



OECD Teaching Compass: Reimagining Teachers as Agents of Curriculum Change

The **Teaching Compass** offers a future-focused and holistic vision of what it means to teach and be a teacher. It provides points of orientation towards teaching that champions students' agency, competencies and well-being, as set out in the [OECD Learning Compass](#). By guiding and empowering teachers, we guide and empower learners. And by investing in both, we invest in shaping the future we want – for education, for society and for the planet.

Together, the Teaching Compass and the Learning Compass form a guiding roadmap for the future of education, drawing on a globally informed yet locally adaptable vision. This aspirational framework is grounded in both robust and emerging research, and enriched through international collaboration, dialogue and co-creation among the OECD Future of Education and Skills project's diverse group of stakeholders.

The OECD Teaching Compass is structured around the following key concepts:

- Making **the future we want** a reality for both students and teachers: Clarifying a shared vision and purpose, aligning education with collective aspirations for the future.
- **Anchoring the Compass**: Navigating change without losing focus - grounding teaching practices in a strong professional identity and clear ethical values that guide educators through complexity, supporting improved student learning and well-being.
- **Teacher agency** to lead curriculum change: Empowering educators with the autonomy, confidence and capabilities necessary to initiate and sustain meaningful innovation and transformation in education.
- **Teacher competencies** for navigating complexity: Cultivating critical competencies and adaptive skills that enable educators to effectively manage complexity, uncertainty and continuous change in educational environments.
- **Teacher well-being** for thriving professionals: Promoting comprehensive well-being strategies to ensure that teachers flourish personally and professionally, sustaining their capacity to educate, inspire and engage students.

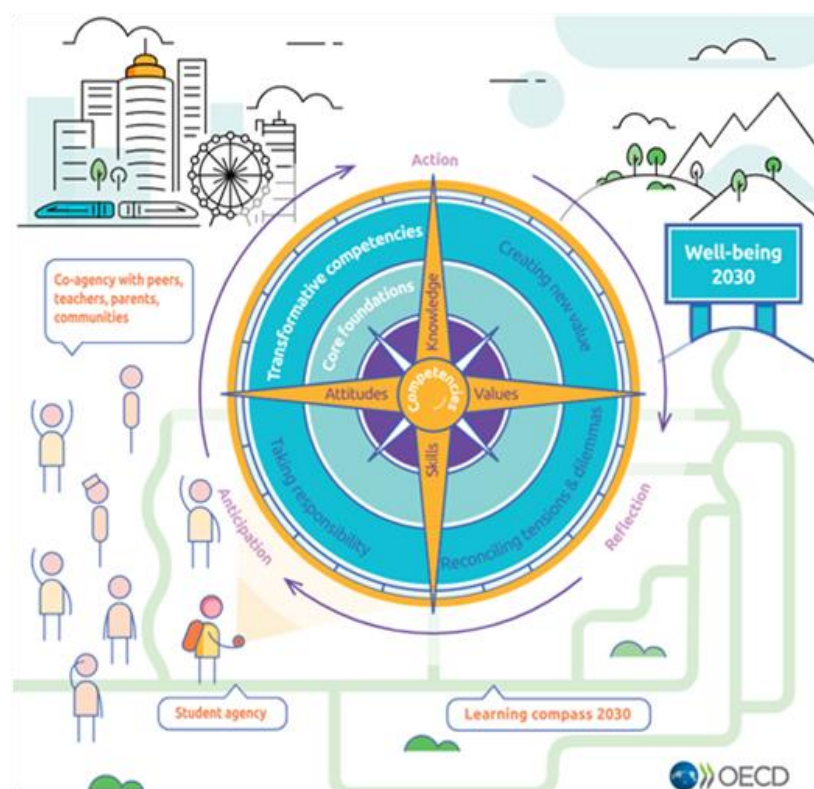
- **Teachers as integral to a learning ecosystem** for collective impact: Positioning educators within collaborative networks and partnerships that foster collective responsibility, mutual learning, and systemic educational improvement.

1. Introduction: Making the future we want a reality

In an age defined by complexity, transformation and uncertainty, the role of the teacher is more vital than ever. As the world asks students to become agents of creative, resilient and collaborative change, the same must be true for their teachers. The OECD Teaching Compass is a bold and timely response to this call. It seeks not only to support teachers, but to reimagine the profession itself, empowering educators to thrive in the 21st century and shape the future of learning.

The Teaching Compass was inspired directly by the OECD Learning Compass 2030 (see Figure 1). As this vision for student learning took shape, it became increasingly clear that such transformative learning could not be realised without corresponding changes in teaching practice and in the support systems that sustain teachers. In other words, students will only flourish when their teachers are equally empowered in terms of their professional identity, agency, competencies and well-being.

Figure 1. OECD Learning Compass



Source: Source: (OECD, 2019^[1]) *OECD Future of Education and Skills 2030: Learning Compass 2030*.
https://www.oecd.org/content/dam/oecd/en/about/projects/edu/education-2040/1-1-learning-compass/OECD_Learning_Compass_2030_Concept_Note_Series.pdf.

The Learning Compass is a future-oriented framework that defines the knowledge, skills, attitudes and values students need to thrive and shape a better future. It is built on three core elements: first, agency at

multiple levels - student agency, co-agency, and collective agency - enabling learners to take ownership and work collaboratively; second, strong core foundations, including cognitive and metacognitive skills (such as literacy, numeracy, and digital/data literacy), social and emotional foundation, and physical and psychological foundation; and third, transformative competencies that empower learners to create new value, reconcile tensions, and take responsibility. These competencies cannot be developed by sitting in the classroom and learning alone, but require active, meaningful engagement with the world. Students learn to be equipped with these foundations and competencies through the Anticipation-Action-Reflection cycle, supported by families, educators and communities. The Teaching Compass builds on this vision, positioning teachers as equally empowered agents of change, together with their students, who bring these elements to life in classrooms through purposeful teaching, ethical decision-making, and professional care.

It is important to note that the Teaching Compass is not intended to address every aspect of the teaching profession or predict its future in full. Rather, it serves as a guiding framework, providing direction for strengthening teacher education, practice and policy, so that teachers are well equipped to support the kind of student learning envisioned by the Learning Compass. In this way, the Teaching Compass becomes a vital enabler of the Learning Compass, offering a future-focused and holistic vision of what it means to teach – and to be a teacher – in a quickly-evolving world.

A new narrative for the teaching profession

At the time of writing, education systems around the world are responding to rapid change and growing complexity. Global teacher shortages, widespread stress and burnout, and rapid technological shifts, including the rise of AI, have dramatically reshaped the teaching landscape. Yet these challenges also present a unique opportunity to reimagine teaching as a dynamic, adaptive and collaborative profession.

At the heart of this transformation lies a renewed understanding of teachers' professional identity. More than a job description, professional identity represents the core values, purpose and sense of meaning that educators bring to their work. It is the anchor of the Teaching Compass and a foundational dimension that enables teachers to navigate change with integrity, agency and clear purpose. The Teaching Compass seizes this opportunity, offering a transformative perspective that:

- **anchors professional identity, dignity and integrity** as the foundation for purpose-driven, future-oriented teaching that enhances student learning and well-being;
- **centres teacher agency** as a driving force in educational change;
- **elevates competencies** that go beyond subject and pedagogical knowledge, and technical skill to include values, mindsets and adaptive expertise;
- **ensures teacher well-being** as essential to sustainable, high-quality education.

It calls for a shift from traditional, one-directional mandates to shared leadership at all levels, positioning teachers as co-designers of learning and key architects of our collective future.

Why the Teaching Compass now?

Teachers face a growing list of expectations – to deliver curriculum, nurture well-being, adapt to digital and AI-assisted learning, support inclusion, and build critical 21st-century competencies. Yet they are often left without the tools, recognition or systemic support to succeed. The Teaching Compass addresses this gap with a coherent and actionable framework. It provides the vision and direction needed to align teaching practices with broader educational goals both globally and locally.

This moment presents a transformative opportunity to unlock untapped potential, address challenges, and fundamentally reimagine the teaching profession itself. It calls for a shift from traditional, top-down approaches to one that empowers teachers as co-designers of learning, adaptive experts and agents of

change. At the same time, this moment opens up new possibilities to elevate the status and meaning of teaching. Emerging innovations, such as collaborative professional learning networks, AI-enhanced tools and greater autonomy in curriculum design, offer unprecedented avenues for teachers to reimagine their roles and amplify their impact. When teachers are empowered and supported, they can not only respond to change but lead it.

Key value propositions of the Teaching Compass

- **Coherence between learning and teaching:** While the Learning Compass defines the “why” and “what” of education, centring student agency, competencies and well-being, the Teaching Compass offers the “why” and “how” teachers embody, nurture and model these goals through curriculum implementation in the classroom. This alignment creates a rare and powerful conceptual coherence between learning aspirations and teaching practices, ensuring both learners and educators are moving forward towards a shared future.
- **Bridging curriculum change and implementation:** One of the persistent gaps in education reform is the misalignment between curriculum goals and teacher capacity. The Teaching Compass has the potential to bridge this divide by guiding both teacher education reforms and in-service professional development, ensuring that teachers have the tools to bring modern curricula to life in their classrooms, not just in theory but in practice.
- **A common vision for collective impact:** Education is not the work of teachers alone. It is a deeply social, collaborative effort. The Teaching Compass provides a shared language and a common vision for stakeholders including families, communities, policymakers, school leaders and businesses to work together. Drawing on ideas of *shared value* (Porter and Kramer, 2011^[2]) and *collective impact* (Kania et al., 2022^[3]), it fosters alignment and mutual accountability, ensuring that educational transformation is inclusive, equitable and systemic.
- **Reimagining the teaching profession:** The Compass offers more than a framework; it offers a new professional identity for teachers. One that is grounded in core values, shaped by context, and attuned to the future. By integrating professional identity, agency, competencies and well-being into a unified vision, the Compass seeks to elevate the status and societal perception of teaching, inspiring new generations to enter – and remain in – the profession for effective curriculum implementation. This vision aligns with broader OECD efforts, including the *New Professionalism and the Future of Teaching* (NPFT) project, which developed tools to support co-creation of preferred scenarios for the future of teaching. It engages teachers and stakeholders in identifying long-term transformations and near-term improvements, with a strong emphasis on professional identity (both individual and collective), meaningful collaboration, diversified career paths and enhanced well-being as pillars of a future-ready profession (OECD, 2024^[4]; OECD, 2025^[5]; OECD, 2025^[6]).
- **Conceptual clarity and future-oriented indicators:** Amidst overlapping teaching frameworks, the Teaching Compass introduces a coherent taxonomy that integrates knowledge, skills, attitudes and values, anchored in clear definitions of professional identity, agency and well-being. This conceptual clarity opens the door to new indicators for assessments; ones that better capture the lived realities of teachers and the quality of their practice.

While globally informed, the Teaching Compass is designed to be locally adapted. For example, Norway is actively aligning its national initiatives – from teacher education reform to AI integration and school well-being – with the pillars of the Compass (see Box 1Box 1). This adaptability makes the Compass not just a framework, but a possible **movement** to change the discourse of the teaching profession, rooted in global collaboration and grounded in local innovation.

Box 1. Example of local contextualisation: The relevance of the Teaching Compass in Norway

The key pillars of the Teaching Compass are closely aligned with several ongoing and upcoming educational initiatives in Norway, offering a framework that supports teacher development, integration of technology, and the creation of a positive and healthy school environment. The following areas highlight how these perspectives are relevant:

- **New framework for teacher education:** Incorporates the holistic approach to teacher well-being, agency and competencies.
- **Professional development:** Emphasises continuous learning, aligning with the Compass's goals for lifelong growth and support for educators.
- **Use of AI in teaching and assessment:** Encourages adaptive and innovative approaches to curriculum, in line with the Compass's commitment to modernising teaching practices.
- **Safe and good school environment:** Focuses on fostering a supportive atmosphere, echoing the Compass's emphasis on teacher well-being.
- **Holistic system for competence and career development:** Provides structured opportunities for educators' professional and personal growth, reflecting the Compass's vision of comprehensive development.
- **National programme for a more practical school:** Promotes teacher agency by allowing educators to adapt their teaching to meet practical, real-world needs.
- **Role of the common school in the future society:** Prepares educators to address evolving societal challenges of the 21st century, directly linked to the Compass's future-oriented goals.

Source: Reidunn Aarre Matthiessen, Senior Advisor, The Norwegian Directorate for Education and Training. Presentation during the 37th session of the Education Policy Committee (EDPC). OECD. 10 April 2025. Paris, France.

