Environmental and Sustainability Education

FEC: Futures of Education Commission

fMRI: functional Magnetic Resonance Imaging

fNIRS: functional Near-Infrared Spectroscopy

GHI

GDP: Gross Domestic Product

GEB: General Ecological Behaviour

GHG: Greenhouse Gas

GIFT: Generalized Intelligent Framework for Tutoring

GIRFEC: Getting It Right For Every Child

GNP: Gross National Product

GPE: Global Partnership for Education

GWAS: Genome-Wide Association Study

HCT: Human Capital Theory

IPCC: Intergovernmental Panel on Climate Change

IPS: Intraparietal Sulcus

IQ: Intelligence Quotient

IRT: Item Response Theory

ISEE Assessment: International Science and Evidence based Education Assessment

ISTE: International Society for Technology in Education

JKL

J-PAL: Abdul Latif Jameel Poverty Action Lab

KBS: Keep Back Straight

LA: Learning Analytics

LAC: Latin American Country

LATAM: Latin America

LGBTQ+: Lesbian, Gay, Bisexual, Transgender, Queer or Questioning

LMICs: Low- and Middle-Income Countries

LTD: Long-Term Depression

LTP: Long-Term Potentiation

LUOTS: Lightning Up the Old Train Station

MNO

MA: Millennium Ecosystem Assessment

MBE: Mind, Brain and Education

MDES: Minimum Detectable Effect Size

MDG: Millennium Development Goal

MEG: Magnetoencephalography

ACRONYMS

MOOC: Massive Open Online Course

MRI: Magnetic Resonance Imaging

MTSS: Multi-Tier Systems of Support

NAPLAN: National Assessment Program – Literacy and Numeracy

NCEE: National College Entrance Exam

NCLB-Act: No Child Left Behind-Act

NCP: Nature's Contribution to People

NEA: National Education Association

NEP: New Ecological Paradigm

NGO: Non-Governmental Organization

NRC: National Research Council

OECD: Organisation for Economic Co-operation and Development

PQRS

PBL: Project Based Learning

PE: Physical Education

PERMA: Positive Emotions, Engagement, (positive) Relationships, Meaning, and Accomplishment

PET: Positron Emission Tomography

PFC: Prefrontal Cortex

PGS: Polygenic Score

PISA: Programme for International Student Assessment

PISA-D: PISA for Development

POC: People of Colour

POE: Post Occupancy Evaluation

PTE: Pearson Test of English

PTSD: Post-Traumatic Stress Disorder

R&D: Research and Development

RAN: Rapid Automatized Naming

RCP: Representative Concentration Pathways

RCT: Randomized Controlled Trial

RD: Reading Disorder

REM: Rapid Eye Movement

ROI: Return on Investment

RtI: Response to Intervention

SCS: Sustainable Community Schools

SDG: Sustainable Development Goal

SDM: Summary for Decision-Makers

SEAL: Social and Emotional Aspects of Learning

SEF: Stage-Environment Fit

SEL: Social and Emotional Learning

SEND: Special Educational Needs and Disabilities

SES: Socio-economic Status
SLD: Specific Learning Disability

SMART: Stress Management and Resiliency Training

SNP: Single Nucleotide Polymorphisms

SOGIE: Sexual Orientation and Gender Identity Expression

STEAM: Science, Technology, Engineering, Arts and Mathematics

STEM: Science, Technology, Engineering, and Mathematics





TUV

TALIS: Teaching and Learning International Survey

TBI: Traumatic Brain Injury

TFI: Teach for India

ToM: Theory of Mind

TPB: Theory of Planned Behaviour

TPJ: Temporoparietal Junction

UDL: Universal Design for Learning

UK (or U.K.): United Kingdom

UKABIF: United Kingdom Acquired Brain Injury Forum

UN: United Nations

UNCRC: United Nations Convention on the Rights of the Child

UNDESA: United Nations Department of Economic and Social Affairs

UNDES: United Nations Decade of Education for Sustainable Development

UNEP: United Nations Environment Programme

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNESCO MGIEP: UNESCO Mahatma Gandhi Institute of Education for Peace and Sustainable Development

UNFCCC: United Nations Framework Convention on Climate Change

UNICEF: United Nations International Children's Emergency Fund
UNPF: United Nations Population Fund

UNPFA: United Nations Fund for Population Activities

USA: United States of America

USSR: Union of Soviet Socialist Republics

VRU: Violence Reduction Unit

VS: Ventral Striatum

VUCA: Volatile, Uncertain, Complex and Ambiguous.

