WORLD ECONOMIC FORUM

New Economy Skills: Unlocking the Human Advantage

WHITE PAPER

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Foreword

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Competitiveness in the new economy – one that is shaped by widespread prosperity, resilient communities and inclusive growth – will be defined not by capital or technology alone, but by how effectively economies cultivate talent and human potential. As economies navigate transformations driven by technological advancement, demographic shifts, the green transition and geoeconomic fragmentation and uncertainty, the defining feature of economic dynamism remains human. Economies that invest in people – enhancing education, learning and adaptability – recover faster from shocks, generate more innovation and achieve more resilient growth. In a world where self-reliance and interdependence must coexist, the economies that thrive will be those that build domestic talent ecosystems while remaining connected to global talent flows.

At the organization level, employers predict that nearly 40% of the core skills required to do jobs will be disrupted in the next five years. At the same time, 170 million new roles are expected to be created, even as 92 million are displaced. In this fast-changing landscape, almost 80% of employers say that reskilling and upskilling will be critical for their business strategy.

While we cannot neatly predict the full range of future jobs in this rapidly evolving environment, there is an opportunity to align on the "big bets" that employers, governments and individuals should be making when it comes to building a skills infrastructure to ensure that economies and workers are ready for the opportunities of the new economy. Many countries are already demonstrating how strategic investments in education and technology diffusion can rapidly move them up the global value chain. Across all economies, the ability to attract, retain and empower talent that can adapt, create and collaborate will determine future competitiveness.

The *New Economy Skills* series aims to provide guidance on skills that should be prioritized to ensure business and economies have the talent to deliver on innovation, resilience and growth priorities. It identifies the core capabilities that will power inclusive and sustainable growth:

1. **Human-centric skills**: a set of uniquely human abilities – such as collaboration, critical thinking and emotional intelligence – that enable effective interaction, problem solving and decision-making.

2. **AI, data and digital skills**: the ability to use digital technologies, analyse and interpret data, and apply artificial intelligence (AI) tools and concepts to solve problems and drive innovation.

3. **Green and sustainability skills**: knowledge and abilities required to support environmental stewardship, promote sustainable practices and contribute to the transition towards a low-carbon, resource-efficient economy.

4. **Trade and vocational skills**: specialized, hands-on abilities gained through training or experience that are essential for performing tasks in manual or technical occupations.

5. **Business skills**: the combined ability to confidently manage tasks and challenges while applying practical business competencies such as project and financial management.

This first instalment focuses on human-centric skills – the capabilities that allow individuals, organizations and societies to adapt to change and lead transformation. Investing in human skills is not just preparation for the future of work, it is the foundation of the future of growth.

Executive summary

In the age of artificial intelligence, the true competitive edge is being human.

Amid the rise of artificial intelligence (AI) and automation, the most valuable professional capabilities are not technical – but human. Once dismissed as "soft" attributes, human-centric skills – creativity, innovation and adaptability – have become the hard currency of the labour market. Employers increasingly recognize that while technology may support efficiency, human-centric skills drive innovation, collaboration and long-term productivity. Drawing on data from education industry and workforce technology providers, a review of existing research and in-depth, expert consultations, this white paper defines human-centric skills; analyses their global supply and demand; proposes a framework for assessing, developing and credentialling human skills; and highlights frontier practices from around the world.

Employers value human skills, but rarely measure or reward them

Although highly sought-after, human skills remain invisible in most labour markets. Only 72% of US job postings explicitly mention at least one human-centric skill. In sectors like supply chain and transport, that number drops to just 44%. These skills are often treated as "givens" – rarely spelled out in job descriptions or systematically taught in schools.

When comparing monetary values assigned to skills by workers across sectors and across all firm sizes, creative thinking tops the list as the most valued human skill. Yet it is among the least acknowledged in hiring and promotion decisions.

Regions show distinct strengths and shared gaps

Globally, nearly 60% of executives believe education systems nurture the ability to work with others, but fewer than half see creativity, curiosity or resilience as well-developed. Regional patterns show distinctive strengths:

- Sub-Saharan Africa scores above average in creativity, resilience, curiosity and collaboration.
- Eastern Asia and the Caribbean show the greatest optimism about human-skills readiness overall.
- North America and Oceania excel in creativity and problem solving, but lag in teamwork and collaboration.

Creative thinking and resilience are the fastest-growing skills globally, with the steepest increases projected in Latin America and the Caribbean, South-Eastern Asia, and Sub-Saharan Africa. Meanwhile, curiosity and lifelong learning remain the weakest across all regions, underscoring a global challenge in cultivating future-ready mindsets.

Human skills are fragile, but hard to automate

Often described as "durable", human-centric skills are surprisingly fragile and highly sensitive to external shocks. Economic downturns, crises and social disruptions can erode them rapidly, as opportunities for practice, collaboration and feedback diminish. During the pandemic, the use of interpersonal interaction skills such as teaching and resilience fell over 5% below 2019 levels. Empathy and active listening proved comparatively more resilient, falling by less than 2%. Yet even by 2025, no human-centric skills had returned to pre-2019 levels. Though considered durable, they can decline without practice and intentional investment; and building these skills takes time: while 25% of learners show progress within weeks, most need several months of deliberate practice to become proficient.

The good news is that these skills are also the least likely to be automated. Tasks tied to empathy, creativity, leadership and curiosity have just a 13% potential for AI transformation since they depend on human – not machine – judgement, context and lived experience.

The path forward: making human skills count

The world urgently needs new ways to value, assess and credential human capabilities. Emerging best practices include creating meaningful, portable credentials that travel across education and employment systems; real-world assessments that measure collaboration, creativity and adaptability in context; and setting shared standards and creating safe spaces for human skills development where people can learn, fail, reflect and grow.

Introduction

Human skills are becoming vital for innovation, leadership and adaptability, yet remain difficult to measure and develop.

In an age of artificial intelligence (AI) and disruption, the true competitive edge is human. As technology, demographic shifts, the green transition and geoeconomic uncertainty reshape economies, human-centric skills – innovation, creativity and adaptability – will drive resilience, innovation and growth. Once dismissed as "soft", they are now core differentiators for thriving individuals, high-performing organizations and agile economies. Scaled effectively, these skills can deliver gains far beyond individual employability. At the macro level, they are engines of resilience and growth, boosting productivity, sparking innovation and supporting economies to adapt in the face of disruption. They shape how people collaborate, lead, disagree and solve problems, laying the foundation for building trust, social cohesion and inclusion. By equipping workers with adaptable mindsets and lifelong learning habits, they underpin career mobility, resilience to change and sustainable purpose throughout their working lives.

Labour-market shifts make these skills more valuable than ever. Demographic change is expanding roles that rely heavily on human expertise, such as nursing professionals, social workers and teachers, where empathy, communication and resilience are indispensable – especially in economies where the working population is growing. Countries will only remain competitive if they train and nurture talent with the critical skills needed to drive innovation.

Meanwhile, geoeconomic fragmentation and economic uncertainty are heightening the need for resilience and leadership. Even in technology-driven fields, creativity, problem solving and emotional intelligence are critical to ensure that innovation translates into real economic and social value.

The accelerating development of generative AI and related technologies magnifies this urgency. Technological investments alone will not deliver productivity gains or economic returns. Machines can process, predict and optimize, but they cannot empathize, inspire or build trust. Human-centric skills are the bridge between technological progress and meaningful organizational and societal outcomes. As automation continues to reduce routine work, the premium on human skills will grow, empowering individuals to thrive alongside machines, unlock organizational agility and help economies adapt amid economic and social disruptions.

Yet education systems and organizations worldwide struggle to assess, develop and credential these vital capabilities, leaving their value under-recognized and under-used. A lack of standardized frameworks, scalable assessment tools and clear pathways for recognition continues to limit their visibility and value. This paper responds to those gaps by examining the supply and demand of human-centric skills and providing guidance for businesses, educators and policy-makers on how to develop, assess and credential them effectively.