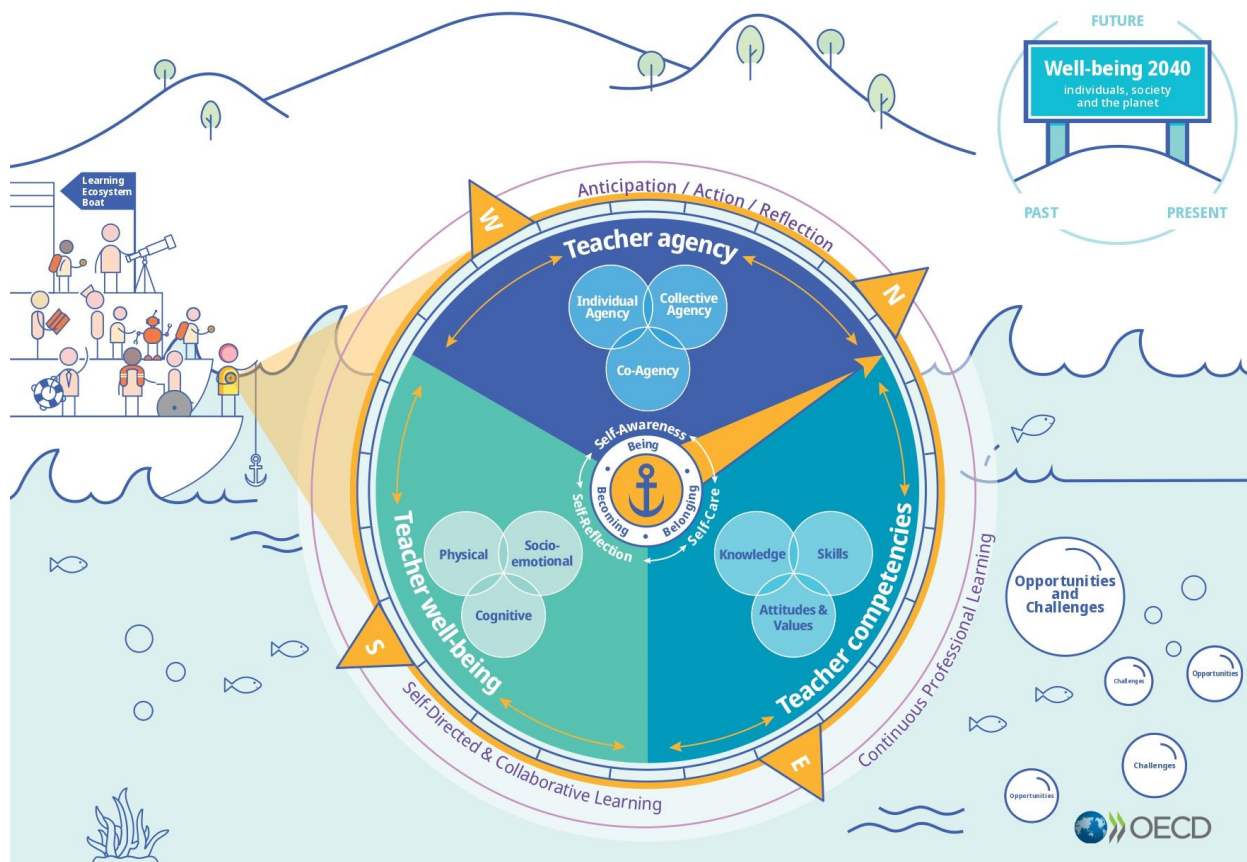
Together, the **OECD Teaching Compass** and the **OECD Learning Compass** form a guiding roadmap for the future of education. By empowering teachers, we empower learners. And by investing in both, we invest in the future we want – for education, for society and for the planet.

The following sections will guide you through the key concepts of the Teaching Compass, in accordance with the visual framework below (see Figure 2):

- **Section 2: Making the future we want a reality;**
- **Section 3: Anchoring the Compass: Navigating change with a strong self-concept;**
- **Section 4: Teacher agency to lead curriculum change;**
- **Section 5: Teacher competencies for navigating complexity;**
- **Section 6: Teacher well-being for thriving professionals;**
- **Section 7: Teachers as integral to a learning ecosystem for collective impact.**

Please note that boxes aim to highlight examples of local contextualisation and adaptation of the framework, to reiterate that the Teaching Compass is globally informed but to be locally contextualised.

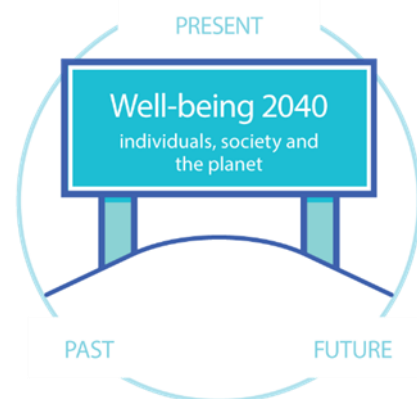
Figure 2. Teaching Compass Visual



2. Making the future we want a reality

The OECD Learning Compass outlines a clear vision for education focused on **individual, collective and environmental well-being**. These three intertwined dimensions form a holistic educational approach essential for sustainable development, preparing individuals to contribute positively to society and the environment. **These goals remain central to the OECD Teaching Compass** as well (for more detail, please see (OECD, 2018^[7])).

Individual well-being emphasises personal growth, resilience and the competencies needed for navigating a rapidly evolving and uncertain world. Education, in this context, fosters personal fulfilment, equipping learners to manage challenges proactively. Collective well-being expands the scope beyond the individual, stressing the importance of social cohesion, inclusion and collaborative efforts within communities. It promotes shared goals, mutual respect and collective responsibility. Environmental well-being broadens the lens further, underscoring sustainability, environmental stewardship and responsible resource management to ensure a thriving future for subsequent generations.



These dimensions are deeply interconnected; individual health and sense of purpose enhance collective well-being through active community participation and advocacy for sustainable practices. Conversely, a healthy, cohesive community provides the supportive environment necessary for personal and planetary well-being to flourish. Without a stable and thriving planet, however, the foundations for both individual and collective well-being are fundamentally compromised.

Learning from the past, grounded in the present, preparing for the future

Preparing effectively for the future requires intentionally learning from past successes and failures, while also firmly grounding education in the present-day context (OECD, 2018^[7]; UNESCO, 2021^[8]). Such an integrated approach enables individuals and communities to cultivate resilience and adaptability, positioning them to thrive amidst technological, demographic and socio-economic uncertainties (Fullan, Spillane and Fullan, 2022^[9]; Schleicher, 2020^[10]).

History is not only a chronology but a **reservoir of tested ideas and cautionary tales**. Empirical syntheses of educational research (e.g. Hattie’s meta-analyses) sit beside centuries of cultural wisdom, reminding us that progress blends continuity with innovation. By studying how prior generations confronted pandemics, technological shifts or moral dilemmas, learners encounter durable values such as equity, curiosity and integrity, as well as recurrent pitfalls like exclusion, short-termism and hubris. When classrooms invite students to trace these patterns, they position young people as **participants in a timeless narrative**, capable of carrying forward the positive while discarding what is harmful.

Foresight that is untethered from lived reality quickly dissolves into speculation. The most powerful future thinking begins with **attentiveness to now** – listening to authentic inner voices as well as community voices, noticing subtle signals of social or ecological change, and acknowledging emotions that surface in the face of uncertainty. Education that cultivates such presence equips learners to pause, reflect and act with intention rather than merely sprint toward the next credential or trend. A person anchored in the present can discern genuine opportunity and can imagine futures that honour the constraints and possibilities unfolding around them.

Beyond either/or: Embracing whole-system logic in addressing challenges and opportunities

In a world saturated with intertwined problems and possibilities, the shortcomings of either/or thinking have never been clearer. Reducing complex realities to neat binaries – right/wrong, us/them – may feel clarifying, but blinds us to the intricate webs that connect education, ecology, economics and culture. Faced with global curriculum reform, climate action or the future of work, such reductionism fractures our attention and constricts our imagination just when we must widen both.

The same is true of single-point optimisation. A school can lift its literacy scores only to see student engagement plummet; a social programme may flourish in one neighbourhood while erecting barriers in another. Because today’s systems are tightly interwoven, interventions made in isolation often ripple outward in unpredictable ways, undermining the very aims they pursue.

What we need instead is big-picture vision: a habit of asking not merely “what works here?” but “what works together?”. Whole-system thinking invites us to zoom out, trace interdependencies and resist the lure of simple answers. It calls us to integrate multiple perspectives, search for patterns rather than points, and hold several truths at once.



This shift is not only strategic; it is profoundly humane. It replaces certainty with curiosity, control with collaboration, reaction with reflection. By moving beyond either/or logic toward systemic coherence, we equip ourselves to navigate the turbulence of innovation, disruption and crisis. More importantly, we gain the perspective to craft futures that are not just efficient or productive, but also sustainable, equitable and deeply life-affirming.

3. Anchoring the Teaching Compass: Navigating change with a strong self-concept

The Teaching Compass places at its centre a robust *self-concept* – an inner anchor that enables teachers to firmly develop their professional agency, competencies and well-being (Beauchamp and Thomas, 2009^[11]; Day and Gu, 2010^[12]). This self-concept is more than a philosophical ideal; it is the steadfast anchor that enables teachers to navigate the surging currents of change, including the dynamic challenges related to digital transformation and AI integration. The Teaching Compass sets the stage for educators to act not only as transmitters of knowledge but as mentors, innovators and agents of lifelong learning – a vision that strikes at the very core of the teaching profession. This is especially important as teachers are expected to bring to life the Learning Compass and must themselves be equipped to navigate complexity with the same clarity, adaptability, and confidence that we aim to instil in learners.



In this emerging landscape, the teaching profession is reimagined as a vibrant interplay of inner authenticity, relational connectivity and continual evolution. A robust self-concept empowers educators to engage with curricular shifts, technological advancements and evolving societal demands while preserving the integrity of their personal and professional values. With this renewed perspective, the Teaching Compass becomes a powerful catalyst for educational innovation, inviting teachers to reframe their roles in ways that resonate deeply with both personal passion and the collective mission of nurturing future generations.

This focus on teachers' self-concept represents a significant evolution from the earlier OECD Learning Compass. While the Learning Compass offers educators visions and directions, the Teaching Compass builds on these and introduces the anchor as a metaphor for the stability and resilience teachers need to navigate complexity and ambiguity in their professional lives. In this way, the Teaching Compass ensures that teachers are not only enablers of student learning, but also active participants in their own learning journeys - reinforcing the idea that schools must be spaces of learning not only for students, but for teachers as well.

Inner anchor: Being, belonging and becoming

When educators are anchored in ***being*** (authentic self-awareness), ***belonging*** (mutually supportive relationships), and ***becoming*** (continuous growth and transformation), they are better equipped to remain resilient, innovative and purpose-driven in today's complex educational environments (Palmer, 1997^[13]; Viac and Fraser, 2020^[14]). By integrating these dimensions into a strong self-concept, teachers establish a holistic foundation that supports enduring professional agency and well-being, while also advancing their expertise, experience, knowledge, skills and attitudes.

Table 1. Key self-concepts

Key self-concepts	Being	Belonging	Becoming
Definitions	The deep, authentic sense of self that teachers develop over time	The feeling of being an integral and valued part of the school community, wherein one feels respected, supported and empowered to contribute meaningfully to the community	Dynamic state of professional identity, embracing lifelong learning and reflective practice to continually evolve, meet new challenges and seize emerging opportunities
Key concept and construct examples	<ul style="list-style-type: none"> Professional identity, dignity and integrity Sense of purpose Sense-making / meaning-making 	<ul style="list-style-type: none"> Psychological safety Caring and empowering relationships School ethos and connection to a wider community 	<ul style="list-style-type: none"> Continuous professional learning Self-directed learning and collaborative learning Anticipation-Action-Reflection Cycle

Anchoring in authenticity: The power of being

At the heart of the Teaching Compass lies “being,” an ever-evolving sense of self that invites educators to root their practice in authenticity. In an era of relentless external pressures and rapid technological change, this inner anchor becomes a beacon of stability, guiding teachers to refine their professional values through honest reflection and meaningful interactions. Far from a static identity, “being” unfolds as teachers grapple with complex challenges, continually aligning their actions with deeply held beliefs and ethical principles (Viac and Fraser, 2020^[14]; Palmer, 1997^[13]).

A teacher's **professional identity** emerges over time through the interplay of experience, social interaction and self-reflection (Hsieh, 2014^[15]; Beijaard, Meijer and Verloop, 2004^[16]). Yet despite its critical importance to professional development, student learning and policy implementation, teacher professional identity has received limited attention in policy. The Teaching Compass aims to help re-centre it in education reform, recognising that identity is dynamic - shaped by systemic supports, professional relationships, and ongoing reflection on teaching and learning (Suarez and McGrath, 2022^[17]).