WXYZ

WEIRD: Western, Educated, Industrialised, Rich and Democratic

WG1: Working Group 1 (of the ISEE Assessment)

WG2: Working Group 2 (of the ISEE Assessment)

WG3: Working Group 3 (of the ISEE Assessment)

WG4: Working Group 4 (of the ISEE Assessment)

WHO: World Health Organization

WSSD: World Summit on Sustainable Development

WWF: World Wide Fund for Nature

ZPD: Zone of Proximal Development

GLOSSARY





Adolescence

Adolescence refers to the developmental period between childhood and adulthood, that is, when children are eleven to nineteen years of age.

See also: infancy, childhood

Amygdala

The amygdala is a subcortical brain structure and is part of the limbic system (as are the hypothalamus and hippocampus). The amygdala is critical for learning (e.g., forming memories) about the emotional significance of (positive and negative) stimuli, emotion processing and emotional responses, but has also been implicated in processes such as memory processing, motivation, anticipating reward, and decision making. The amygdala - therefore - is involved in all learning, most notably social-emotional learning. Furthermore, the amygdala is closely linked to activity of the HPA-axis.

See also: hippocampus, HPA-axis

Anterior cingulate cortex

The anterior cingulate cortex (ACC) is a brain region involved in various complex cognitive functions such as error detection, attention, decision-making, empathy, cognitive/impulse control and affect regulation. The ACC has connections to both the limbic system and the prefrontal cortex.

Assessment in the context of ISEE

Assessment in the context of the ISEE refers to a deliberative process in which experts from different fields, arriving from a number of disciplines and different

regions in the world, consider various perspectives on a certain concept/domain (here: education) and based on past literature, theories and deliberations arrive at informed key messages, findings and recommendations.

Assessment in the context of learning and education

Assessment in the context of learning and education operates at various levels of education systems: students, teachers, schools and entire systems themselves. Assessment can be seen as a constant activity occurring during formal or informal teaching as a teacher evaluates student understanding and reflects on their work, and as students reflect on and regulate their own learning (learner or student assessment). Assessment occurs constantly throughout one's life and offers evaluation and feedback on one's progression in relation to any problem or task. Furthermore, assessment is also a formal practice that occurs at the teacher, school and policy-making level.

Capability

Capability refers to a person's effectiveness in promoting a designated outcome. Having the capability to become 'x' means that it can be predicted that he will become x if he makes the effort. A capability is what is within a person's power to do and what he is free to do. See also: capacity, potentials and propensity

Capability Approach to Education

The capability approach (or capability approach) is an educational philosophy and policy originally devised

by the Indian economist Amartya Sen (1933). The capability approach stresses that (educational) policies should (also) strive to enlarge people's capabilities.

Capacity

A capacity is a possibility; ascribing a capacity to someone means that one denies a presupposed argument for the necessity that she cannot do/be (come) x. Having a capacity means that one assumes that if the conditions are correct, someone would be able to do or become what the capacity indicates she is able to do or become. A capacity notion of potential only denies that a person cannot acquire some characteristic, it does not say that he will.

See also: capability, potentials and propensity.

Childhood

Childhood refers to the developmental period between infancy and adolescence, that is, when children are two to eleven years of age.

Citizenship education

Citizenship education emphasises that (on of) the goal(s) of education is forming critical citizens able to reflect on politics, sensitive to questions of social and economic justice and aware of power relations among individuals, groups, genders and so on. Citizenship education strives (or should strive) to form active, responsible and participatory citizens rather than docile subjects.

Cognition

Cognition is the mental process involved

in knowing, understanding and learning.

Contemplative Science

Contemplative Science aims to integrate insights about the optimization of human development from both science and the wisdom of the world's contemplative meditative traditions in order to gain a better understanding of the nature of the mind and of life, as well as how various practises can help us to cultivate skills leading to a personally meaningful and socially beneficial life.

COVID-19 (pandemic)

COVID-19 refers to a coronavirus that first emerged in December 2019 and has led to a pandemic in 2020-2021 (which is still continuing at this time of writing) resulting in lockdowns and school closures across the world.

Curriculum

Curriculum is seen as both the object concerned with the materialisation of policies and subject matters, and the experience and the process that comes to life in teaching and learning. It is both the collective experience of a class and the first-person experience of a lifelong journey. It includes both the top-down elements of policy-making and teacher deliberation as well as the bottom-up processes that are introduced into the learning experience as students interact with teachers and other students and engage formally and informally with the curriculum.