1 Evolving landscape of human-centric skills

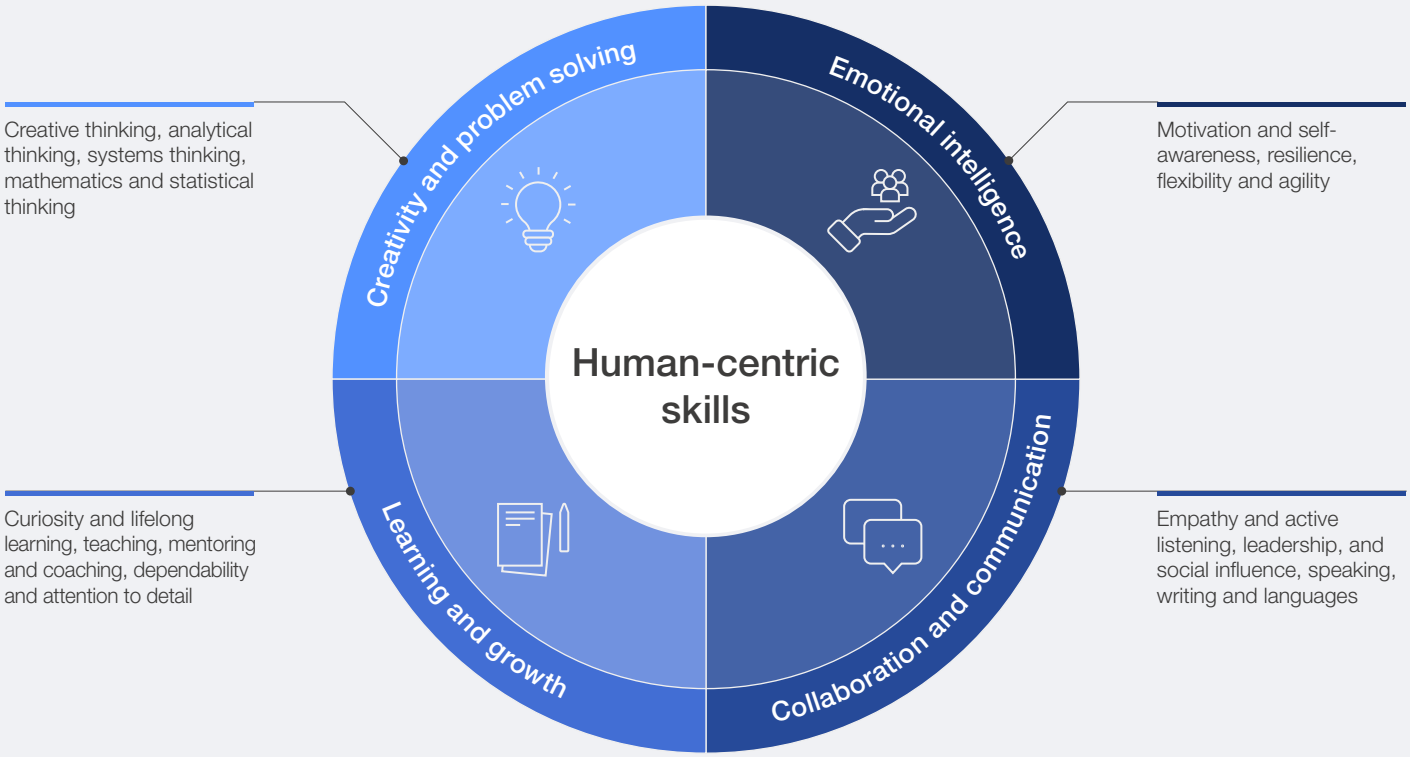
Demand for creativity, resilience and collaboration is rising, but inconsistent training and assessment leave global skill gaps unresolved.

1.1 What are human-centric skills?

Human-centric skills – often referred to as "21st century", "durable" or "soft" skills – are uniquely human capabilities that promote adaptability, innovation and meaningful interaction in dynamic and often uncertain environments. They encompass creative and problem-solving skills such as critical, analytical and systems thinking, as well as mathematical reasoning, to help address complex challenges and generate new ideas. Also included are motivation and self-awareness resilience, flexibility and agility, essential emotional intelligence skills that enable individuals to manage oneself, navigate interpersonal relationships and sustain their well-being. Equally important are capacities for lifelong learning and growth, reflected in skills such as curiosity and lifelong learning, mentoring and coaching, and dependability and attention to detail, which enable adaptability and helping others to develop. Finally, collaboration and communication, grounded in empathy and active listening, leadership social influence and speaking, writing and languages, are critical for teamwork, inclusion and leading with impact.

While this paper focuses on these higher-order skills, foundational skills such as literacy, numeracy and digital fluency remain the building blocks for communication, learning and acquisition of more complex competencies.

FIGURE 1 **Human-centric skills defined**



1.2 Supply and demand of human-centric skills

Technological advances and evolving labour-market dynamics have intensified the demand for human-centric skills. *The Future of Jobs Report 2025* underscores the urgency: by 2030, nearly six in 10 workers will need some form of training. While digital fluency in AI, big data and technological literacy is growing in importance, employers consistently place the highest value on human-centric skills as the real differentiators in the new economy.

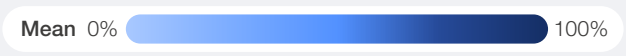
The talent pipeline: gaps in human-centric skills among youth

While education systems have started to place a renewed emphasis on human-centric skills, progress has been uneven. Many countries identify these skills as policy priorities, but they are rarely embedded in curricula and or systematically tracked over time. A study of 152 countries found communication, creativity, critical thinking and problem solving to be the most frequently cited skills in national policy documents.[1] However, even when these appear on education agendas, clear pedagogical and assessment guidance is limited.[2] Terminology and frameworks to describe these skills also vary significantly, as systems tailor skill priorities to cultural contexts and values [3]

Employers also see gaps in how education systems develop human-centric skills. The Forum's Executive Opinion Survey 2025 shows that while nearly six in 10 executives globally believe primary and secondary education systems nurture the ability to work with others, fewer than half see creativity, curiosity or resilience as well-developed. Regional patterns differ. Most regions identify collaboration (for example working with others) as the strongest educational outcome, but Eastern Asia and Latin America and the Caribbean are the most optimistic. Sub-Saharan Africa has above-average ratings for resilience, creativity, curiosity, lifelong learning and working with others – suggesting confidence in its ability to prepare students to navigate change and work collaboratively. By contrast, Northern America, Central Asia and Oceania rank creativity and problem solving highest, collaboration lowest (Figure 2).

FIGURE 2 **Share (%) of executives indicating that public education systems develop the stated skill well, by region**

	Working with others	Creativity and problem solving	Curiosity and lifelong learning	Resilience, flexibility and agility
Central Asia	42	45	37	33
Eastern Asia	68	46	39	36
Europe	49	39	37	31
Latin America and the Caribbean	64	35	37	34
Middle East and Northern Africa	50	43	43	38
Northern America	43	44	36	36
Oceania	39	46	40	42
South-Eastern Asia	58	52	42	44
Southern Asia	56	50	41	48
Sub-Saharan Africa	65	53	47	45
Global	56	44	40	37



Note: Share of executives indicating that public education systems develop the stated skill well, by region.

Source: World Economic Forum Executive Opinion Survey 2025.

Teacher preparedness remains a bottleneck. The OECD's (Organisation for Economic Co-operation and Development) Survey on Social and Emotional Skills (SSES 2023) found that 30% of teachers of 15-year-olds had no training in incorporating social and emotional skills into their classroom practices, and 40% lacked training to monitor these skills regularly.[4] Many teachers – particularly in secondary education – feel less capable fostering social and emotional skills than other teaching tasks. Although structured practices such as explicit teaching, guided reflection and peer-to-peer learning are proven to enhance student well-being, motivation, trust and academic outcomes, their integration into curricula remains inconsistent.[5]

Despite considerable progress in elevating human skills as equal in importance to knowledge acquisition, robust evaluation of these skills is still in its infancy. The Programme for International Student Assessment (PISA) 2022 creative thinking assessment in 66 countries found that only half of students in OECD countries could generate original ideas in familiar contexts, and in over 20 countries, most students did not reach a baseline level of creative proficiency. Results also revealed divides: students from higher socioeconomic backgrounds consistently performed better, and girls outperformed boys. Policy-makers cited overcrowded curricula, limited assessment practices and insufficient teacher training as key obstacles to embedding creativity in education.[6]

PISA 2022 also offers insights into learning strategies and lifelong learning attitudes. Fewer than half of students frequently ask clarifying questions when they do not understand lessons, and only 44% report carefully reviewing homework, behaviours strongly linked to academic performance and metacognitive growth.[7] These self-monitoring and persistence habits – central to self-directed learning – are strongly linked to later engagement in adult education, as shown by Programme for the International Assessment of Adult Competencies (PIAAC) data, which found that adults with stronger intrinsic motivation are more likely to pursue lifelong learning.[8]

Additionally, attitudes such as open-mindedness and growth mindset remain uneven. Just over half of students surveyed believed there was only one correct position in a disagreement, reflecting limits in perspective-taking and critical thinking. Conversely, students with stronger persistence, self-efficacy and growth mindsets were far more likely to adopt proactive learning strategies, such as connecting new material to prior knowledge or engaging in group discussions.[9]