When this identity is fortified by **dignity** – the recognition of one's expertise and worth – and by **unwavering integrity**, educators gain the confidence to uphold high standards even amid the uncertainties and pressures of today's rapidly changing societies (Kelchtermans, 2005^[18]; van Veen, Slegers and van de Ven, 2005^[19]). Anchored by such ethical assurance, teachers are better equipped to demonstrate enduring commitment and resilience, nurturing classroom environments built on trust and respect. In turn, students witness role models who embody authenticity, reinforcing their own sense of security and engagement.

This grounded identity naturally gives rise to a clear **sense of purpose**, a guiding force that illuminates why each lesson matters. Purpose-driven educators continuously reflect on their motivations and aspirations, weaving personal values into pedagogical choices (Gong and Wang, 2023^[20]). Such clarity not only elevates teacher well-being – fostering job satisfaction, motivation, and resilience (Beauchamp and Thomas, 2009^[11]; Day and Gu, 2010^[12]) – but also transforms student experiences, sparking increased engagement, stronger self-efficacy, and improved academic outcomes (Jennings and Greenberg, 2009^[21]). Yet this purposeful approach does not exclude spontaneity, as wise educators balance intentional objectives with emergent, play-based inquiry, creating space for student curiosity and creativity to flourish (Sutton-Smith, 2022^[22]; Lillard et al., 2013^[23]).

Underpinning both identity and purpose are the twin processes of **sense-making** and **meaning-making**, through which teachers interpret new information and integrate it into coherent professional narratives (Dalo, 2000^[24]; Stollman et al., 2020^[25]). By bringing reflective practice to the forefront – critically examining successes, learning from missteps, and continuously reauthoring their stories – educators transform everyday challenges into opportunities for innovation and growth (Beauchamp and Thomas,

2009^[11]). This reflective stance not only shields against burnout but also cultivates in students the inquisitiveness and resilience they observe modelled in their teachers.

In this renewed vision, authenticity is far more than an ideal, it is the practical foundation of professional agency (see “Teacher agency”). Teachers anchored in a powerful sense of being harness their inner strengths to make decisions aligned with both personal convictions and ethical standards. This intrinsic clarity sustains their well-being and positions them as enduring role models, guiding each student toward a voyage of self-discovery, purpose and meaningful learning.

Anchoring through trust: Weaving a fabric of belonging

In a truly collaborative school, the inner strength of each teacher’s professional identity finds its fullest expression when interwoven with a profound sense of belonging. Far from being a mere byproduct of a positive school culture, belonging is the lifeblood of vibrant learning communities – a recognition that no educator operates in isolation but flourishes through reciprocal relationships across classrooms, staff spaces and the wider ecosystem. Recent studies confirm that when teachers feel genuinely valued and connected, their emotional and psychological well-being improves, collaboration deepens and turnover declines (Mishra and Oster, 2023^[26]; Viac and Fraser, 2020^[14]). In such environments, trust becomes the warp thread, underpinning every interaction, from day-to-day pedagogical decisions to long-term strategic change.

At the core of this fabric lies **psychological safety**, the conviction that one can speak up, ask difficult questions, or admit mistakes without fear of repercussion. When schools cultivate this atmosphere, teachers report higher job satisfaction and a greater willingness to experiment with new instructional strategies (Kelchtermans, 2017^[27]; Kachchhap and Horo, 2021^[28]; Bjorklund et al., 2020^[29]). This professional courage then extends into the classroom, as confident teachers model the resilience and risk-taking they wish to see in their students, fostering classrooms where curiosity thrives, mistakes become learning moments, and academic engagement deepens.

Equally vital are the **caring, empowering relationships** that bind educators to one another and to families. When interactions among colleagues and school leaders are characterised by mutual respect and genuine support, teachers feel both seen and heard (Akinyemi, Rembe and Nkonki, 2020^[30]). These affirming connections act as a buffer against stress and burnout, elevating motivation and reinforcing a shared commitment to student success (Collie, Shapka and Perry, 2012^[31]). In turn, students benefit as their teachers bring renewed energy and collaborative expertise into every lesson, modelling the social-emotional competence that underpins resilient, engaged learners (Jennings and Greenberg, 2009^[21]).

Finally, a coherent **school ethos** and strong ties to **the wider community** give this fabric its scale and strength. Such ties are increasingly recognised as critical to strengthening teacher development and student learning, yet often require purposeful transformation to become more coherent, integrated and supportive in practice (McGrath, 2023^[32]). When educators help shape a school’s vision, and see that vision reflected in welcoming physical spaces and communal rituals, they develop a profound sense of ownership that wards off burnout and anchors their professional purpose (Dewey, 1986^[33]; Hargreaves and Fullan, 2015^[34]). Thoughtfully designed classrooms, versatile gathering areas, and inviting staff lounges signal that every voice matters (Barrett et al., 2013^[35]), while engagement with families and local organisations affirm teaching’s vital role in society (Epstein, 2018^[36]). Together, these multi-dimensional connections reinforce a culture of trust, respect and interdependence, ensuring that when teachers are anchored by trust, the entire school community weaves together a resilient, flourishing fabric of belonging.

Anchoring growth and transformation: The journey of becoming

“Becoming” lies at the heart of the Teaching Compass, reminding us that an educator’s professional identity is never fixed but perpetually evolving (Dewey, 1986^[33]; Hargreaves and Fullan, 2012^[37]). In this vision,

teaching is understood as a lifelong journey of discovery, in which reflective practice and continuous learning propel teachers to meet new challenges and seize emerging opportunities (Mishra and Oster, 2023^[26]; OECD, 2019^[38]). Rather than a one-time qualification, professionalism becomes a vibrant process of continuous professional learning (CPL), self-directed inquiry and collaborative engagement. Teachers also need to lead by example in demonstrating how competency is developed through the continuous cycle of “anticipation-action-reflection”.

CPL – which the OECD defines as a “lifelong process of ongoing learning and improvement” (OECD, 2024^[39]) – serves as both anchor and engine for this journey. When teachers pursue purposeful in-service development, they deepen subject-matter expertise, refine pedagogical skills and reinforce the psychological foundations that support meaningful student relationships (OECD, 2019^[38]). Such sustained growth not only elevates classroom practice but also affirms the teacher’s own identity as an evolving expert, one whose integrity and dignity are continually renewed through learning.

To build on this idea, growth and development need not be an isolated journey, especially when teachers have the agency to shape their own learning experiences. Self-directed learning (SDL) empowers teachers to diagnose their own needs, craft personalised goals, and select strategies that resonate with their aspirations (Knowles, 1975^[40]; Lan, 2022^[41]). Research shows that when educators chart their own paths – seeking out research, experimenting with new tools and reflecting on outcomes – they experience greater motivation, pedagogical agility and resilience in adapting to diverse student needs (Bhat and Dahal, 2023^[42]; Li, 2023^[43]). Crucially, SDL models for students the dispositions of curiosity and agency educators wish to cultivate in the classroom (Roe and Perkins, 2024^[44]).

To amplify this individual agency, collaborative learning (CL) weaves together the insights and talents of educators across schools and contexts (Bransford, Brown and A. L., 2000^[45]; Hattie, 2008^[46]). Whether through professional learning communities or networked inquiry groups, teachers engage in shared problem-solving, peer mentorship and co-creation of innovative practices. In the era of generative AI, where data-driven tools and ethical dilemmas emerge rapidly, such collective professional ecosystems become indispensable. They enable educators to co-construct knowledge about digital pedagogy, grapple with algorithmic bias, and support one another in translating AI’s promise into human-centred learning experiences (Kozma, 2003^[47]; OECD, 2021^[48]; Vangrieken et al., 2015^[49]).

Underpinning both SDL and CL is the Anticipation-Action-Reflection (AAR) cycle, adapted from the Learning Compass to guide teachers through iterative cycles of foresight, practice and critical review (Hinton, 2022^[50]; OECD, 2019^[51]). In the anticipation phase, educators draw on data, research and professional wisdom to forecast potential challenges and design flexible strategies. Acting on these plans, they experiment with innovative methodologies, such as inquiry-based projects or an AI-enhanced lesson, while monitoring real-time feedback. Finally, through structured reflection, teachers analyse outcomes, refine their approaches and ready themselves for the next cycle of exploration.

By embracing becoming – integrating CPL, SDL, CL, and the AAR cycle – teachers not only sharpen their craft but also model the dispositions of adaptability, curiosity and resilience they seek to instil in students. The result is a vibrant professional culture in which educators lead by example, transforming classrooms into spaces where every learner is invited to grow, innovate and thrive.

Anchoring the Compass or losing the Compass

A teacher’s ability to navigate the shifting currents of modern education – whether surging parental expectations or evolving policy mandates – rests on the deliberate cultivation of their inner compass. By seamlessly integrating self-awareness, reflective practice and intentional self-care, educators reinforce the dimensions of being, belonging and becoming that lie at the heart of the Teaching Compass (Day and Gu, 2010^[12]; Jennings and Greenberg, 2009^[21]).

When those foundational anchors weaken, however, the Teaching Compass itself loses its guiding force, leaving teachers vulnerable to the disruptive tides of rapid technological change, fragmented directives and volatile societal demands (Teräs, 2022^[52]; Selwyn, 2019^[53]; Giannakos et al., 2024^[54]).

In this ever-evolving landscape, it is essential that every teacher practice rigorous meta-cognitive vigilance – regularly monitoring their own beliefs and emotions, and consciously recalibrating their inner compass – to remain grounded, resilient and purpose-driven as they lead learning into the future.

Table 2. Conditions for the Compass to work

	<i>Strengths for anchoring the Compass</i>	<i>Risks of losing the anchor</i>
Key factors	<ul style="list-style-type: none"> • Self-awareness • Self-reflection • Self-care 	<ul style="list-style-type: none"> • Spinning needle: Distraction, loss of focus, ambiguous goals • Drifting off intended course: Loss of engagement, narrower focus, the accountability paradox • Magnetic distortion: Unconscious bias, external pressure, impaired judgment

Anchoring the Compass: Cultivating self-awareness, reflection and care

Cultivating **self-awareness** lays the groundwork for ethical, principled practice. When teachers learn to recognise their own emotional triggers, cognitive biases and professional strengths, they gain clarity about how personal states influence classroom decisions. Research demonstrates that heightened self-awareness, and the empathy it fosters, can mitigate unconscious bias and improve student outcomes (Roeser et al., 2012^[55]). In an era of AI-assisted insights, self-aware educators also remain vigilant about the limits of technology, resisting over-reliance while remaining open to innovations that truly serve student learning.

Building on this foundation, **self-reflection** transforms experience into growth. Through deliberate, regular reflection – scrutinizing instructional choices, analysing student responses, and questioning underlying assumptions – teachers create a feedback loop that refines their practice and aligns it more closely with both learner needs and personal values (Imelda Santos Caleon, 2024^[56]). This reflective stance becomes indispensable as educators juggle the complexities of digital tools, social media influences and diverse classroom dynamics, ensuring that every lesson informs the next cycle of professional development.

Equally vital is **self-care**, which sustains the resilience needed for a demanding profession. Far from an optional indulgence, self-care encompasses setting healthy boundaries, engaging in restorative activities, and seeking support when challenges mount. Studies underscore that teachers who prioritise well-being – through balanced workloads, access to wellness resources, and time for rest and social connection – experience lower burnout rates and return to the classroom with renewed energy and focus (Reid, 2025^[57]; Abou Assali and Al Abdouli, 2024^[58]). Moreover, by modelling self-care, educators impart to students an essential life lesson that sustainable engagement and emotional balance are as critical as academic rigour.

Together, these intertwined practices of self-awareness, self-reflection and self-care form the professional bedrock upon which teachers anchor their sense of being, belonging and becoming. When policy and leadership create conditions that support this inner work – through professional learning time, reflective communities and wellness initiatives – educators are empowered to remain focused, innovative and resilient. In doing so, they not only steer their own professional journeys with integrity but also inspire their students to embark upon lifelong voyages of learning and growth.

When the Compass falters: Risks of losing the anchor

The E2040 multi-stakeholder community, bringing together teachers, school leaders, researchers and policymakers, has distilled both research insights as well as the lived experiences of classroom practitioners into three types of cases in which a teacher’s inner anchor (being, belonging, becoming) can slip away. These cases of “losing the anchor” illuminate how even the most dedicated educators may become adrift when exposed to overwhelming technological demands, conflicting policy pressures, or unexpected situations. By examining these research implications and experience-rich examples, we can be better prepared for possible vulnerabilities that threaten a teacher’s resilience and reaffirm the necessity of reinforcing the inner compass.

Spinning needle: Distraction, loss of focus and ambiguous goals

When a teacher’s internal anchor wavers, the professional compass can begin to spin wildly, drawing educators into a cacophony of competing priorities. In such moments, the proliferation of **digital distractions and the pressure to multi-task** erode cognitive well-being, making it difficult to hold fast to core educational aims. In the absence of a clear professional identity and sense of purpose, the latest digital trend or AI-assisted tool can distract more than it empowers.