See also: teaching





Curricular domain

We define a 'curricular domain' as a relatively distinct area/field that includes knowledge and practises to be learned.

DEF

Delors Report

The Delors report, officially titled "Learning: The Treasure Within" was created by the Delors commission in 1996 in order to provide a basis for reflection and debate about what choices should be made in formulating (educational) policies. The report emphasises the importance of a humanistic approach to education and establishes "the four pillars" of education, namely: learning to be, learning to know, learning to do, and learning to live together. The report has further emphasised and updated the concept of lifelong learning.

Education

Education is a societal process that shapes human behaviour and social action. It stands for three central types of activities of teachers and students, namely teaching, learning and evaluation, that each express a particular relationship with the actors involved. Education can be framed as a broad, complex system consisting of a set of human and non-human elements and the relationships between them, e.g., teacher-student, self-other, self-self, self-society, self-ecology. Human elements include students, teachers, administrators, parents, policymakers, stakeholders and various others. Non-human elements comprise learning spaces - classes, schools,

virtual, outdoor, textbooks, etc. The term complex system entails the presence in the system of a group of multiple components working both independently and interdependently that prevent the system from being fully controlled and predicted, hence it is bound to evolve in unexpected ways.

Educational system

The educational system consists of a set of human and non-human elements and the relationships between them. Human elements include not only students and teachers but extends to include administrators, parents, policymakers, stakeholders and various others. Non-human elements comprise learning spaces - classes, schools, virtual, outdoor, textbooks, etc.

Education technology (EdTech)

Technology refers to the artefacts which are invented or adapted with the purpose of addressing human challenges. In this context, artefacts can assume a material (i.e. computer hardware) or non-material form (i.e. software); technology also includes associated processes that surround the use of the artefacts. Education Technology (EdTech) refers to any technology (process or tool) applied in an educational context or as a solution to an educational problem

Emotion regulation

Emotion regulation refers to recognizing and managing emotions.

Eudaimonic theory of well-being.

Eudaimonic theories of well-being suggest that persons live a life of well-being if

GLOSSARY

WORKING GROUP- 1

they realise goods that are deemed to be objectively good for all people or if they develop or have developed their human capacities to the full (i.e., functioning well).

Formal Curriculum

The formal (or “planned” or “taught”) curriculum refers to that which is formally taught.

GHI

Hedonic theory of well-being

Hedonic (or subjective) theories of well-being equate well-being to having positive emotions about life and presume that individuals themselves are the judges of their well-being (i.e., ‘feeling well’).

Hidden Curriculum

A hidden curriculum is a set of lessons “which are learned but not openly intended” to be taught in school such as the norms, values, and beliefs conveyed in both the classroom and social environment.

Human Flourishing

Human flourishing is both the optimal continuing development of human beings’ potentials and living well as human beings. Living well as a human being means being engaged in relationships and activities that are meaningful, i.e. aligned with both their own values and humanistic values, in a way that is satisfying to them. Flourishing is conditional on the contribution of individuals and requires an enabling

environment (e.g., fulfil basic biological and existential needs). It can be regarded as a particular interpretation of well-being. Furthermore, flourishing involves community and is an interpersonal, not a personal pursuit.

Hippocampus

The hippocampus is a brain structure located in the allocortex and is part of the limbic system (as are the amygdala and hypothalamus). The hippocampus is primarily involved in memory processes and learning. Furthermore, the hippocampus is closely linked to activity of the HPA-axis.

See also: amygdala, HPA-axis

HPA-Axis

The Hypothalamic Pituitary Adrenal (HPA)-Axis is a biological stress system (i.e., neuroendocrine system) that controls reactions to stress as well as many body processes. HPA-axis activity follows a circadian rhythm and is activated in response to cognitive (e.g. fear, excitement, anxiety) or non-cognitive (e.g. infections) stressors. Furthermore, the HPA-axis is closely linked to activity of the amygdala and hippocampus.

See also: amygdala, hippocampus.

Human capital

Human capital refers to people’s knowledge, skills and abilities that can increase production and contribute to economic growth and employment. The human capital approach to education proposes that education has a vital economic role. It (therefore) sees the domains of reading, mathematics and





science (as opposed to, e.g., the arts, humanities, physical education, and social skills) as critical for preparing individuals to fulfil their productive potential and thus contribute to maximising national or corporate economic performance.