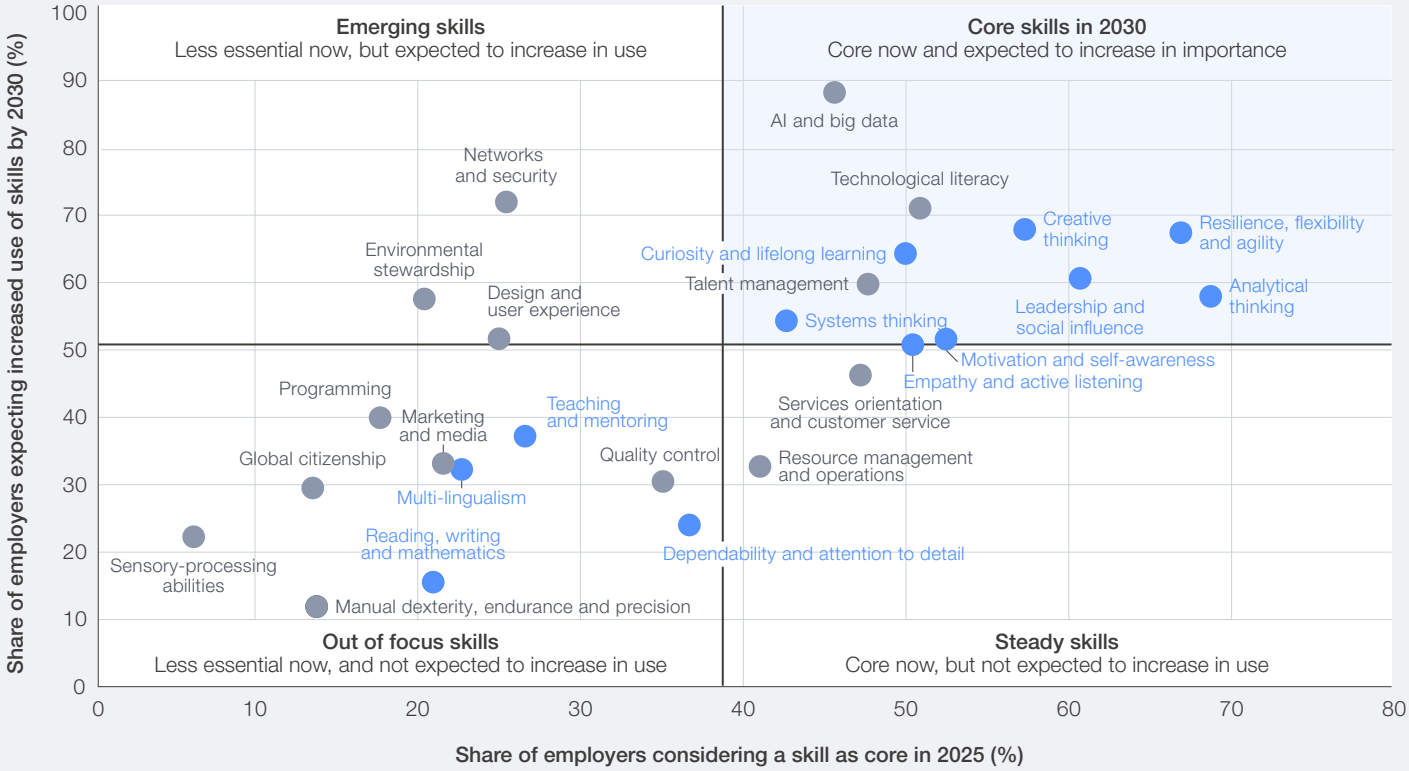
SSES 2023 data also reveals socioeconomic divides in socio-emotional skills, with disadvantaged students showing lower levels of creativity, tolerance, assertiveness, curiosity, sociability and empathy, reflecting uneven access to learning opportunities in and out of school. Further, girls tend to have higher levels of empathy and tolerance, while boys report stronger sociability and self-control – due, perhaps to cultural expectations around gender roles, which shape the importance assigned to different skills.

A growing gap in human-centric skills

Figure 3 illustrates employers' demand for human-centric skills. Analytical and systems thinking, creativity, resilience, motivation and self-awareness, as well as curiosity and lifelong learning are not only core today, but will remain critical over the next five years. By contrast, skills such as dependability and attention to detail; teaching and mentoring; multilingualism; and reading, writing and mathematics are expected to plateau, increasingly viewed as assumed or supported by technology. Reading, writing and mathematics are foundational or assumed skills that underpin learning and professional development, and thus perhaps why they are less prioritized. Similarly, teaching and mentoring are critical factors, even if less emphasized by global employers.

“ Fewer than half of students frequently ask clarifying questions when they do not understand lessons, and only 44% report carefully reviewing homework.

FIGURE 3 | **Share (%) of employers that consider human-centric skills to be core in 2025 and expect increased use by 2030**



Notes: Share of employers that consider human-centric skills to be core in 2025 and to increase in use by 2030.

Source: World Economic Forum.

BOX 1 | **Generative AI and the enduring nature of human-centric skills**

The rapid advancement of generative AI (genAI) has raised questions about how far these technologies can substitute for existing skill sets and reshape how tasks are performed. Research conducted by Indeed underscores the enduring importance of human-centric skills in an increasingly digitalized world.

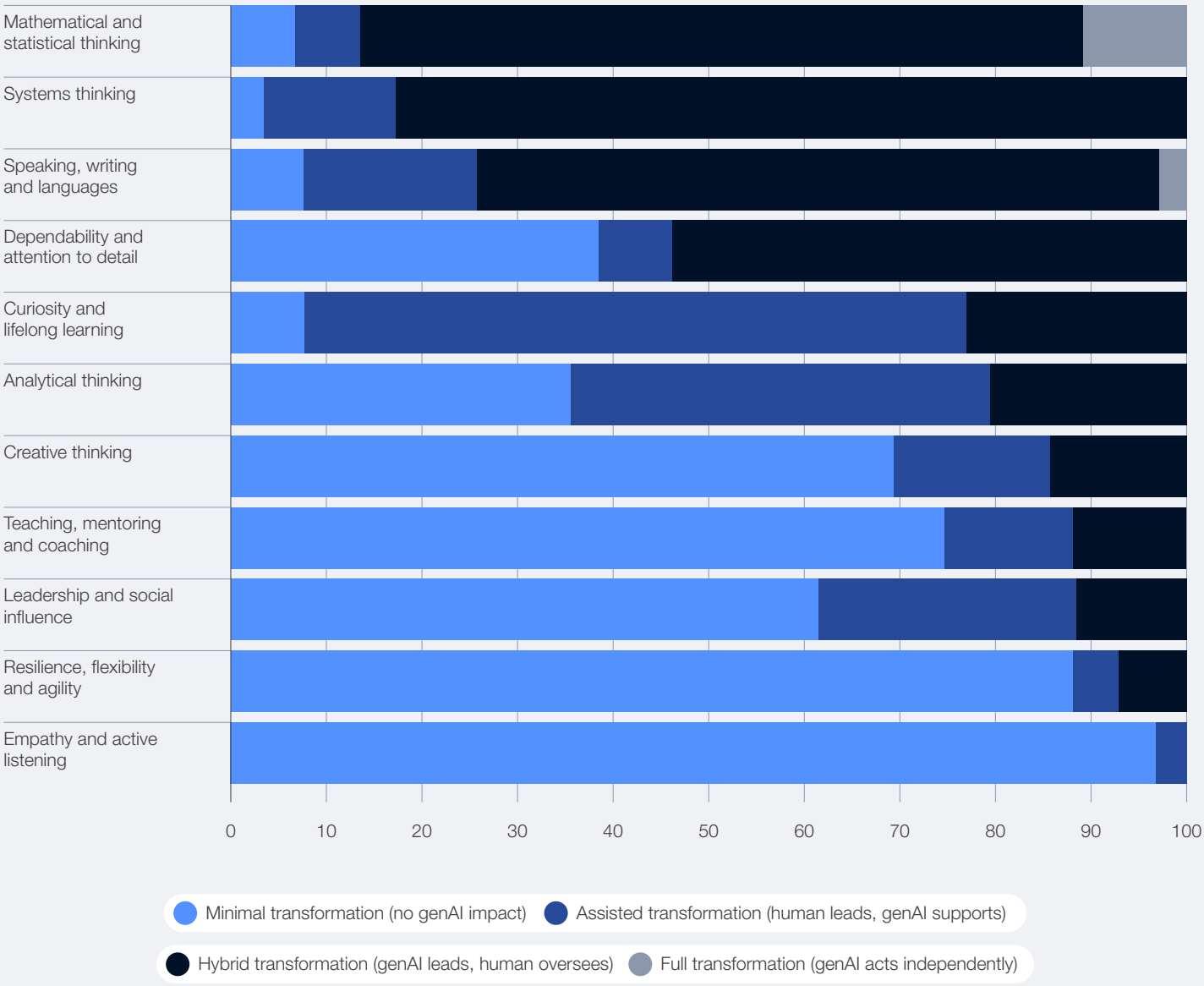
Figure 4 shows the potential for genAI to transform human-centric skills, drawing on Indeed Hiring Lab's GenAI Skill Transformation Index. The index scores skills across two dimensions: cognitive abilities and physical requirements. Using the World Economic Forum's Global Skills Taxonomy, the analysis classifies nearly 2,900 granular work skills into four categories of transformation potential under genAI: minimal transformation, assisted transformation, hybrid transformation and full transformation.[10]

Skills rooted in human interaction and experience, such as empathy, resilience, leadership and teaching, alongside higher order cognitive abilities like analytical and creative thinking and curiosity and lifelong learning are expected to undergo minimal transformation. Just 12.7% of granular tasks linked to these skills show potential for hybrid transformation; thus, human performance will remain largely unchanged, as they depend on interpersonal dynamics, contextual judgement and lived experience AI cannot easily replicate.