Emerging technologies, introduced under the banner of “AI-assisted, student-centred learning”, too often appear without clear guidance, leaving teachers to juggle complex ethical decisions around data privacy, adaptive algorithms and equitable access (Zawacki-Richter et al., 2019^[59]). Rather than streamlining workloads, these innovations often become “just another thing on teachers’ plates,” exacerbating cognitive overload and undermining well-being (Luckin and Holmes, 2016^[60]; Selwyn, 2019^[53]). Over time, this **loss of focus** can lead to burnout and diminished classroom effectiveness, as educators lose sight of core educational priorities. When policy fragments into **conflicting, often ambiguous directives** – e.g. “tech over pedagogy” one day, “high-stakes assessment” the next – teachers can lose sight of their pedagogical goals.

Drifting off course: Loss of engagement, narrower focus and the accountability paradox

Even well-intentioned automation can impair the broader role of the teacher. An over-reliance on practical tools, including automated data analytics and standardised metrics seen in recent years, can narrow the scope of education to what is easily measured (such as test scores and engagement dashboards) at the expense of creativity, social-emotional development, and relational trust (Henriksen and Mishra, 2022^[61]; Gocen and Aydemir, 2020^[62]). When opaque algorithms begin to dictate instructional choices, teachers **risk ceding their professional agency, leading to disengagement**.

This **narrowing focus on quantifiable outputs** like test scores, engagement metrics and algorithmic recommendations, instead of holistic human development, including “hard-to-measure” developmental aspects, creates **an accountability paradox**: teachers often feel they are held accountable for outcomes dictated by opaque technologies over which they have little control (Luckin and Holmes, 2016^[60]; Williamson and Hogan, 2020^[63]). This shift from human-driven teaching to data-driven compliance erodes teacher motivation, stifles innovation and ultimately undermines both educator well-being and student flourishing.

The result is a disengaged workforce, disheartened by shifting demands and unpredictable expectations, where innovation gives way to compliance and long-term commitment wanes under the weight of incessant measurement (Henriksen and Mishra, 2022^[61]; Gocen and Aydemir, 2020^[62]).

Magnetic distortion: Unconscious bias, external pressure and impaired judgment

Even well-intentioned AI solutions carry hidden costs when untethered from human judgment. Just as a compass falters in the presence of a powerful magnet, a teacher's professional judgment can be skewed by unseen forces. **Unconscious biases**, shaped by societal norms and personal histories, may subtly influence who receives attention, how assessments are interpreted, or which students are encouraged to take risks (Pham et al., 2024^[64]). When AI tools trained on imperfect data are adopted without critical scrutiny, those biases risk becoming incorporated into grading, student support and instructional recommendations (Obed Boateng and Bright Boateng, 2025^[65]; Baker and Hawn, 2021^[66]).

Concurrently, **external pressures**, from mandates to adopt trendy coding programmes to parental demands for test-prep, can compel teachers into cautious conformity, stifling reflective exploration in the best interests of their students (Biesta, 2019^[67]).

An emerging peril is “**humanising AI**”, or our tendency to attribute human qualities such as understanding or intent to statistical systems and trusting machine outputs over one's own pedagogical instincts (Towers-Clark, 2024^[68]; Fenwick and Molnar, 2022^[69]). This misplaced trust can skew professional judgment and reshape how teachers and students perceive both technology and each other. In a world where AI increasingly influences governance, media and healthcare, developing critical frameworks of accountability and transparency is imperative to preserve human agency and ensure technology remains a servant, not a master, of educational values. In recognising AI as a cultural technology rather than a neutral cure-all, educators and policymakers should develop critical ethical competencies and frameworks that preserve human agency and guard against distortions of professional judgment (Crawford, 2021^[70]).

Anchoring other pillars of the Teaching Compass

To keep the compass well-functioning, educators must reaffirm that effective teaching is anchored in a robust self-concept and sustained by self-awareness, reflective practice and self-care. Only by maintaining this inner stability, alongside flexibility and ethical discernment, can teachers navigate complex challenges, harness technology wisely, and create vibrant, student-centred learning environments where both educators and learners thrive. A stable inner anchor fosters resilience, innovation and lasting commitment, benefiting both teachers and learners. Teachers grounded in purpose can reinforce their professional agency (see “Teacher agency”) and ensure their own well-being (see “Teacher well-being”), enabling them to develop the types of knowledge, skills, attitudes and values required to navigate even the most complex challenges with confidence and integrity (see “Teacher competencies”).

4. Teacher agency to lead curriculum change

Teachers are not merely animating the future of education, they are at the frontline, actively leading and shaping educational change. Anchored in a robust self-concept, teacher agency acts as an important element of teachers' professional identity as well as teachers' and students' continuous learning and well-being (Bandura, 2018^[71]; Priestley, Biesta and Robinson, 2015^[72]; Priestley, 2015^[73]).

Teacher agency refers to teachers' belief that their purposeful actions and decisions - individually or collectively - can positively influence their professional practice, student learning experiences and broader educational contexts. It also involves these actions and decisions with the will to drive positive change for teachers themselves and for their students, rooted in their own growth mindset and the belief that all students can learn.



When empowered, teachers become agents of change - adapting to uncertainty, innovating pedagogy and championing student voice and well-being. Setting new horizons for the re-shaping of the teaching profession requires moving beyond conventional paradigms of control and compliance to create enabling environments that nurture the full potential of teacher agency across individual, relational and systemic levels. To lead curriculum transformation, the teacher must be positioned as a central agent who connects new learning with everyday life experiences, acting as a "life integrator" to foster deep and transferable learning. This role involves implementing, managing and adapting differentiated instructional strategies that consider individual differences, while also engaging in school-based planning tailored to the specific needs and context of their school community.

Individual agency

Teacher agency extends beyond *autonomy, voice and choice* (Table 3). While these dimensions matter, agency integrates them into a forward-looking, context-sensitive capacity to act. It reflects the teacher's belief that their intentional decisions and actions can shape the broader educational landscape through their positive impact on students and on their own professional growth (Priestley et al., 2015). It is expressed through decision making, action, and the will and capacity to initiate and drive meaningful change (Priestley, Biesta and Robinson, 2015^[72]). This requires a deliberate, ongoing process of observing the surrounding context, exercising sound judgment and taking actions that advance shared goals, while honouring one's own values as well as those of the community of practice (Priestley, Biesta and Robinson, 2015^[72]; Priestley, 2015^[73]; Wang Y., 2017^[74]).

Table 3. Definitions of teacher autonomy, voice, choice and agency

	Definition
Teacher autonomy	The degree of freedom and independence teachers have in making decisions about instructional practices, curriculum implementation, and classroom management. It is often determined by external authorities (school leadership, policymakers) (Mausethagen and Mølstad, 2015 ^[75]).
Teacher voice	Refers to the opportunities provided to teachers to express their insights, perspectives and reflections on professional matters (e.g. practices, curriculum design and educational policies). It also includes teachers' opportunities to advocate for student needs, participate in decision-making, and influence school or system-wide improvements (Gillett-Swan and Baroutsis, 2023 ^[76]).
Teacher choice	The autonomy teachers have in selecting instructional strategies, curriculum adaptations and pedagogical approaches based on professional expertise.
Teacher agency	Teacher agency refers to teachers' belief that their purposeful actions and decisions – individually or collectively – can positively influence their professional practice, student learning experiences and broader educational contexts.

Sources: Mausethagen, S., & Mølstad, C. E. (2015), "Shifts in curriculum control: Contesting ideas of teacher autonomy," *Nordic journal of studies in educational policy*, 2015(2), 285-290; Priestley, M. R., Biesta, G., & Robinson, S. (2015), *Teacher agency: An ecological approach*, Bloomsbury Publishing; Gillett-Swan, J., & Baroutsis, A. (2024), "Student voice and teacher voice in educational research: A systematic review of 25 years of literature from 1995–2020," *Oxford Review of Education*, 50(4), 533-551.

Autonomy is often a function of institutional permission; voice may be invited but not enacted; choice exists within curricular boundaries. Agency, by contrast, is a professional disposition; it is an active stance shaped by self-efficacy, ethical responsibility and a commitment to change. Research indicates that policy frameworks that nourish teacher agency yield richer learning experiences and more resilient school cultures (Gillett-Swan and Baroutsis, 2024^[77]; Paniagua and Istance, 2018^[78]).

Individual agency is exercised through teachers' beliefs in their own capabilities, their orientation toward goals, and their decision-making processes. Three key elements underscore this agency:

- **Self-efficacy:** Teachers with strong beliefs in their own capacity persist through challenges, innovate more readily, and inspire student achievement and motivation (Bandura, 1982^[79]; Guskey, 1988^[80]; Burić and Kim, 2020^[81]).
- **Goal-orientation:** A motivational compass, goal-orientation drives educators to act intentionally and align efforts with meaningful outcomes (Dweck and Leggett, 1988^[82]; Dresel et al., 2013^[83]).
- **Threefold decision-making:** Agency manifests in how teachers draw on past experiences (iterative), envision future possibilities (projective), and make judgments based on current realities (pragmatic-evaluative) (Bergh and Wahlström, 2018^[84]).

Teachers acting with individual agency are not paralyzed by uncertainty, they are mobilised by it. They turn systemic rigidity into opportunity, using judgment, values and creativity to co-create inclusive and adaptive learning environments (Toom, Pyhältö and Rust, 2015^[85])

Co-agency

Teacher agency is amplified through co-agency. Co-agency refers to the reciprocal, mutually influencing relationships between a teacher and another agent such as a student, a colleague, a school leader, a support staff member, a parent or an emerging AI agent. It emphasises the relational, dialogic and interactive nature of teaching in today's complex learning ecosystems (OECD, 2020^[86]). This means a typology of co-agency exists within the classroom (e.g. teacher-student or teacher-AI agents), within the school (e.g. teacher-teacher) and within the wider community (e.g. teacher-parent).

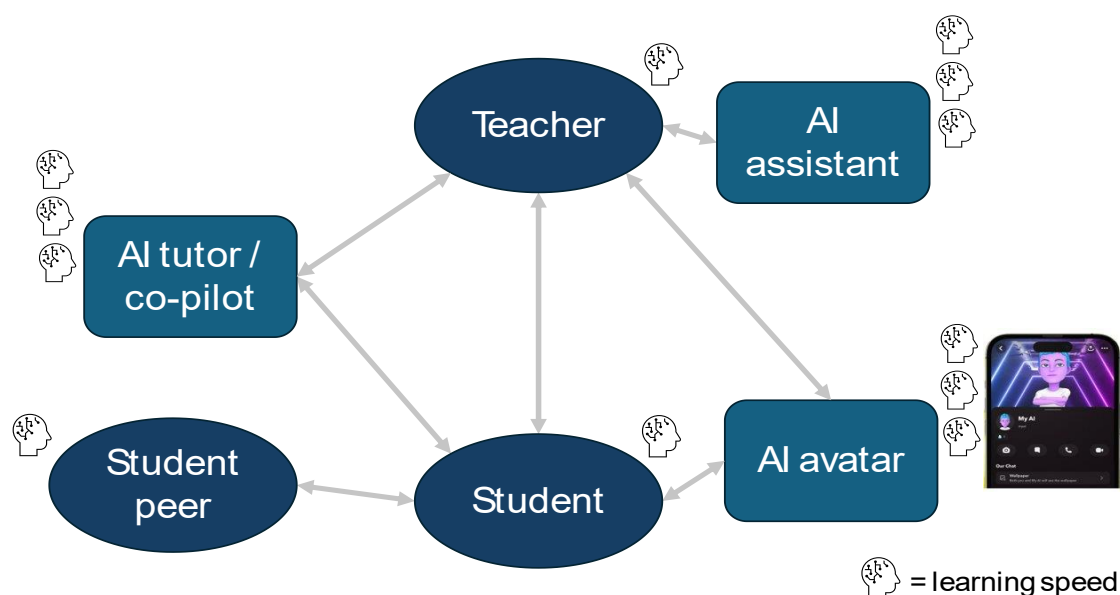
While every type of co-agency is relevant for teachers and students in their own right, we highlight here two emerging types of co-agency in 21st century schools. The first one is **teacher-student co-agency**, the essence of co-agency, currently expanded to encompass not only academic performance, but also well-being.

Secondly, **teacher-AI co-agency**, resulting from the co-existence of human and AI agents in classrooms. As human and artificial intelligence create new ways to co-exist in the world, the notion of agency, both for students and teachers, will continue to evolve. Figure 3 exemplifies the growing complexity of co-agency relationships in 21st century classrooms.