Infancy

Infancy refers to the developmental stage between birth and two years of age.

Interdisciplinary/Multidisciplinary/Transdisciplinary

Three terms used interchangeably in the ISEE which refer to combining and/or involving several academic disciplines or professional specializations in assessing education and learning.

JKL

Knowledge-based economy

The knowledge-based economy refers to an economy that stresses the importance of knowledge, and especially scientific and technological knowledge, to economic growth.

Learning

Learning refers to coming to make sense of what one is taught and happens when students' potentialities are evoked to come to understanding in agential ways of being and acting. Learning would fail to be learning, if students' potentials are not evoked in the quest to gain understanding, insight, and be encouraged to embark on an academic, political, economic, social and environmental journey with a quest for human flourishing. The broad

perspective of learning encompasses both learning as process, as experience, and as outcomes. Learning is a process of active meaning-making situated in context, based on which relatively permanent changes occur within any one or more of the following: human dispositions, capabilities, knowledge, behaviours, values, attitudes, and/or preferences. Learning thus involves relational, embodied, affective and non-conscious ways of knowing and is inherently social, emotional, relational and affective. Learning is heavily influenced by cognitive, emotional, motivational and social brain processes that are all interdependent, as well as by culture (e.g., value and belief systems and practises shared by groups) and other environmental factors (e.g., socio-economic status/SES).

Learning context

The learning context encompasses such factors as communication styles, performance expectations, classroom structures and rules, school organisational climate, commitment to the academic success for all students, district policies, and parental and community involvement.

Learning spaces

Learning spaces are physical (built or natural) and digital spaces or sites in which education and learning occurs, e.g., schools, outdoors, nature, virtual/digital. Furthermore, 'spaces' here can be understood as the way in which geography shapes social relations and practises, connecting things and people.

GLOSSARY

WORKING GROUP - 1

Learning trajectories

The learning trajectories reflect the changes in an individual's knowledge, values and practises as she or he engages with the curriculum, reacts and responds to it, which brings forth the learning experience.

Living well

Living well as a human being in this report means being engaged in relationships with e.g., humans, animals and the environment as well as being engaged in activities that are meaningful (i.e. aligned with both one's own values and humanistic values in a way that is satisfying to an individual) and having the agency to do so.

MNO

Metacognition

Metacognition is “thinking about thinking” or “learning to learn” and refers to processes such as monitoring of attention, emotion and behaviour. Students can use metacognitive processes and strategies to monitor and reflect on their own learning.

Mindfulness

Mindfulness refers to “both a mental state and a set of practises that are characterised by two components: 1) the self-regulation of attention, so that it is maintained on immediate experience, thereby allowing for the increased recognition of mental events in the present moment; and 2) the adoption of an orientation towards one's experiences in the present moment,

characterised by curiosity, openness, and acceptance. Mindfulness has as its foundation awareness of breath, body, mind (thoughts and emotions), and phenomenal experience. Mindfulness practises tap cognitive processes (attention and EFs) as well as social-emotional skills (prosocial behaviour, emotion awareness).

Mixed/Blended theory of well-being

Mixed (or blended) theories of well-being see both the realisation of objective goods as necessary for well-being and the positive evaluation of this by the person herself.

Neuroplasticity

Neural plasticity (or neuroplasticity) refers to the anatomical and functional changes of the brain underlying cognitive and behavioural changes during development in relation to place, time and context-specific experiences or in response to an intervention, e.g. learning or training.

Optimal development

Optimal development is used in this report to explicitly express the agent-relative (i.e., individual) aspirational quality of flourishing. For example, what is optimal for human A can be different from what is optimal for human B.

PQRS

Pillars of Learning

The four pillars of learning were brought forth by the Delors report (UNESCO, 1996) and include 1) Learning to know, 2) Learning to be, 3) Learning to do, and





4) Learning to live together. They are now known as the six learning trajectories. See also: Delors report

Prefrontal Cortex

The prefrontal cortex (PFC) is a brain region located at the front of the frontal lobe. The PFC linked to a variety of complex behaviours and processes such as metacognitive skills including monitoring of attention, emotions and thinking patterns, and executive functioning skills (e.g., working memory, inhibition/cognitive control and cognitive flexibility). The PFC regulates the activity of the limbic system (see Amygdala and Hippocampus).

Positive Education

Positive education refers to the use of approaches with empirical support from positive psychology used within educational settings, to enable students to learn and develop approaches which support flourishing and well-being.