By contrast, mathematical and statistical reasoning, systems thinking, speaking, writing and languages, and dependability and attention to detail are nearly six times more likely to undergo hybrid or full transformation. Here, genAI can take on much of the routine work, but human oversight remains essential. Overall, there are few skills with potential for full transformation, where genAI can handle entire tasks with minimal human interaction: basic mathematics, editing and writing exercises and hypothesis testing.

These findings highlight the enduring nature of human-centric skills. Many technical or routine skills may need constant updating as AI capabilities evolve, yet human-centric skills retain their relevance precisely because they are harder to automate. Even in areas where genAI is essential, human oversight remains indispensable. Rather than replaced, human-centric skills will become even more valuable as complements to digital technologies.

FIGURE 4 | **Current skill transformation capacity of genAI (%), by skill group**



Notes: Capacity of genAI to transform a given skill as a share of all granular skills within each skill group. Analysis based on consolidated GPT-4.1 and Claude Sonnet 4 ratings, with close to 2,900 granular skills from the Indeed database as of July 2025.

Source: Indeed analysis; World Economic Forum, Global Skills Taxonomy.

Yet, supply of these skills is not keeping pace with demand. The World Economic Forum's Executive Opinion Survey 2025 reveals that just one in two employers consider their workforce proficient in collaboration or creativity, and fewer in resilience, curiosity and lifelong learning. This suggests that while teamwork and collaboration are relative strengths, the mindsets and habits that underpin continuous growth and self-directed learning remain weak points globally.

Regional differences add nuance. Employers in Eastern Asia and Sub-Saharan Africa report higher workforce proficiency in collaboration, while those in Oceania and Northern America report the lowest shares. Although there is little regional variation for creativity and problem solving, resilience, flexibility and agility are most positively viewed in Latin America and the Caribbean and South-Eastern Asia. Curiosity and lifelong learning are weakest across all regions, underscoring a global challenge in cultivating future-ready mindsets (Figure 5).

FIGURE 5 **Share of employers that consider their workforce proficient in selected human skills, by region**

	Working with others	Creativity and problem solving	Curiosity and lifelong learning	Resilience, flexibility and agility
Central Asia	48	51	32	48
Eastern Asia	69	47	30	54
Europe	50	50	30	44
Latin America and the Caribbean	60	50	34	57
Middle East and Northern Africa	51	49	30	48
Northern America	38	49	27	41
Oceania	35	52	30	49
South-Eastern Asia	54	45	28	56
Southern Asia	62	57	37	51
Sub-Saharan Africa	64	53	39	50
Global	56	51	33	49

Mean 0% 100%

Notes: Share of employers that consider the workforce proficient in determined skills, by region.

Source: World Economic Forum Executive Opinion Survey 2025.

Learning investment shifts in human-centric skills

While employers point to weakness in workforce readiness, evidence suggests that individuals are actively investing in these capabilities. Coursera data generated for this paper shows a steady increase from 2020–2025 in learning hours dedicated to human-centric skills. Since 2022 there has been sharp growth in analytical and systems thinking, and since 2024 in creative thinking, resilience, empathy, curiosity and lifelong learning. The data also shows that human-centric skills are not taught in isolation but are closely intertwined with technical, business and green skills. This interconnectedness creates multiplier effects, as investing in one human-centric skill often strengthens others, reducing the overall cost and time of skilling and amplifying workforce readiness. Analytical thinking stands out as the most taught human-centric skill and as a bridge across domains, frequently appearing alongside AI, big data and business skills (Box 2). These trends highlight growing learner demand for human-centric skills and their significance for enabling adaptability across domains.

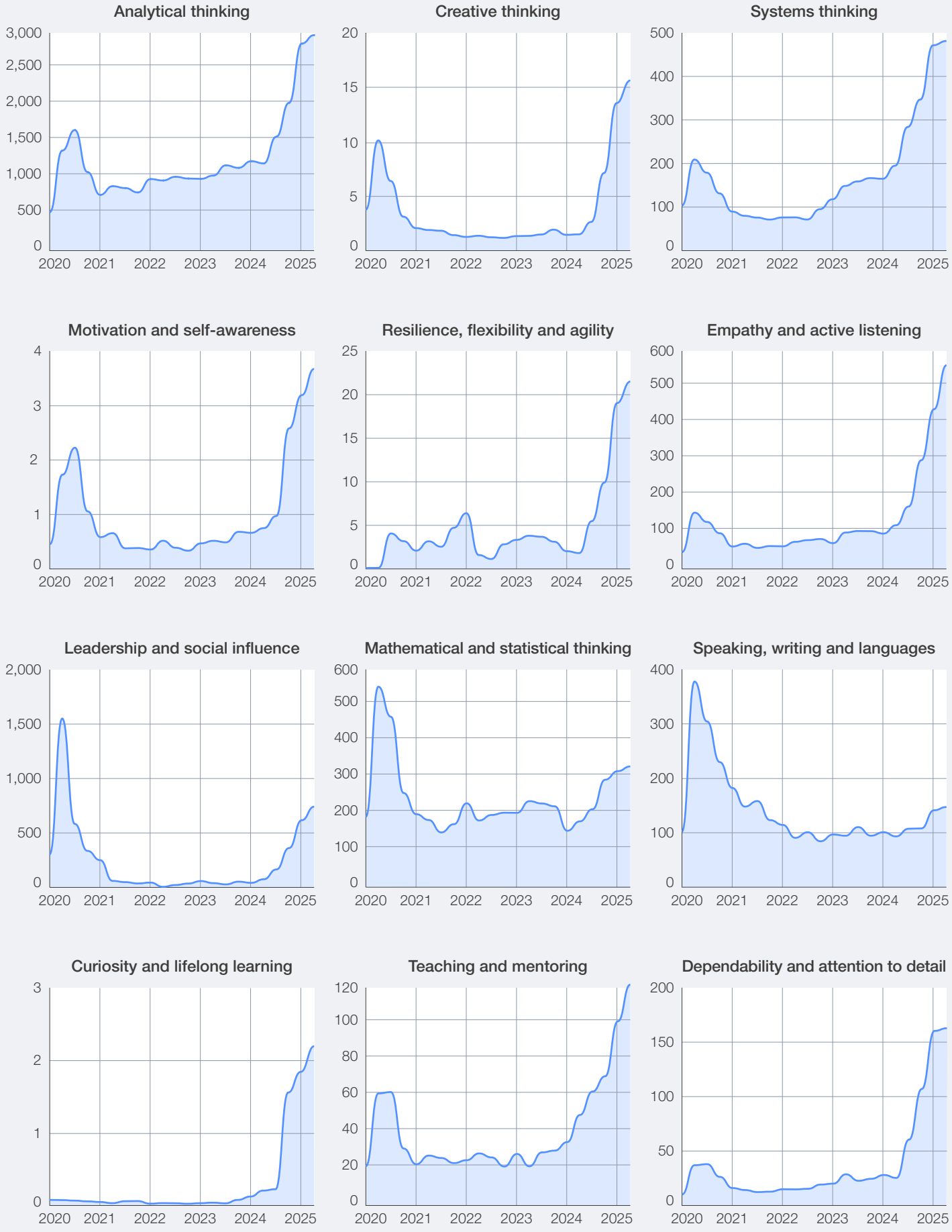
BOX 2 **Learning trends in human-centric skills**

Coursera data reveals a steady increase in learning investments in human-centric skills between 2020 and 2025. Figure 6 shows that the hours Coursera learners invested in to nurture analytical thinking and systems thinking skills has grown consistently since 2022, with a sharper increase beginning in 2024. Learning hours in these skills increased by 1.7% between the first quarter of 2024 and the second quarter of 2025.

Apart from the increase in learners interested in analytical thinking and systems thinking, other skills, including creative thinking, motivation and self-awareness, resilience, empathy and active listening, curiosity and lifelong learning, and dependability and attention to detail expanded even more rapidly, with average growth of 8.2% between 2022 and 2025. Teaching and mentoring have also gained momentum since 2023, as learners increasingly invest in peer-to-peer training, instructional practice and curriculum design. By contrast, leadership and social influence have remained relatively stable, showing only modest increases in learning hours.

Analytical thinking stands out among human-centric skills in terms of total learning hours, reflecting both its foundational nature and its integration across multiple course tracks. Figure 7 highlights its frequent co-occurrence with other skills, signalling its importance as a bridge skill across domains. For instance, 51% of courses teaching analytical thinking also cover AI and big data, 19% include resource management and operations, 16% address design and user experience, and 14% link to marketing and media. This interconnectedness is a hallmark of human-centric skills. For example, leadership is taught alongside empathy in 56% of cases, and both are closely linked to other skills groups such AI and digital skills, business, and green skills. Human-centric skills provide the foundation upon which technical and business competencies are built – and developing them reinforces capacity across multiple domains.