As observed in Figure 3 **Error! Reference source not found.**, the traditional teacher-student relationship has expanded to include several new agents. In addition to the human teacher and student, student peers also play important collaborative roles. But what is most significantly transformative is the introduction of various AI agents, such as AI tutors/copilots that provide personalised instruction, AI assistants that support teachers with administrative and educational tasks, and AI avatars that create immersive or interactive learning experiences for students.

Each of these agents brings different capabilities to the learning environment, as indicated by the brain icons representing learning speed and processing capacity. Together, they form an interconnected web of relationships where learning happens through multiple channels and relationships.

Teachers now not only interact with students, but with AI assistants that can help manage workloads, provide data on student performance, and suggest instructional strategies and even assist in designing or localising curriculum content based on real-time insights from classroom practice. AI agents can help identify gaps in curriculum implementation and recommend differentiated resources aligned with learning goals. At the same time, students engage with multiple sources of instruction and feedback, from their human teachers and peers to AI tutors/copilots that adapt to their learning pace and needs. They may also interact with AI avatars that simulate scenarios or provide alternative ways to engage with content.

Figure 3. Diverse co-agency relationships in 21st century classrooms

Sources: OECD Future of Education and Skills 2040 Team, inspired by inputs from 1) E2040 Focus Group 2B meeting (20 March 2023, “The Use of AI in teaching and learning: opportunities and risks”; Presenters: Donald Clark, CEO at WildFire Learning, United Kingdom; Giles Bennett, Deputy Headmaster, Saint Paul’s Girls’ School, United Kingdom; Marius Manolachi, Student, Moldova; Marie Aamisepp, Student, Estonia); 2) E2040 expert presentation at the 37th EDP meeting on 9 April 2025 by Prof. Punya Mishra (Director of Innovative Learning Futures at the Learning Engineering Institute (LEI) and Professor in the Mary Lou Fulton College for Teaching & Learning Innovation at Arizona State University)

The relationship between teachers and AI tutors/copilots creates opportunities for co-ordinated instruction where personalised AI tutoring complements whole class teaching. Similarly, student peers and AI agents can work together to create collaborative learning experiences that blend human creativity with technological capabilities. The bi-directional arrows in the figure represent this flow of information, guidance and feedback that can make modern classrooms much more dynamic and interconnected than ever before.

The traditional classroom with a teacher instructing a group of students has transformed into a complex ecosystem with multiple agents and interactions. Teachers now must orchestrate this complexity, deciding when and how to incorporate AI tools, how to interpret AI-generated data, and how to maintain their essential human connection with students amidst all these technological tools (Dai, Thomas and Rawolle, 2025^[87]).

For students, navigating different learning relationships requires new skills, e.g. knowing when to seek peer collaboration, when to use AI support, and how to synthesise feedback from multiple sources. This complexity reflects an increasingly interconnected world but requires thoughtful intentional implementation to avoid overwhelming both teachers and learners.

In light of this complexity, how can human teachers and AI agents effectively co-exist? Table 4 provides a comparison of human agents and AI agents suggesting how they can co-exist in classrooms.

Table 4. Co-existence of human teacher agents and AI agents in classrooms towards optimal integration

	Aspect	Human intelligence	Artificial intelligence
Anchor / Being	Professional Identity	Developed through training, reflection, and ethical codes, professional and personal experience, collaboration with other colleagues and wider community and self-reflection; shapes self-concept and social role within the profession; includes self-awareness and a reflective professional mindset.	Assigned functions within a domain; lacks self-concept, self-reflection, or social belonging; performs tasks without internalisation or identity.
	Professional dignity	Rooted in intrinsic human worth and professional ethics; involves mutual respect and recognition of teachers' societal role.	Derived from human design and use; lacks moral agency and cannot engage in reciprocal respect or claim inherent moral status.
	Professional integrity / responsibility / ethical reasoning	Involves professional moral conscience, empathy, and a capacity for ethical growth and reflection; supports complex, value-driven decision-making within teaching. Teachers are accountable for their professional, legal and social conduct, expected to uphold ethical standards, consider societal values, and respond to the consequences of their actions.	Operates within pre-programmed ethical parameters; follows guidelines without genuine moral understanding or emotional awareness. Professional responsibility remains with the designers, users, or institutions deploying the AI, as the agent itself lacks moral agency or professional accountability.
	Sense of purpose	Emerges from internal motivations, values, relationships, and self-reflection.	Driven by externally assigned goals (e.g. task optimisation); lacks intrinsic motivation or purpose.
	Sense-making / meaning-making	Constructed through subjective, emotional, and cultural contexts; shaped by lived experience, narrative, and values.	Based on algorithmic data processing; lacks personal, emotional, or contextual understanding.
Individual agency	Decision-making	Informed by judgment, context, ethics, personal beliefs, and experience. Teachers can weigh both moral and emotional factors and are accountable for the choices they make, although human biases may influence their decisions.	Based on algorithmic processing and data-driven optimisation. AI can select options efficiently but lacks a moral compass. Decisions may reflect biases embedded in training data or design.
Co-agency	Interaction with students	Engages in authentic dialogue, mentorship, and inspiration; responds to learners' emotional and social cues.	Provides structured support and automated feedback based on pre-programmed models.
Teacher competencies	Processing speed, consistency and knowledge scope	Slower, but allows deep reasoning and reflection. Consistency may vary depending on context or task. Limited by individual experience, memory, and learning opportunities.	Extremely rapid, capable of processing vast data consistently and reliably. Can access and process vast, diverse datasets from multiple domains almost instantly.
	Adaptability	Adapts dynamically to new and unexpected situations. Can switch flexibly between tasks, manage competing priorities, and adapt based on context and social/emotional cues, although performance may decline under overload.	Adapts based on programmed learning; can run many tasks in parallel at high speed but lacks contextual awareness or judgment in setting priorities or adapting across domains.
	Creativity and innovation	Can think innovatively, generate original ideas, and make intuitive leaps; draws on emotion, context, and experience.	Can detect patterns and generate content based on existing data but lacks original insight or authentic creative intent.
	Empathy	Empathy is grounded in emotional awareness, perspective-taking, and the ability to respond with care and compassion. Teachers interpret non-verbal cues, adapt to emotional needs, and build trust through human connection.	Simulates empathetic responses based on data patterns and programmed cues but lacks emotional understanding or felt experience. Can mimic care but cannot genuinely connect or feel.
	Tolerance of ambiguity	Comfortable with uncertainty; uses emotion, intuition, and experience to navigate complex or contradictory situations.	Operates probabilistically; lacks subjective experience and struggles with nuance, irony, or cultural subtleties.

Aspect	Human intelligence	Artificial intelligence
Optimal integration	AI-enhanced human innovation Complementary strengths, not replacement: Teachers focus on the human elements - empathy, judgment, and relationship-building-while AI handles data-driven tasks across administrative, pedagogical, and creative domains, enhancing speed, efficiency, and personalisation in education.	
Broader social context	AI as both epistemic and cultural technology. Transforms work, social interaction, entertainment, politics. Education must prepare students for AI-augmented society.	

Source: (Le Moli, 2022^[88]) "AI vs Human Dignity: When Human Underperformance is Legally Required," *RED* 4(1), 105-109, <https://shs.cairn.info/journal-red-2022-1-page-105?lang=en>.

Note: Comparison generated in March 2025, acknowledging this is an evolving field. Just like the Learning Compass, the Teaching Compass will continue to be updated and refined over time, informed by emerging insights and contributions from diverse experts across disciplines.

The comparison between human and artificial intelligence highlights their distinct strengths: while AI excels at rapid data processing and consistency, currently it lacks the emotional understanding, ethical reasoning and professional identity that characterise human educators. As the table suggests, it is in the yet-to-be-explored space of complementarities (rather than competition) between AI and humans that lies the greatest potential for AI-enhanced human innovation (optimal integration).

From this new form of co-agency emerges both risks and opportunities. Teachers may experience challenges such as diminished autonomy, over-reliance on algorithmic decision-making, and reduced space for creativity. However, when thoughtfully integrated, AI can also support professional agency by enhancing productivity, enabling more personalised and engaging teaching, and freeing up time for relationship-building. This suggests a model of optimal integration where human and AI agents form partnerships based on valued educational goals and guided by community values.

To fully realise this potential, teachers must retain control over whether, when and how AI is used in the classroom. Their agency remains essential to navigating digital environments. Yet, this agency is shaped by systemic factors including school leadership, policy frameworks, and technology design. These broader actors must act as "proxy agents," fostering ethical, informed and enabling conditions for AI-supported teaching to thrive (Weinstein and James, 2022^[89]).

Collective agency

Collective agency reflects the shared beliefs, values and capacity of educators to act collaboratively toward common goals, influencing educational practices and systems through joint decision-making, mutual responsibility and professional solidarity (Hökkä, Vähäsantanen and Mahlakaarto, 2017^[90]; Pantić, 2015^[91]). Rooted in social cognitive theory (Bandura, 2006^[92]), collective agency emerges when teachers combine their individual strengths to co-shape the future of education.

To be truly impactful, collective agency must balance **autonomy and interdependence**, a principle captured in the idea of *connected autonomy* (Fullan, Spillane and Fullan, 2022^[9]), which emphasises the importance of professional freedom within structured collaboration. Collective agency is built on:

- **Collective efficacy:** The belief among teachers that, together, they can achieve meaningful educational outcomes. Research shows it is a powerful predictor of student success and school improvement, fostering innovation, high expectations and greater inclusivity (Donohoo, 2018^[93]; Hattie, 2012^[94]). It also supports teacher well-being by enhancing job satisfaction and reducing stress through shared responsibility (Skaalvik and Skaalvik, 2019^[95]).
- **Trust:** Trust is the glue that holds collective agency together. It enables open communication, risk-taking, and the sharing of strategies within teams. Strong professional trust boosts collaboration, strengthens learning communities, and leads to more coherent and responsive teaching practices

(Hallam et al., 2015^[96]; Ninković, Florić and Đorđić, 2022^[97]). Building trust requires time, reciprocity and supportive leadership that models transparency and empowers teachers (Kolleck et al., 2021^[98]).

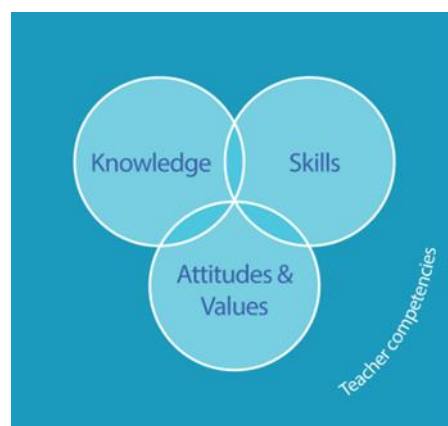
- **Shared ethos:** A shared ethos reflects the common values, vision and professional commitments that align teacher teams, including a sense of teacher solidarity. It provides direction and unity, shaping collective decision-making and fostering a strong professional identity. It also reinforces a sense of collective identity - a shared understanding of purpose and belonging - which is increasingly seen as essential to the future of teaching, yet often remains underdeveloped (Hökkä, Vähäsantanen and Mahlakaarto, 2017^[90]). Research suggests that a shared ethical foundation contributes to cohesive school cultures where pedagogical integrity and educational purpose are central (Husu and Tirri, 2007^[99]).

Together, these elements enable teachers to act not just as a collection of individuals, but as a united force for deep, sustained educational transformation.

5. Teacher competencies for navigating complexity

What is a teacher competency? Drawing on the holistic concept of competency outlined in the Learning Compass - the ability to meet complex demands and engage with the world by equally mobilising **knowledge, skills, attitudes and values** through a process of reflection, anticipation and action (OECD, 2019^[100]) - the Teaching Compass reimagines this framework for teachers.

Effective curriculum implementation is not merely about mastering content or delivering lessons, it is about purposefully integrating **teaching knowledge, skills, attitudes and values** to enhance students' learning and well-being in the classroom and to meet the goals set in the curriculum, reflecting this holistic approach in teacher education programmes.