Positive Neuroscience

Positive neuroscience seeks to unravel the neural mechanisms that support flourishing, psychological well-being, resilience and promotion of health.

Positive Psychology

Positive psychology is the scientific study of what makes life most worth living, focusing on both individual and societal well-being.

Potentials

Potentials encompass capacity (i.e., possibility); having a capacity means that

one assumes that if the conditions are correct, someone would be able to do or become what the capacity indicates she is able to do or become, but does not say she will), propensity (i.e., a conditionally predictable endpoint will be reached if the right conditions are present) and capability (i.e., a person's power to effectively pursue what he has set out to do). Developing one's full potential is part of human flourishing. See also: capability, capacity, and propensity

Propensity

The propensity to become something or other or to acquire a feature of a certain sort expresses that a conditionally predictable endpoint (which can be good or bad) will be reached if conditions x-z are present.

See also: capability, capacity, and potentials

School climate

School climate is based on patterns of people's experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practises, and organisational structures. Compare with: School culture.

School culture

School culture refers to a general set of norms, beliefs, and practises or "the way things are done around here". Compare with: School climate.

Science

Science is the pursuit and application of knowledge and understanding of the natural and social world following

GLOSSARY

WORKING GROUP- 1

a systematic methodology based on evidence.

Science of Learning

Science of Learning is an approach that recognises the value and importance of cross-fertilization across multiple disciplines drawing on many different methods and techniques to understand how learning occurs with the ultimate goal of optimising learning for all.

Self-Determination Theory

Self-determination theory is a 'needs' theory of motivation positing that humans have three universal psychological needs, namely: the need for autonomy, the need for competence, and the need for relatedness, which promote optimal human functioning and well-being. The need for autonomy is satisfied when behaviour, feelings and thoughts are experienced as one's own choice and self-endorsed. The need for competence describes a sense of mastery in activities that one considers important. The need for relatedness concerns the sense of connectedness with those who are important to an individual, in the school-context e.g., teachers and peers at school.

Self-Regulatory Capacity

The self-regulatory capacity, one of the two neurocognitive well-being capacities, describes the ability to manage our attention, emotions and behaviour in ways that foster our flourishing and postulates that adaptive regulation of mind wandering (daydreaming or random off-task ruminative thinking) is a necessary prerequisite for this ability.

Self-World Capacity

The self-world capacity, one of the two neurocognitive wellbeing capacities, describes an overarching integrated state or trait of cognition, affect and awareness that determines our sense of self and reality in connection to others and the world more broadly.

Social Emotional Learning (SEL)

Social emotional learning (SEL) involves the processes through which people acquire and effectively apply the knowledge, attitudes, skills and competencies to recognize, understand and manage their emotions, feel and show empathy, care and concern for others, establish and achieve positive goals, develop and maintain positive relationships, make responsible decisions and handle challenging situations.

Systemic Social Emotional Learning (SEL)

Systemic SEL is an approach to create equitable learning conditions that actively involve all Pre-K to Grade 12 students in learning and practising social, emotional, and academic competencies.

TUV

Teaching

Teaching refers to the activity in which the teacher provokes students to come to an understanding. Teaching is an activity in which an intention to propel changes in knowledge, understanding, behaviour, attitude or opinions in a student is exercised in a nurturing way through





diverse forms of human expression, such as speech, bodily demonstration, art, and silence. In contrast to notions of ‘training’ or ‘instruction’, the concept of ‘teaching’ encompasses the relationship between teachers and students, their shared interest in the learning process and, most importantly, an imaginative or creative sympathy joining the minds of teacher and student.

Technology

The word technology refers to the artefacts which are invented or adapted with the purpose of addressing human challenges. In this context, artefacts can assume a material (e.g. computer hardware) or non-material form (e.g., software); technology also includes associated processes that surround the use of the artefacts. See also: EdTech.

Transformative Social Emotional Learning (SEL)

Transformative SEL is concerned with advancing equity in access to resources and outcomes in education. Transformative SEL competencies focus on identity, intersectionality, agency, belonging and engagement as central to furthering social-emotional development and achieving equity in education.

Ventral striatum

The ventral striatum is a brain region associated with, among others, rewarding experiences.

WXYZ

Well-being

Well-being is a multidimensional construct covering anything from cognitive appreciation of one’s satisfaction with life up to subjective, highly affective experiences of happiness. In the ISEE Assessment, well-being is seen as an umbrella term of the two central concepts happiness and flourishing.



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