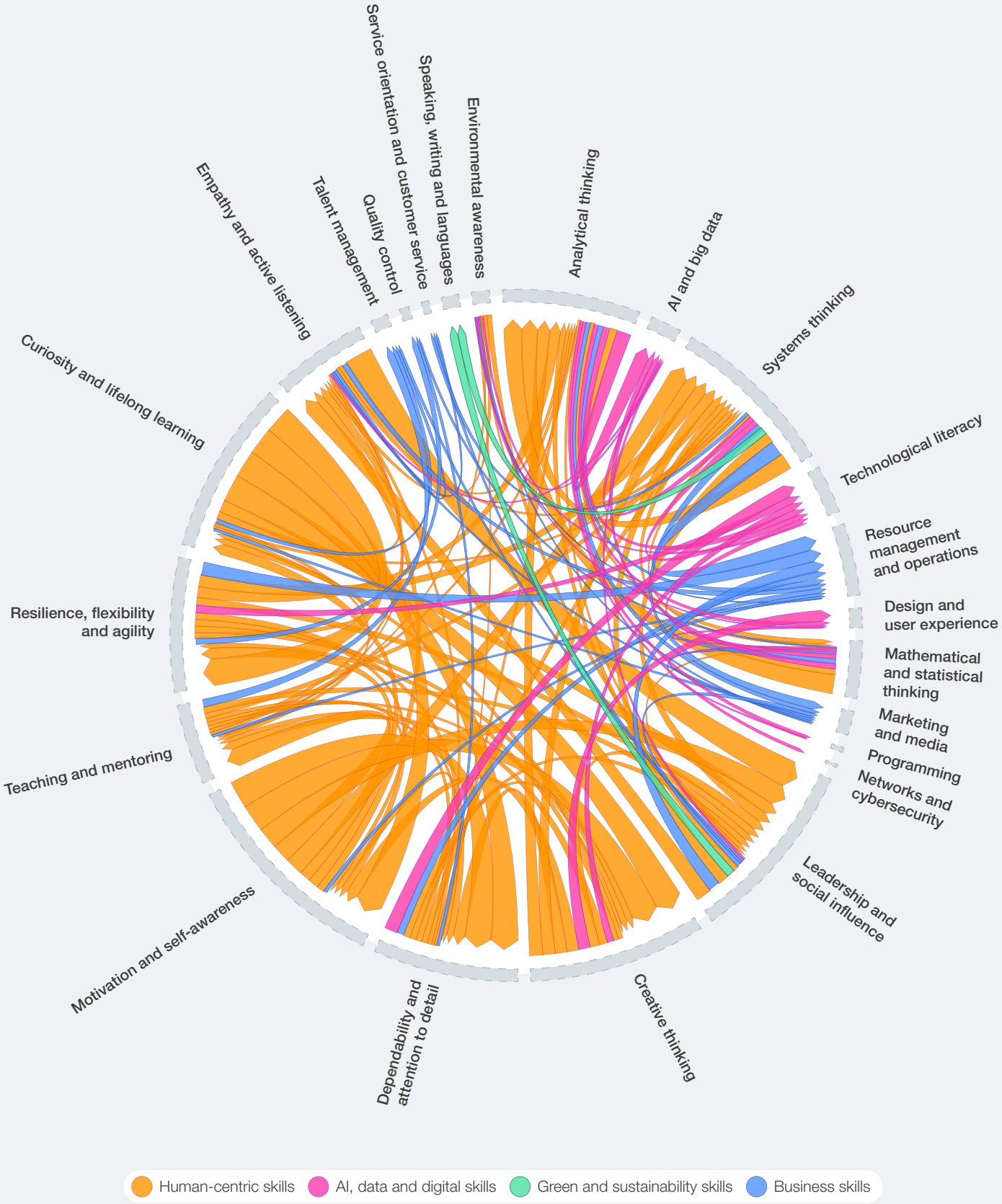
FIGURE 6 | **Learning trends in human-centric skills, 2020–2025**



Notes: Learning hours (in thousands) spent pursuing assessments and credentials from 2020 to 2025.

Source: Coursera; World Economic Forum, Global Skills Taxonomy.

Probability that courses covering each focus human-centric skill also teach other skills. Each arrow shows the pair of skills that are often co-taught with another skill in Coursera courses. Thicker flows mean skills are more often taught together, with colours highlighting the category of the related skill.



Notes: This graph was constructed by first selecting human-centric skills as the focus, in order to provide a clearer view of how they connect with related skills.

Source: Coursera; World Economic Forum, Global Skills Taxonomy.

The fragility and recovery of human-centric skills

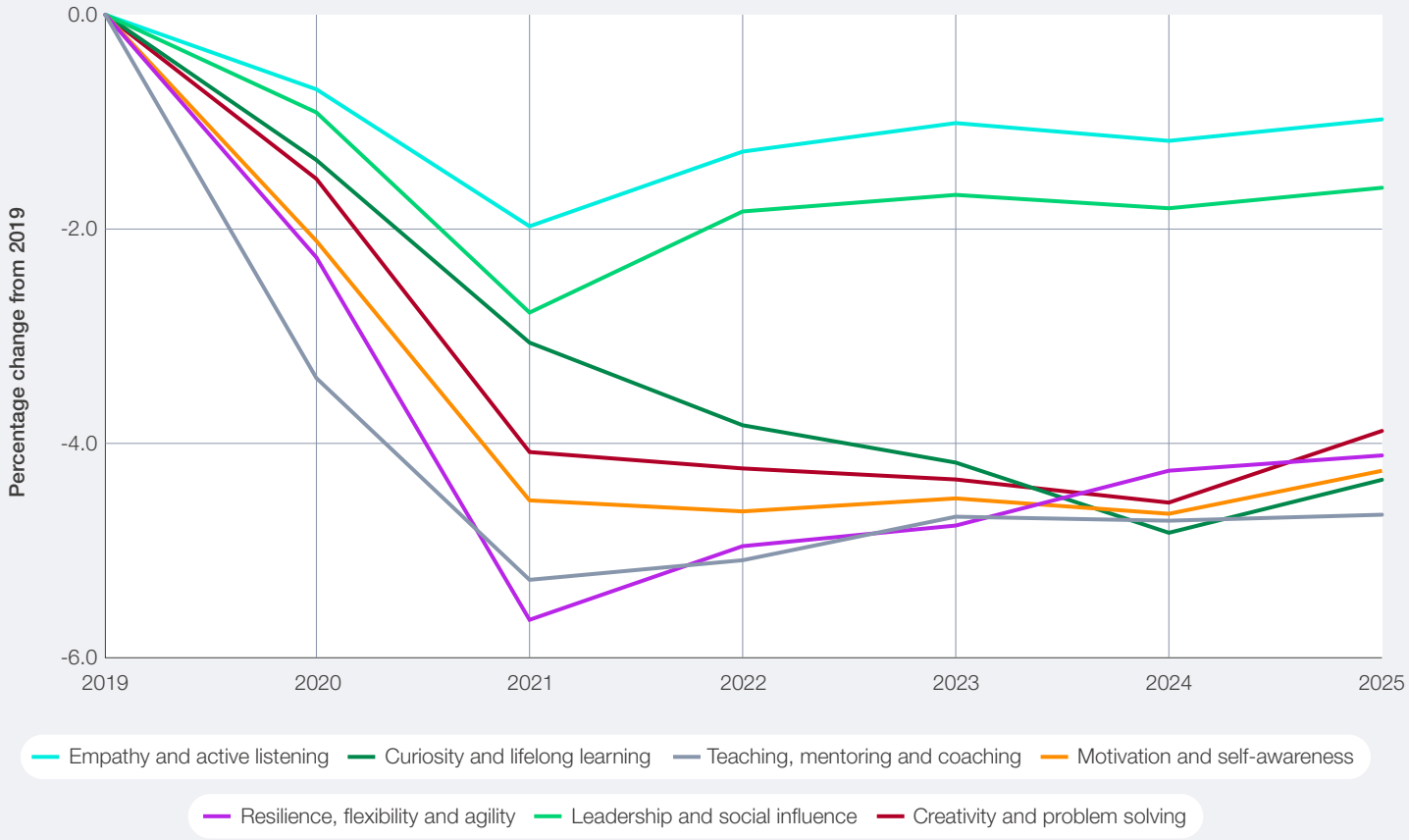
Human-centric skills are often seen as durable, yet they are highly sensitive to external shocks. Economic downturns, crises and social disruptions can erode them rapidly, as opportunities for practice, collaboration and feedback diminish. The COVID-19 pandemic exposed this fragility: skills requiring frequent interpersonal engagement, such as teaching and resilience, declined sharply, while empathy and active listening proved more resilient, reinforced by the heightened demand for connection during a time of crisis. Evidence from the SSES 2023 further underscores these limitations; basic education teachers report significant difficulties in nurturing social-interaction skills through online or remote learning.[11] Recovery is possible but uneven. Without structured opportunities and deliberate investment, human-centric skills deteriorate.

The notion that human-centric skills are enduring ignores a key reality: they erode without sustained practice and deliberate cultivation.[12] BetterUp data shows a sharp inflection between 2019 and 2021, as self-reported human-centric skills declined amid profound social and professional changes triggered by the COVID-19 pandemic.