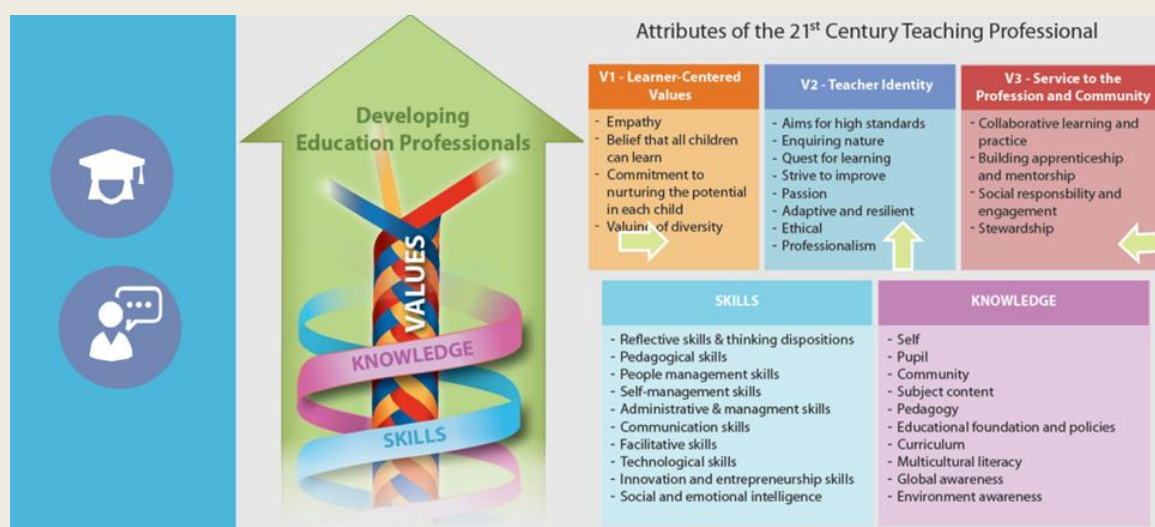


While no checklist can fully capture what makes an outstanding teacher, research consistently shows that teachers - and how they bring together these human capacities - are the most significant in-school factor affecting student learning and success (Darling-Hammond, 2000^[101]; Hanushek and Rivkin, 2006^[102]).

The integration of knowledge, skills, attitudes and values is found in visionary education systems and is well illustrated in the comprehensive teacher education programme of the National Institute of Education in Singapore, which aims to prepare teachers for dynamic, evolving classrooms. Their enhanced model for teacher education emphasises value creation in education, sustainable development and the broader ecosystem in which teacher competencies shape future generations (see Box 2Box 2)

Box 2. Example of local contextualisation: Singapore's holistic framework for guiding 21st century teachers

The model of teacher education developed by Singapore's National Institute of Education outlines the holistic development of education professionals through the integration of **values**, **knowledge** and **skills**. At the core is the development of strong learner-centred values (V1), a clear teacher identity that is guided by ethical conviction (V2), and a sense of service to the profession and community that is aligned with national and global issues (V3). These values guide teachers to act with empathy, professionalism and a commitment to nurturing each child's potential.



Surrounding the values are essential knowledge domains, including self, learner, pedagogy, curriculum, global awareness and multi-cultural literacy. These are complemented by critical and relevant skills as well as literacies, such as those related to cognitive and metacognitive, communication, digital and data, leadership, research and social-emotional aspects. The model emphasises a reflective and agentic teaching profession that continuously evolves to meet the needs of students and society against the larger global backdrop. Ultimately, it supports the vision of developing teachers who are ethical, innovative and committed to lifelong learning and community engagement.

Source National Institute of Education, Singapore, [TE²¹ Empowering Teachers for the Future, National Institute of Education \(NIE\), NTU Singapore](#).

Crucially, this approach transcends outdated binaries. The oft-debated divide between “knowledge” and “competency” is not only unhelpful, but also false. Effective education does not choose between deep knowledge and real-world application; it weaves them together. Yet, curriculum approaches have often split into competing camps:

- **Knowledge-rich curricula** highlight structured, disciplinary learning, outlining specific content goals across stages.
- **Skills-based curricula** emphasise transferable skills like critical thinking, communication and problem-solving, often with less focus on disciplinary content.

But the most future-focused approach integrates both. The OECD Teaching Compass takes this holistic approach:

- **Competency-based curriculum** integrates knowledge, skills, attitudes and values. It is concept-driven and skill-oriented and rooted in real-world experience and relevance. It ensures that subject knowledge is not static but brought to life through the mobilisation of human capacities to solve complex problems and co-create more just, sustainable futures.

Just as the Learning Compass provides students with a framework to navigate an uncertain world, the Teaching Compass serves as a guiding map for teachers. It helps them cultivate the competencies they need to inspire, guide and empower each learner to develop their own compass, anchored not just in knowledge, but in agency and in well-being.

The following section explores the essential types of teacher knowledge, skills, attitudes and values that underpin this vision of the teaching profession - one that embraces complexity, leads with purpose, and prepares students not just for exams, but for life. The integration of such competencies and appropriate support systems are critical to avoid the risk of ever-growing, unrealistic expectations on teachers, inadvertently overwhelming them and undermining the space they need to exercise agency in becoming self-directed and lifelong learners.

Teacher knowledge

A robust and multi-dimensional knowledge base lies at the heart of effective teaching. In increasingly knowledge-rich societies, the expectations placed on educators are also evolving. As a result, the body of knowledge that teachers need to draw upon keeps expanding, and teachers are expected to ground their professional practice on a continuously updated knowledge base (Guerriero, 2017^[103]; OECD, 2024^[104]). More than ever, this also includes technology. As generative AI continues to permeate the daily lives of both students and teachers, it becomes increasingly essential not to settle for mere cognitive understanding - simply “knowing” - but to move toward an embodied understanding of the world, grounded in real, lived experiences and genuine engagement.

This requires reaffirming foundational bodies of knowledge underlying teachers’ professional expertise, while combining them with emerging knowledge domains.

For this, **foundational knowledge areas for teachers** remain essential. Core domains such as disciplinary knowledge, curriculum knowledge, knowledge of pedagogy and assessment, and procedural knowledge continue to shape effective teaching. Increasingly important, reflecting broader aspirations for student learning and well-being, emerging bodies of knowledge for teachers include, for example:

- **Knowledge of the learner:** Understanding how students think, feel and grow - cognitively, socially, and emotionally - is essential to inclusive and impactful teaching (Durlak et al., 2011^[105]; Bransford, Brown and A. L., 2000^[45]). This includes recognising learners as active participants in their education and respecting their rights to protection, participation and development in safe, inclusive environments that support diverse learning needs (Waber et al., 2021^[106]).
- **Knowledge of the self:** Self-awareness enables teachers to respond thoughtfully to challenges, recognise bias and teach with authenticity (Kelchtermans, 2009^[107]). When teachers understand their own values and professional identity, and exercise reflective practices, they can model integrity and resilience for students navigating their own paths (Włodkowski and Ginsberg, 1995^[108]).
- **Knowledge about the world:** Teachers need to connect learning to real-world issues - climate change, migration, digitalisation, evolving labour market needs - and understand the broader social, cultural and global contexts shaping education (Nachtigall, Shaffer and Rummel, 2022^[109]; OECD, 2020^[110]). This includes the ability to engage with families, communities and external organisations, and familiarity with relevant policies and legislation that govern and guide professional responsibilities.

- **Epistemic knowledge:** This refers to understanding how knowledge is constructed, validated and used within a discipline - and beyond it (OECD, 2019^[1]). Teachers who engage with epistemic knowledge help students see not just what they are learning, but why it matters and how it connects to their lives, fostering disciplinary thinking and practices in students.
- **Interdisciplinary knowledge:** Connecting ideas and methods across different subjects to create meaningful, real-world learning experiences.
- **Knowledge of educational data and research:** Evidence-informed practice empowers teachers to tailor instruction and continuously improve. This includes interpreting student data, engaging with research, and using tools like learning analytics to support equity (Hattie, 2008^[46]; Slavin, 2002^[111]).
- **Knowledge of AI:** As AI becomes embedded in classrooms, teachers must understand how AI tools and systems work, their possibilities and risks, and how to use them to improve teaching and learning. Ethical, critical use of AI requires training and support, especially as technology reshapes teaching roles and student expectations (Zawacki-Richter et al., 2019^[59]; OECD, 2024^[112]).
- **Neuroscience and human development:** Brain research underscores the importance of attention, emotion, sleep and growth mindset in learning (Goswami, 2008^[113]; Dweck and Leggett, 1988^[82]; Immordino-Yang and Damasio, 2007^[114]). Teachers who apply insights from brain science and developmental psychology can create environments that support holistic student growth.

Together, these evolving knowledge domains reflect the expanding scope of what it means to teach well in today's complex educational landscape.

Teachers' skills

Teaching is a relational, responsive and ever-evolving practice. No matter how well a lesson is planned, real-world classroom moments require teachers to think on their feet, shift tone, adjust pacing and connect with students emotionally and intellectually. These moments are rarely dictated by scripts or policies – they are shaped by teachers' skills: their ability to reflect, adapt, collaborate and stay grounded in purpose.

The Teaching Compass views skills not as isolated techniques, but as competencies that help teachers enact their knowledge in dynamic, ethical and sustainable ways. They encompass cognitive and metacognitive skills, socio-emotional skills, as well as physical and practical skills. Some of these, like problem-solving or classroom management, have long been part of teacher training. Others, such as digital fluency or collaborative design, or socio-emotional skills such as empathy, and help-seeking behaviours are increasingly vital in today's classrooms, but not necessarily emphasised in teacher education programmes and professional learning (OECD, 2024^[115]; OECD, 2024^[116]).

Cognitive and metacognitive skills lie at the heart of adaptive teaching. They empower educators to think critically, question assumptions and remain intellectually curious over the course of their careers (Eyre, 2016^[117]; Stein, Minness and Kintz, 2018^[118]). Some examples include:

- **Critical thinking** is at the core of an inquiry mindset. It enables teachers to make sound pedagogical decisions, evaluate educational tools, including AI, guided by ethical principles, and model reflective inquiry for students (Nguyen, Dao and Iwashita, 2022^[119]; Di Teodoro et al., 2011^[120]; Tofade, Elsner and Haines, 2013^[121]).
- **Problem-solving** and **cognitive flexibility** allow teachers to shift strategies mid-lesson, reframe challenges as learning opportunities, and demonstrate tolerance of ambiguity (Jonassen, 2011^[122]; Wallace et al., 2021^[123]).
- **Creativity and curiosity** fuel innovative practices, inquiry-based learning and interdisciplinary teaching (Peterson, 2020^[124]).

- **Scientific thinking** enables teachers to engage in inquiry, experimentation and evidence evaluation, fostering a mindset that supports continuous learning and effective problem-solving in educational settings (Saparbaikyzy et al., 2023^[125]; Erman et al., 2018^[126]).
- **Independent thinking** – the ability to form reasoned judgments and take responsibility for one's beliefs and actions, rather than relying solely on external authority or consensus. For teachers, this skill supports sound professional judgment, especially in uncertain or complex contexts (Paul and Elder, 2007^[127]). When modelled, it can foster students' critical thinking and intellectual autonomy (Lipman, 2003^[128]).
- **Self-awareness and reflective capacity** – as metacognitive examples manifesting one's ability to think about one's own thinking, these constructs help teachers refine their practice and guide students through ambiguity (Eyre, 2016^[117]).
- **The ability to learn, unlearn and relearn** is increasingly crucial. Experienced teachers may need to question even successful routines of the past to embrace new approaches to curriculum and pedagogy, and be responsive to cultural shifts in what defines good teaching (Azmi, 2008^[129]; Toffler, 1970^[130]).

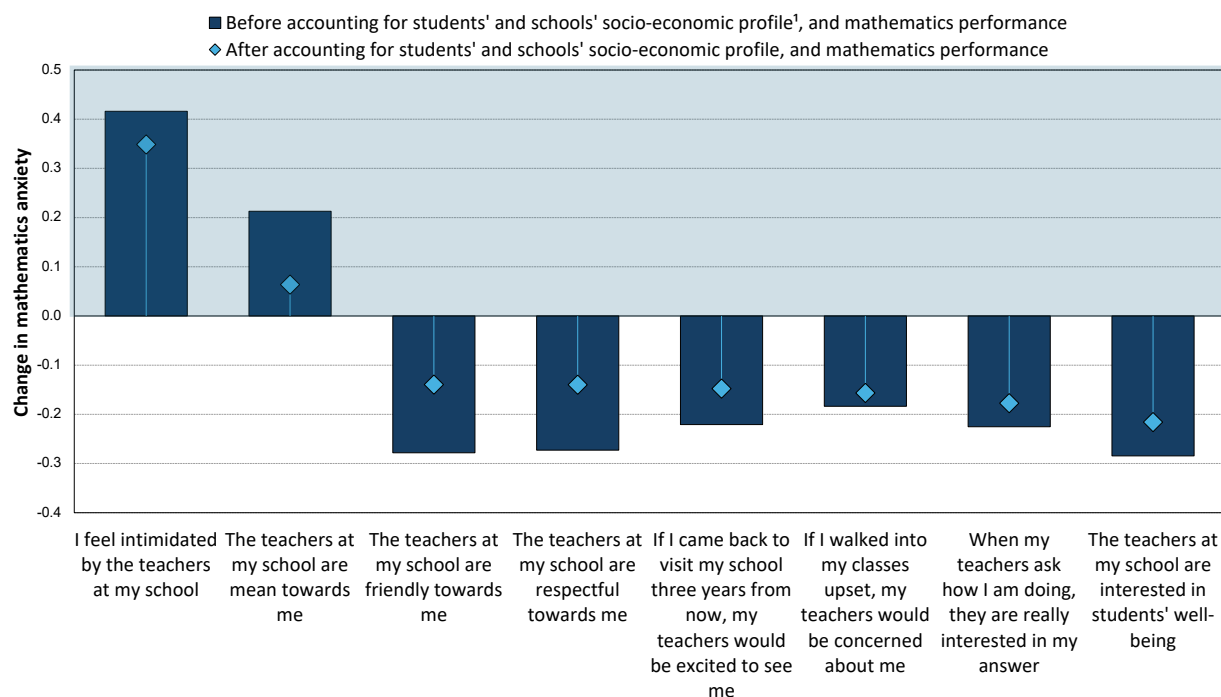
Socio-emotional skills help create safe, motivating and inclusive spaces where all learners and teachers can thrive, e.g.