Skills particularly sensitive to external shocks[13] – resilience, ability to cope with and overcome adversity and stress – and those requiring regular interpersonal interaction, such as teaching, experienced the steepest declines. In contrast, empathy and active listening appeared more durable, likely reflecting the heightened focus during this period on understanding others and maintaining social connection, through virtual communication and other remote interactions. This trend aligns with existing evidence showing that while social empathy – the ability to read social cues and respond appropriately in group contexts – declined during the pandemic, emotional empathy improved.[14]

The decline in skills such as curiosity and empathy may reflect that, under sustained adversity, individuals tend to focus on short-term problem solving, while exploration, creative thinking and the drive for curiosity and lifelong learning become constrained.[15] Even by 2025, the perceived importance of human-centric skills had not returned to pre-2019 levels (Figure 8), illustrating that while these skills are considered durable, they can decline without opportunities to practice and intentional investment.[16]

FIGURE 8 **Self-reported skill trends, 2019–2025**



Notes: Percentage change in skill levels relative to 2019 values, by skill. A value below 0 indicates a reduction in skill levels compared to 2019.

Source: BetterUp; World Economic Forum, Global Skills Taxonomy.

The data also reveals clear role-based differences (Figure 9). Declines in human-centric skill levels were steepest among individual contributors, especially creativity, resilience and leadership, with most 2025 skills remaining below 2019 levels. Managers-of-managers showed the smallest declines, remaining relatively stable in leadership and empathy, for example, which likely reflects access to leadership development. Front line managers experienced smaller declines than individual contributors, but a slower recovery. These patterns highlight the long recovery cycle of human-centric skills and the importance of structured opportunities and interpersonal practice for their development.

FIGURE 9 **Change in human-centric skills, by role, 2020–2025**

Notes: Percentage change in skill levels relative to 2020 values, by skill. A value below 0 indicates a reduction in skill levels compared to 2020.

Source: BetterUp; World Economic Forum, Global Skills Taxonomy.

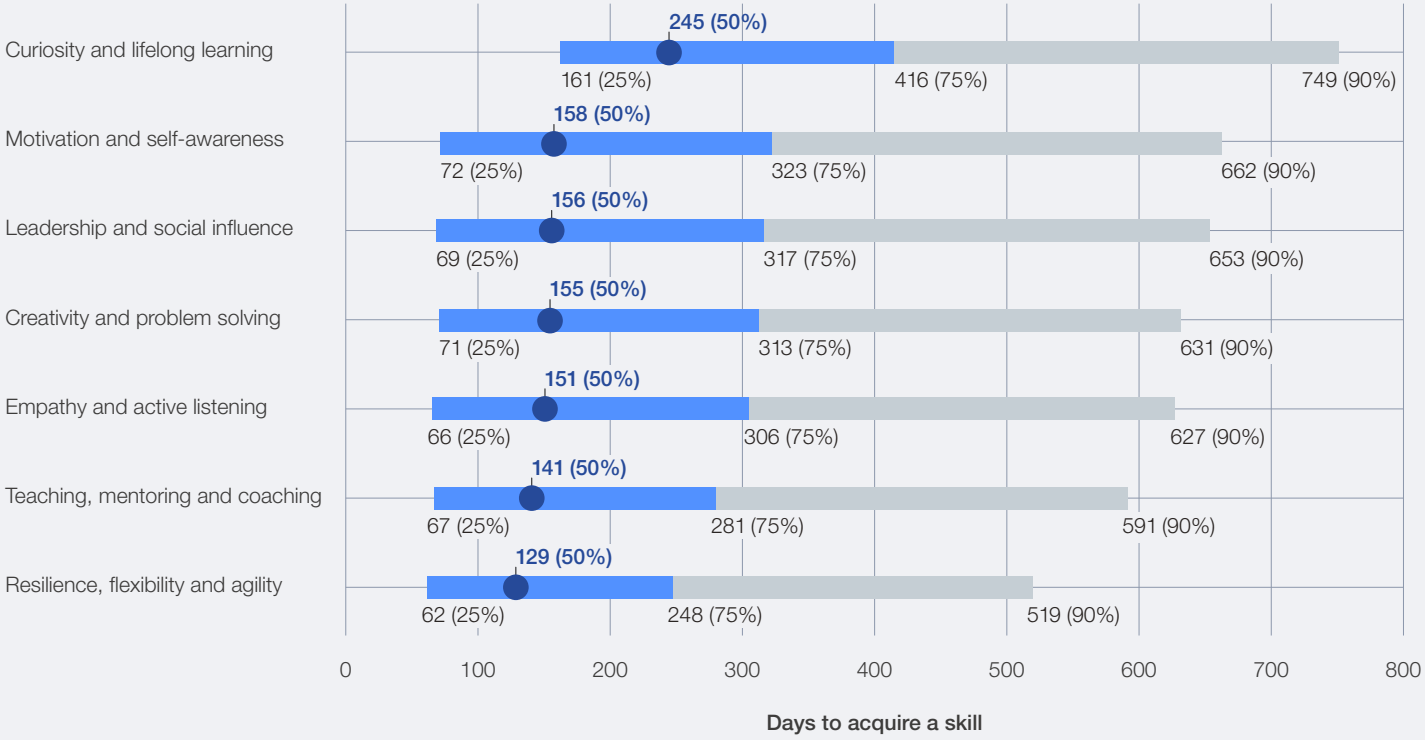
Regional variation adds another layer. In North America, creativity, leadership, motivation and resilience declined more sharply than elsewhere, whereas Latin America recorded the largest fall in teaching skills. These differences suggest that the pandemic's impact on human-centric skills was shaped not only by the nature of work but also by regional contexts and organizational responses.

Data on time-to-skill acquisition further shows that while a small share of learners (around 25%) demonstrate progress within weeks, the majority (50–75%) need several months of sustained practice to build human-centric skills. The wide gap between early and late learners suggests some benefit from prior experience or natural inclination, while others depend more heavily on structured opportunities and organizational support. Existing research highlights the critical role of organizational factors – such as a sense of belonging, perceived support and psychological safety – in facilitating learning and skill development.[17]

Taken together, these findings highlight that the stability of human-centric skills is not guaranteed. They are sensitive to disruption, context-dependent and require deliberate cultivation. Yet, they can be rebuilt through workplace cultures and learning strategies that actively sustain them.

FIGURE 10 **Learning timelines for upskilling human-centric skills**

Number of days needed to upskill in human-centric skills. Data shows average numbers of days required by 25%, 50% (represented by a dot), 75% and 90% of each cohort.



Notes: Skills are assessed at onboarding and at multiple points during coaching. Values show the days needed for 25%, 50%, 75% and 90% of learners to acquire a skill, excluding those who left early or lacked sufficient data. For example, "25%: 161 days" means 25% of participants acquired the skill within 161 days.

Source: BetterUp; World Economic Forum, Global Skills Taxonomy.

Invisibility of human-centric skills in hiring

Another challenge is that human-centric skills are often treated as "givens". An Indeed analysis of job postings from May 2024 to April 2025 shows that even when human-centric skills are critical to long-term adaptability, they are not always explicitly mentioned in job descriptions (Figure 12).

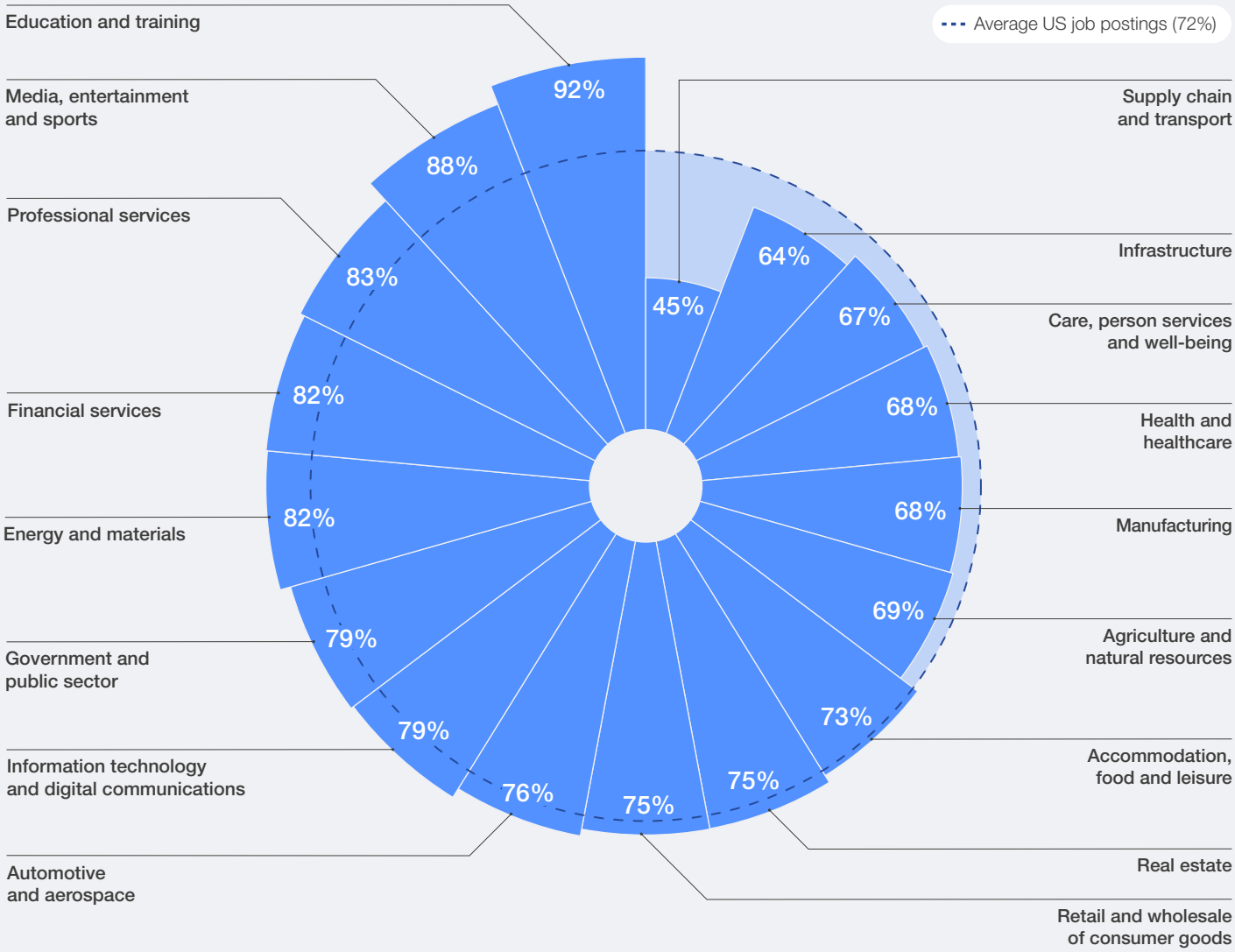
Employers tend to emphasize skills such as communication, leadership and dependability. The relative invisibility of other skills, especially curiosity and lifelong learning, and creativity, suggests they are assumed competencies rather than explicit requirements (Box 3). This creates a disconnect. For instance, employers consistently project creative thinking as one of the fastest-growing skills in demand by 2030 (Figure 3), yet it remains among the least mentioned in hiring signals today.

BOX 3 | **Human-centric skills on job postings**

Job postings provide a close view into employers' priorities. An analysis by Indeed of nearly 2,900 granular work skills, classified according to the World Economic Forum's Global Skills Taxonomy and mentioned in US job postings from May 2024–April 2025, reveals that only 72% mention at least one human-centric skill (Figure 11). The share varies widely by sector – from just 45% in supply chain and transport to 92% in education and training. Anything below 100% underscores how employers often omit human-centric skills from job postings.

The most frequently cited skills are communication, leadership and dependability as well as attention to detail. By contrast, curiosity and lifelong learning, creative thinking and systems thinking are rarely referenced, despite their importance for adaptability and innovation. Communication skills emerge as the most frequently cited requirement across nearly all sectors, appearing in more than 60% of postings in industries such as financial services, government and public sector, and real estate. Teaching and mentoring ranks first in education and training and is also highly cited in media, entertainment and sports. Resilience and flexibility dominate in accommodation, food and leisure, and are strongly emphasized in healthcare, reflecting the pressures of frontline and operational roles. Creative thinking is most visible in media and entertainment, while analytical thinking is concentrated in energy and materials, automotive and aerospace, financial services, and information technology. These patterns underscore how demand for these capabilities tends to cluster within specific industries rather than being universally sought across the labour market.

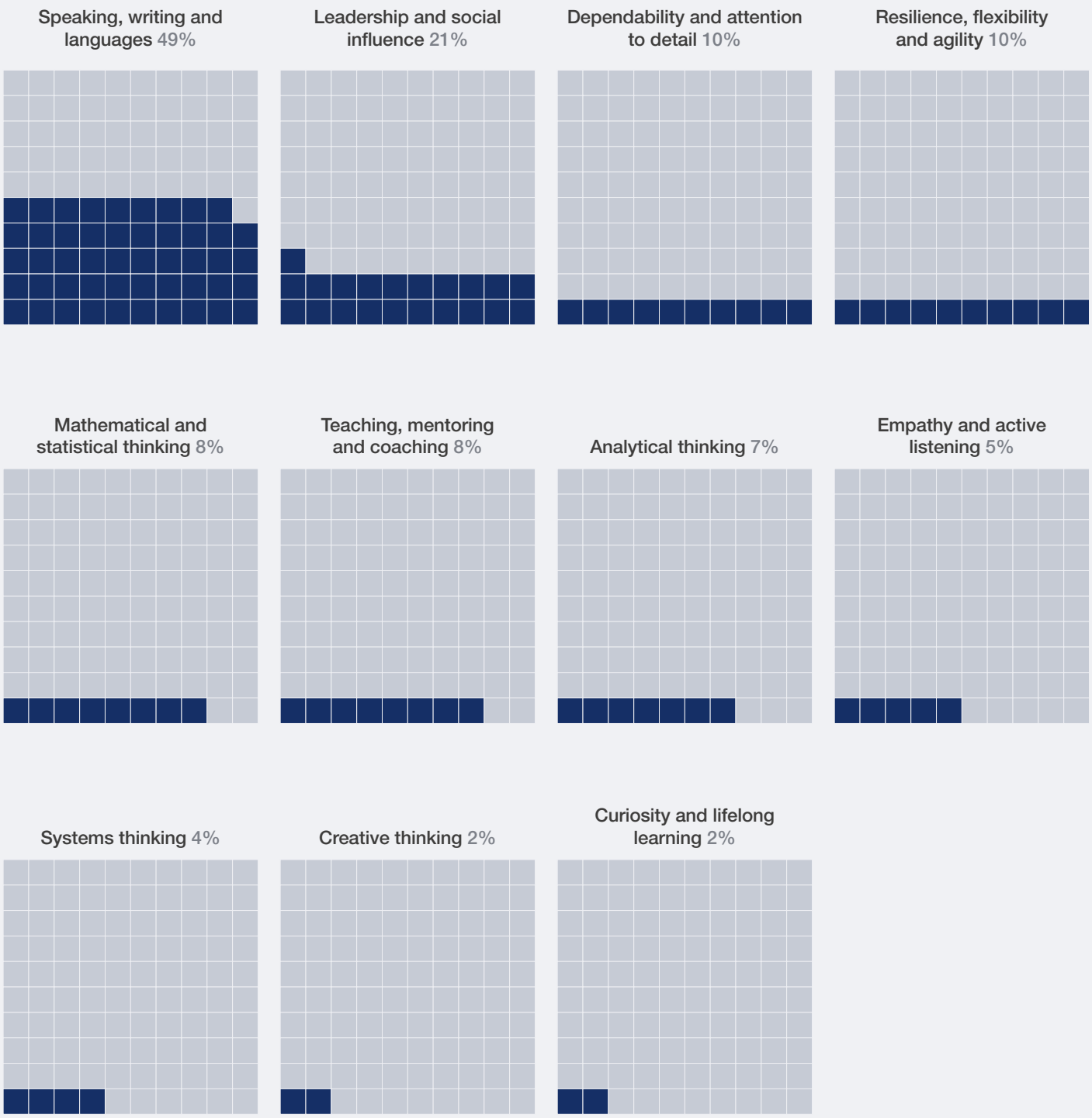
FIGURE 11 | **Share of US job postings mentioning human-centric skills, by sector, May 2024–April 2025**



Notes: Share of US job postings mentioning human-centric skills from May 2024 to April 2025, by sector.

Source: Indeed analysis; World Economic Forum, Global Skills Taxonomy.

FIGURE 12 | **Share of US job postings mentioning human-centric skills, May 2024–April 2025**



Notes: Share of US job postings mentioning human-centric skills May 2024– April 2025.

Source: Indeed analysis; World Economic Forum, Global Skills Taxonomy.

Recognition data deepens this paradox. Workhuman data shows that leadership, motivation and dependability are the most frequently recognized in workplaces, while systems thinking, teaching and creative thinking are least acknowledged. Yet frequency does not always align with value. Skills like creative thinking and resilience, though less often observed, are consistently attributed higher value than other human-centric skills when recognized by peers (Box 4).

Taken together, findings from Indeed and Workhuman show that the very skills expected to drive future adaptability and innovation are the least visible in recruitment practices. If organizations fail to make such skills explicit in job descriptions or recognition systems, they risk sending the message that they are secondary, undermining their perceived importance for future employees.