- **Empathy** enables teachers to understand student experiences and respond with compassion, even during moments of crisis or disengagement (Ampofo et al., 2025^[131]; Cai et al., 2022^[132]), thus supporting students' learning and well-being (see **Error! Reference source not found.**).
- **Emotional awareness** and **self-regulation** allow teachers to manage their responses under stress and maintain clarity and composure (Jennings and Greenberg, 2009^[21]).
- **Help-seeking behaviours**, including knowing when and how to access peer support or professional care, are critical for teacher well-being, especially in high-stress environments (Philibert, Soto and Veon, 2019^[133]).
- **Collaboration** – with colleagues, parents and students – is not an add-on but an essential practice. Co-teaching and professional learning communities enhance both instructional quality and teacher growth (Germuth, 2018^[134]; Prenger, Poortman and Handelzalts, 2018^[135]).

The section on “Teacher Well-being for thriving professionals” in the sequence also includes the following constructs: self-worth and recognition; resilience and self-compassion; empathy, trust and collaboration.

Figure 4. Teacher empathy and interest and student anxiety in mathematics

Change in mathematics anxiety when students agreed or strongly agreed with the following statements; OECD average



Source: OECD (2024), *PISA 2022 Results (Volume V): Learning Strategies and Attitudes for Life*, PISA, OECD Publishing, Paris, <https://doi.org/10.1787/c2e44201-en>.

Physical and practical skills bridge the gap between educational ideals and daily classroom realities, e.g.

- **ICT/digital/technical skills in all subjects** are essential. Whether managing virtual classrooms or using AI tools, teachers need the skills to evaluate and integrate technology responsibly and meaningfully (OECD, 2024^[116]; Celik et al., 2022^[136]; OECD, 2023^[137]).
- **Physical and practical skills in some subjects, e.g. the arts, sports, or crafts** contributes to holistic education. Teachers who can facilitate physical and creative experiences foster resilience, joy and belonging.
- **Stress management skills in daily school life** can also be very helpful to teachers. Teachers who manage stress well are more emotionally balanced, adaptable, and better able to support student learning (Kyriacou, 2001^[138]; Montgomery and Rupp, 2005^[139]).
- **Safety-related skills in school life**, from first aid to emergency preparedness, these are increasingly relevant in a world affected by, for example, climate crises, school violence and geopolitical uncertainty (Gagliardi et al., 1994^[140]).

Ultimately, practical skills give teachers the tools to turn vision into action and turn plans into transformative experiences.

Teacher attitudes and values

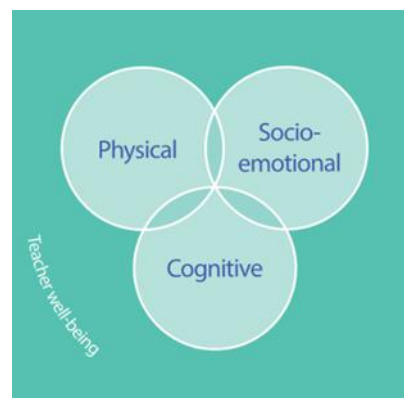
Teaching is not just a technical profession, it is a deeply human one. Every decision a teacher makes, from how they respond to a struggling student to how they handle disagreement, is shaped by their attitudes and values. These internal beliefs form the ethical backbone of teaching, guiding how educators relate to their students, collaborate with colleagues, and navigate uncertainty.

- At the **personal level**, attitudes and values like a **growth mindset** (Bardach et al., 2024^[141]), **resilience** and **risk-taking**, **prosocial attitudes** and a **commitment to equity** (Cochran, DeRuiter and King, 1993^[142]; Barni, Danioni and Benevene, 2019^[143]) help teachers remain flexible, inclusive, and committed to every learner's potential.
- At the **local level**, shared values such as **trust in students**, a **collaborative mindset**, and **inquiry-driven mindset** shape the culture of classrooms and schools (Platz, 2021^[144]; Vangrieken et al., 2015^[49]; Correia and Harrison, 2019^[145]). These values become visible in the way teachers co-design learning environments that are respectful, curious and intellectually alive. At the **social level**, teachers' values help them engage with broader community contexts and shifting societal demands. Through **social awareness**, **civic responsibility** and **ethical responsibility and integrity**, teachers model how to live with integrity in a world of competing pressures (Reichert, Lange and Chow, 2021^[146]; Winthrop, 2020^[147]).
- At the **human or universal level**, educators uphold values that transcend borders, such as **dignity**, **justice**, **respect**, **compassion**, **global solidarity**, and **environmental awareness** (Goodwin, 2019^[148]; Worline and Dutton, 2021^[149]). These values are woven into how teachers relate to the world and their students' place within it, encouraging young people to act with care and purpose beyond the school gates. Ultimately, such values are not just taught, they are *caught*: students learn them by observing how teachers speak, lead, listen and show up, especially when it matters most.

While the Teaching Compass articulates the evolving roles and competencies expected of teachers, it is equally important to consider how these capacities are cultivated from the very beginning of the profession. Greater attention to initial teacher education - including curriculum design, mentorship models, and accreditation standards - is essential to ensure that novice teachers regardless of their age and professional experience are prepared not only to navigate complexity, but also to embark on a lifelong journey of becoming – as outlined in the Anchor – marked by continuous learning, reflective practice, and ethical growth.

6. Teacher well-being for thriving professionals

Teacher well-being has long been a topic of keen interest for educational policy and research, typically discussed in terms of structural aspects such as remuneration, workload, working hours, class size and other regulations (OECD, 2020^[150]). Although these elements remain essential, they only partially capture the multiple layers of meaning and fulfilment that teachers derive from their profession. Recognising this reality, a growing body of research underscores the need to consider teacher well-being in a more holistic manner - one that encompasses intellectual, socio-emotional and physical dimensions. This expanded perspective is at the heart of the teacher well-being pillar of the Teaching Compass, going beyond policy mandates and regulatory frameworks, inviting us to see teachers as dynamic professionals whose sense of purpose and identity must be nurtured throughout their careers.



From compliance to calling: Beyond regulations, embracing purpose

Teacher well-being is increasingly understood as a dynamic state of fulfilment, integrating intellectual stimulation, socio-emotional support and physical security, grounded in a sense of professional purpose (see “Anchoring the Teaching Compass”). Emphasising this element of purpose has profound implications for how educational systems organise and support teacher transformation and continuous growth. Purpose, in this context, extends beyond daily lesson planning or classroom management. Instead, it touches the deeper motivations that drive teachers to shape the next generation, support inclusion and accompany young people through the formative stages of learning. These motivations are what create resilience in times of challenge and sustain teachers’ enthusiasm when demands intensify. A clear sense of purpose is central to teacher well-being and is illustrated in the example below (Box 3Box 3).

Box 3. Ikigai Framework – a reason for being

Ikigai, meaning “reason for being” is a conceptual framework, bringing together four interconnected elements:

- **passion** – what one loves;
- **mission** – what the world needs;
- **vocation** – what one excels at;
- **profession** – what one is paid for.

When considered through the lens of teaching, these elements offer a holistic framework for understanding what helps educators remain engaged, resilient and fulfilled over time. *Ikigai* speaks to the unique strengths and personal motivations each teacher brings to their work, while also acknowledging the importance of broader purpose and societal contribution.

A strong sense of purpose is particularly vital in education. Teachers shape futures – not only by imparting knowledge, but also by mentoring, supporting inclusion and nurturing student potential. Aligning personal values with professional identity can help sustain motivation, even in demanding contexts. But to thrive, this must be supported by fair working conditions, proper recognition and opportunities for growth. This perspective highlights how globally shared aspirations for teacher well-being can be enriched by local values and cultural traditions, offering diverse ways to reflect on what contributes to a meaningful and sustainable teaching career.

Source: Dr. Emma Kell (Founder and Director of Those That Can) (2025), Conference presentation at the 6th meeting of the Global Forum on the Future of Education Skills, Japan; García, H., Miralles, F., & Cleary, H. (2017). *Ikigai: The Japanese secret to a long and happy life*, Penguin Books

It has become increasingly clear that educators’ well-being has a direct impact on the vibrancy of the classroom environment, as well as on student engagement and achievement (Jennings and Greenberg, 2009^[21]). Research has consistently shown that positive teacher experiences correlate with emotionally supportive classrooms where students can thrive (Braun, Schonert-Reichl and Roeser, 2020^[151]; Schonert-Reichl et al., 2023^[152]). Although the nature of this relationship is correlational rather than strictly causal (Dreer, 2023^[153]), it is difficult to ignore the synergy that exists when engaged teachers create environments that nurture student confidence and motivation, in turn reinforcing the teacher’s professional satisfaction. Nevertheless, the contemporary teaching landscape is characterised by heightened curriculum demands, administrative pressure, and the rapid emergence of new technological tools, which can increase teacher workload (OECD Future of Education and Skills 2040, 2023^[154]). These shifts add complexity to teachers’

responsibilities and emphasise the urgent need to uphold teacher well-being as a central pillar of educational quality.

The Teaching Compass framework addresses these realities by outlining three inter-related dimensions of teacher well-being: physical, cognitive and socio-emotional. Each of these categories contains specific constructs that affect how teachers perceive their own effectiveness, security and growth within the profession (Table 5). Examples of teacher well-being dimensions and constructs (Table 5).

Table 5. Examples of teacher well-being dimensions and constructs

Categories of teacher well-being	Physical well-being	Cognitive well-being	Social and emotional well-being
Examples of dimensions and constructs	<ul style="list-style-type: none"> • working conditions • work-life balance • physical health & safety 	<ul style="list-style-type: none"> • intellectual engagement • sense of ownership • professional growth 	<ul style="list-style-type: none"> • self-worth & recognition • resilience & self-compassion • empathy, trust & collaboration

Physical well-being highlights the central role played by **working conditions**, **work-life balance** and the **physical safety** as well as **comfort of educational settings**. Fair salaries, manageable workloads and supportive leadership arrangements are crucial in boosting educators' motivation and ensuring their long-term commitment to teaching (Börü, 2018^[155]; Toropova, Myrberg and Johansson, 2020^[156]). At the same time, these factors should not be perceived merely as financial or logistical interventions. Their real power lies in freeing teachers from undue stress and precarious employment conditions, as well as ensuring safe and comfortable educational spaces, so they may devote more of their energy to effective instruction, collaboration and innovation in pedagogy.

Cognitive well-being foregrounds teachers' mental and intellectual health, spanning how they engage in critical thinking, problem-solving and decision-making. Three interwoven constructs sustain cognitive well-being. **Intellectual engagement** is fuelled when teachers encounter rich professional experiences, such as research-informed development, inquiry projects and collaborative networks, that keep curiosity alive and spark fresh ideas (Darling-Hammond, E. Hyler and Gardner, 2017^[157]; Tobin, Farren and Crotty, 2024^[158]; OECD, 2019^[38]). The pursuit of intellectual engagement can, however, become stifled if teachers find themselves overwhelmed by administrative duties and heavy workloads. Indeed, cognitive overload, resulting from the relentless multi-tasking of lesson planning, assessment and classroom management, has been found to undermine creativity, inhibit reflective practice and contribute to burnout. Ensuring that teachers can critically shape their professional learning experiences, adapt new technologies judiciously, and feel valued as contributors to school-wide decision-making is thus key to preserving their cognitive well-being (Skinner, Leavey and Rothi, 2019^[159]; Hargreaves and Fullan, 2015^[34]). **A strong sense of ownership** emerges when teachers help design their learning pathways, judiciously adopt new technologies, and see their expertise reflected in school-wide decisions. Such agency protects against the cognitive overload that unchecked administrative demands can generate (Skinner, Leavey and Rothi, 2019^[159]; Hargreaves and Fullan, 2015^[34]). Finally, **ongoing professional growth**, informed by research and facilitated through collaborative networks, can help energise educators to remain curious, self-directed and resilient in the face of continuously evolving educational paradigms (Darling-Hammond, E. Hyler and Gardner, 2017^[157]; Tobin, Farren and Crotty, 2024^[158]).

Socio-emotional well-being is the pulse of a flourishing teaching force; it shapes how educators connect with colleagues, leaders, parents, and – most importantly – students, while nourishing the inner resources they need to thrive. **Self-worth and recognition** form the bedrock of professional identity. When teachers see their expertise publicly valued – through student feedback, peer affirmation or community praise – they experience a heightened sense of purpose that translates into renewed classroom energy and a warmer school climate (Tehseen and Ul Hadi, 2015^[160]) (OECD, *Teaching Compass* Anchor on Professional Identity). Without such affirmation, enthusiasm wanes and isolation can set in, eroding both morale and

retention (Kariou et al., 2021^[161]). **Resilience and self-compassion** act as the engine of sustainable practice. Research in this area further underscores the importance of resilience and self-compassion, not merely as markers of personal resolve but as capacities that enable teachers to recharge and model a healthy attitude toward risk-taking and reflective practice (Day, Sammons and Gorgen, 2020^[162]; Murphy et al., 2020^[163]). At the systemic level, such resilience is fostered through school cultures that encourage collaborative learning, open dialogue and constructive feedback. When teachers feel safe to engage in innovative teaching or pedagogical experiments, they develop the agility needed to adapt to new demands. They also mirror for students a mindset that embraces failure as a key stage in the learning process (Moè and Katz, 2020^[164]). Furthermore, **empathy, trust and collaboration** weave an ecosystem where professional growth and student success reinforce one another. Empathetic relationships cultivate psychological safety; trust empowers teachers to share vulnerabilities; and structured collaboration turns individual insights into shared innovations (Moè and Katz, 2020^[164]; Kariou et al., 2021^[161]). Schools that institutionalise peer mentoring, instructional rounds and open dialogue embody the Teaching Compass principle that learning is a communal endeavour, not a solo act.

Adding to the complexity of these three dimensions of well-being is the growing presence of artificial intelligence (AI) in education. On one hand, AI-assisted tools can alleviate administrative burdens, such as grading and data analysis, freeing teachers to devote greater time to the human aspects of teaching – mentorship, personalised instruction and creative lesson design. If implemented thoughtfully, AI-assisted tools can serve as a supportive technology that reduces mundane tasks, offering teachers clearer insights into student progress and enabling them to intervene earlier and more effectively. However, AI-assisted tools can also present new pressures. Teachers are frequently called upon to learn, evaluate and integrate AI tools with limited formal training or guidance, thus risking cognitive load and anxiety (OECD Future of Education and Skills 2040, 2023^[154]). In some cases, algorithms may challenge teachers' professional autonomy if, for instance, data-driven recommendations appear to replace their own pedagogical judgment. Ethical concerns such as privacy, potential bias in algorithms, and data security add further complexity to an already demanding role. For AI-assisted tools to enhance rather than undercut teacher well-being, it must be introduced with robust professional development, inclusive leadership that values teacher input, and regulatory guidelines that respect the professional nature of teaching and safeguard educator agency.

Recognising teacher well-being for deeper and lasting impact

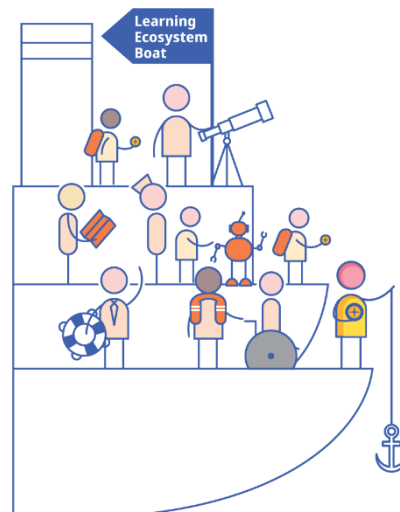
A commitment to teacher well-being, then, emerges not as a secondary concern but as a foundational value that impacts every dimension of the educational ecosystem. When teachers are physically secure, cognitively engaged and socio-emotionally supported, they are better positioned to cultivate classrooms that foster student achievement, inclusion and emotional health (Braun, Schonert-Reichl and Roeser, 2020^[151]; Schonert-Reichl et al., 2023^[152]). Beyond the classroom, teacher well-being influences long-term attrition rates and the sustainability of the teaching profession, ensuring that expertise remains within schools and supports the development of future generations of educators. Recognising this interplay, the Teaching Compass serves as a guiding framework that encourages leaders, policymakers and other stakeholders to invest in conditions that sustain educators throughout their careers. Secure contracts, collaborative leadership and respectful workloads are not ends in themselves but prerequisites for a vibrant community of teachers who are able to respond with creativity and resilience to the evolving needs of society (Webb et al., 2009^[165]; Christensen and Jerrim, 2025^[166]; Glaveli et al., 2023^[167]).

Ultimately, this vision calls for reimagining how society views teachers, moving beyond narrow definitions of productivity toward a broader recognition of the deep human impact embedded in every lesson, mentorship opportunity and decision that shapes a young person's path. The notion of well-being as a "dynamic state" underscores that teachers, like their students, grow and shift over time – they require ongoing opportunities for reflection, renewal and adaptation.

7. Teachers as integral to a learning ecosystem for collective impact

Teaching and learning thrive in a dynamic, interconnected ecosystem involving various actors, not just teachers. While teachers are key to student success, true transformation requires a multi-stakeholder effort, including policymakers in education, health and social policy; school leaders; community organisations; private companies and EdTech firms; universities; research institutions; teacher associations; and media influencers.

Each actor contributes to creating an environment that empowers teachers and delivers exceptional education. Together, they form a strong alliance essential for an education system focused on excellence and transformation. Without systemic support, the teaching profession risks losing status and attractiveness, worsening global teacher shortages. All stakeholders must recognise the need for support and contribute to strengthening the profession, ensuring teachers are equipped, valued and motivated.



The Education 2040 project's ecosystem approach views an individual's environment as multiple interconnected systems impacting development throughout life, acknowledging the complex interactions among schools, teachers, students, families and society (OECD, 2020^[168]).

Micro- and meso-system

Students are at the core of the educational ecosystem, influencing and being influenced by their learning environment. Their diverse needs and aspirations require adaptive pedagogical approaches shaped by socio-cultural, cognitive and emotional factors (Ryan and Deci, 2000^[169]). Student engagement is viewed as both an outcome and a catalyst for pedagogical improvement, with motivated students driving innovation and providing valuable feedback on teaching strategies (Hattie, 2008^[46]). Empowering students with agency fosters self-regulation and flexibility, helping them develop critical thinking, problem-solving skills, and lifelong learning habits (Bandura, 1982^[79]).

A collaborative approach among educators, school leaders and professionals is key to an effective teaching ecosystem, in particular, in implementing curriculum for a purpose. Teachers thrive in professional learning communities (PLCs) that support shared knowledge and interdisciplinary collaboration (Vescio, Ross and Adams, 2008^[170]). School leaders, including principals, create environments that promote continuous growth and innovation, which influences student outcomes (Leithwood, Sun and Schumacker, 2019^[171]; Fullan, 2014^[172]). Specialists, such as counsellors and social workers, support students' diverse needs, allowing teachers to focus on pedagogy (Sachs, 2001^[173]).

Engagement of **parents or other caregivers** is one of the most influential factors in student achievement (Henderson and Mapp, 2002^[174]). When parents and caregivers support their child's learning at home and collaborate with teachers, the educational experience is enhanced (Epstein, 2018^[36]). This partnership is especially crucial when students face learning or socio-emotional challenges, fostering a tailored learning approach.

The educational ecosystem extends beyond schools, with **community partners and the private sector** potentially playing key roles in enhancing students' learning, increasingly so with pedagogies often suggested in curriculum, e.g. project-based learning in real life contexts. Local organisations, NGOs and cultural institutions offer mentorship and real-world learning opportunities that connect with students' lived experiences (Thomasian, 2007^[175]). Collaborations with research organisations ensure teaching practices remain evidence-based and continuously improve (Darling-Hammond, E. Hyler and Gardner, 2017^[157]).

However, not all ecosystem collaborations are perceived as meaningful. Many current supports remain fragmented and insufficiently adapted or reactive to the realities of teachers' work (McGrath, 2023^[32]).

The private sector, particularly EdTech, fosters innovation by providing adaptive learning technologies that improve efficiency and reduce teachers' workloads (Zhao, 2018^[176]). Industry partnerships, such as internships, align academic learning with career readiness (Binkley et al., 2011^[177]). These collaborations support not only students' learning but also teachers' professional development, while ensuring educators stay informed about industry trends.

Ethical guidelines are crucial to ensure that these partnerships prioritise public educational goals and do not place excessive demands on teachers (Zhao, 2018^[176]). By offering practical resources and support, such partnerships can create a more inclusive, effective and adaptive educational ecosystem.

Exo-system

Regional/local education authorities play a pivotal role in shaping educational ecosystems by managing school governance, resource allocation and policy implementation. Traditionally top-down in their approach, these authorities are now increasingly recognising the importance of engaging teachers – those closest to the curriculum – in policy development. When collaboration occurs, policies become more pedagogically grounded and contextually relevant (Hargreaves and Shirley, 2019^[178]). This shift supports a more flexible and responsive curriculum, promoting innovation and teacher agency. Emerging models of governance emphasise shared accountability and position teachers as co-constructors of curriculum decisions (Hargreaves and Shirley, 2019^[178]; Pocklington, Fullan and Wallace, 2014^[179]).

Private foundations play a significant role in funding innovative initiatives, teacher development and research-driven improvements. They often address gaps in the education system through pilot projects, technology integration and equity-focused initiatives (Reckhow and Snyder, 2014^[180]). Moving forward, these foundations will collaborate with schools, governments and universities to drive systemic changes. By focusing on sustainability and scalability, foundations can catalyse long-term improvements in teacher preparation, curriculum design and student support (McCamby and Anderson, 2020^[181]).

Learning standards and assessments provide benchmarks for student achievement, guiding curriculum content and instructional strategies. While they ensure consistency and accountability, a balanced approach is necessary, prioritising both academic rigour and student well-being. Teachers play a crucial role in making these standards meaningful and accessible, while assessments should evolve to include formative and competency-based approaches that better capture student progress.

Teacher training and education institutions also play a vital role in ensuring effective curriculum implementation in an effective teaching ecosystem. The Teaching Compass emphasises the integration of theoretical knowledge and practical experience in teacher preparation programmes. To meet the demands of 21st-century classrooms, universities and research institutions should align their curricula with contemporary pedagogical challenges - equipping educators with adaptive expertise, technological competencies as outlined in the TPACK framework (Mishra and Koehler, 2006^[182]), and culturally responsive practices. Teacher professional associations also play a key role in advocating for educators' rights and offering professional development opportunities (OECD, 2021^[183]).

Macro-system

Education policy intersects with curriculum, funding, teacher support and student equity, shaping the broader ecosystem. The Teaching Compass stresses the need for policies that align education with social, economic and workforce needs. Policies on teacher working conditions, mental health support and professional autonomy directly affect teacher retention and motivation. Additionally, social policies or other relevant policies and laws, such as those related to child welfare, public health and digital access, must

complement education policies for holistic support for effective curriculum implementation (Hargreaves and Fullan, 2015^[34]). Policymakers influence teacher standards, professional development and resourcing, impacting teaching practices. Effective policies must support teachers as reflective practitioners, promoting autonomy and ensuring access to training and resources.

Media shapes public perceptions of education and teachers. Positive media representation can foster respect and attract talent, while misinformation can harm teacher morale. Teachers can use media strategically to share best practices, advocate for their needs, and promote educational innovation. Social media or other education influencers can also offer new opportunities, for example, supporting teachers to collaborate beyond their immediate environment, changing the discourse or creating a new narrative for the teaching profession.

Widely shared cultural values and beliefs toward education, in particular, a new curriculum, significantly influence the teaching profession. Societies that value teachers as professionals are more likely to enhance better student outcomes and retain high-quality educators. The Teaching Compass calls for a cultural shift to recognise teaching as a dynamic, intellectually demanding career. Respect for educators, investment in their well-being, and a culture of lifelong learning are crucial to sustaining an effective teaching profession. The interconnected ecosystem of education must be revitalised to address, for example, teacher shortages, so that all students will have teachers in the classroom who can support them to learn and grow healthily and prepare for the modern world. Supporting teachers is a strategic investment in society's future, ensuring that curriculum can be properly implemented, and that education remains adaptive and equitable.

Box 4. Key Resources

Concept Notes and List of Contributors will be available soon on the project website.

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