BOX 4 **Recognition of human-centric skills**

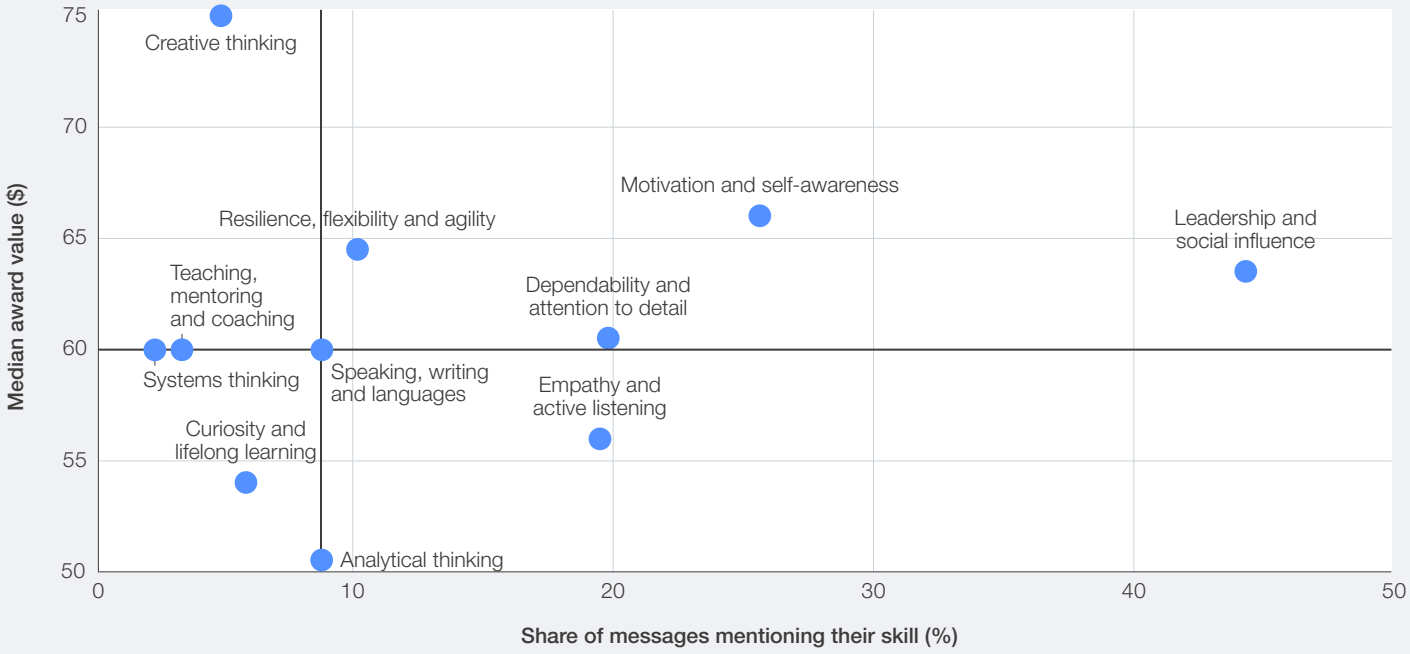
Recognition data, such as peer-to-peer awards and acknowledgements, provide real-time, actionable insights into how skills are demonstrated and valued within organizations. Voluntary and intentional acknowledgement of individuals' contributions provides rich and unique insights into human-centric skills, which are often difficult to measure through traditional assessments or overlooked in formal reporting. Workhuman's analysis of recognition messages across 73 countries between 2019 and 2025 shows that leadership is the most frequently acknowledged skill in daily interactions, followed by motivation and self-awareness, and dependability and attention to detail. By contrast, systems thinking, teaching and mentoring, creative thinking, and curiosity and lifelong learning are least often recognized (Figure 13).

Recognition patterns differ by organizational size. Across firms of all sizes, creative thinking emerges as the most valued skill. In smaller firms (1,000 employees or fewer), resilience and teaching follow closely, while in large organizations (over 50,000 employees), leadership and resilience dominate. At the industry level, creative thinking is the most valued skill in almost all sectors – average values range from $61 in banking and finance to $197 in pharmaceuticals – except in consumer goods and services, where dependability leads ($73). Second-ranked skills vary: the technology sector emphasizes resilience; banking, finance and insurance highlight motivation; manufacturing prioritizes resilience; and consumer goods and services elevates teaching.

Trends over time reveal meaningful shifts (Figure 14). Recognition of motivation has risen sharply since 2022, while leadership, dependability, systems thinking and creative thinking have also increased since 2023. These trends likely reflect a growing recognition that these skills contribute to engagement and productivity.[18] Empathy has followed a different trajectory – recognition grew during 2019–2021, likely reflecting heightened attention to interpersonal connections during the COVID-19 pandemic that has remained above pre-pandemic levels. While curiosity and lifelong learning has increased since 2022, its overall frequency of recognition remains low. This underscores that, while organizations emphasize the importance of upskilling and reskilling,[19] the very skill that underpins those behaviours is not often recognized or rewarded (Figure 14).

Yet, skill recognition does not always align with value, as attributed by peers (Figure 13). While leadership is both widely recognized (44% of messages) and highly valued (averaging $64), creative thinking shows the opposite pattern: it is among the least frequently acknowledged (5%) but the most highly valued ($75). Resilience follows a similar trajectory, less often recognized (10%), but consistently assigned high value ($65). Conversely, empathy and active listening is frequently acknowledged but less often associated with tangible value.

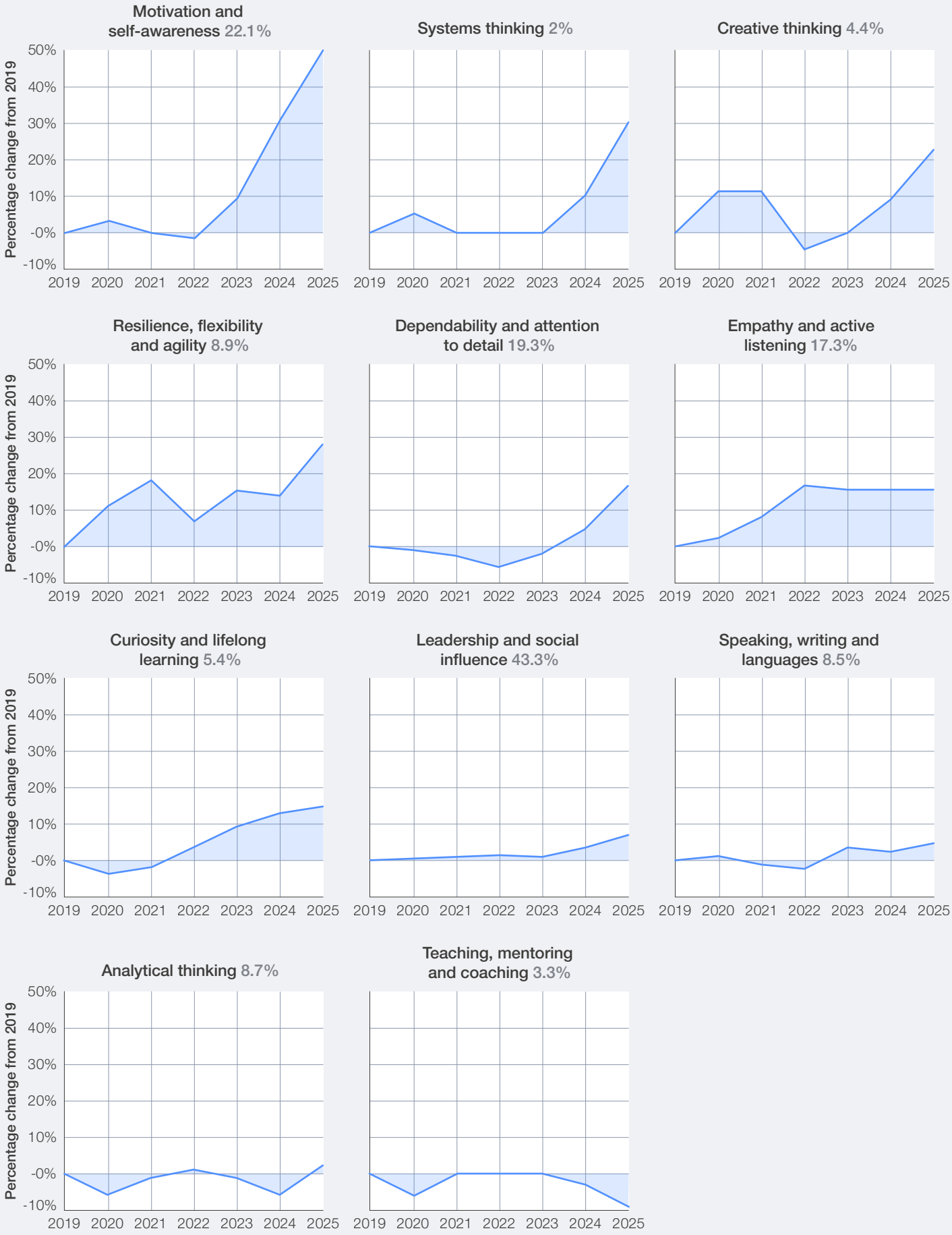
FIGURE 13 **Human-centric skills: prevalence vs. recognition value**



Notes: Quadrants are defined by the median values.

Source: Workhuman; World Economic Forum, Global Skills Taxonomy.

FIGURE 14 | **Recognition trends in human-centric skills, 2019–2025**



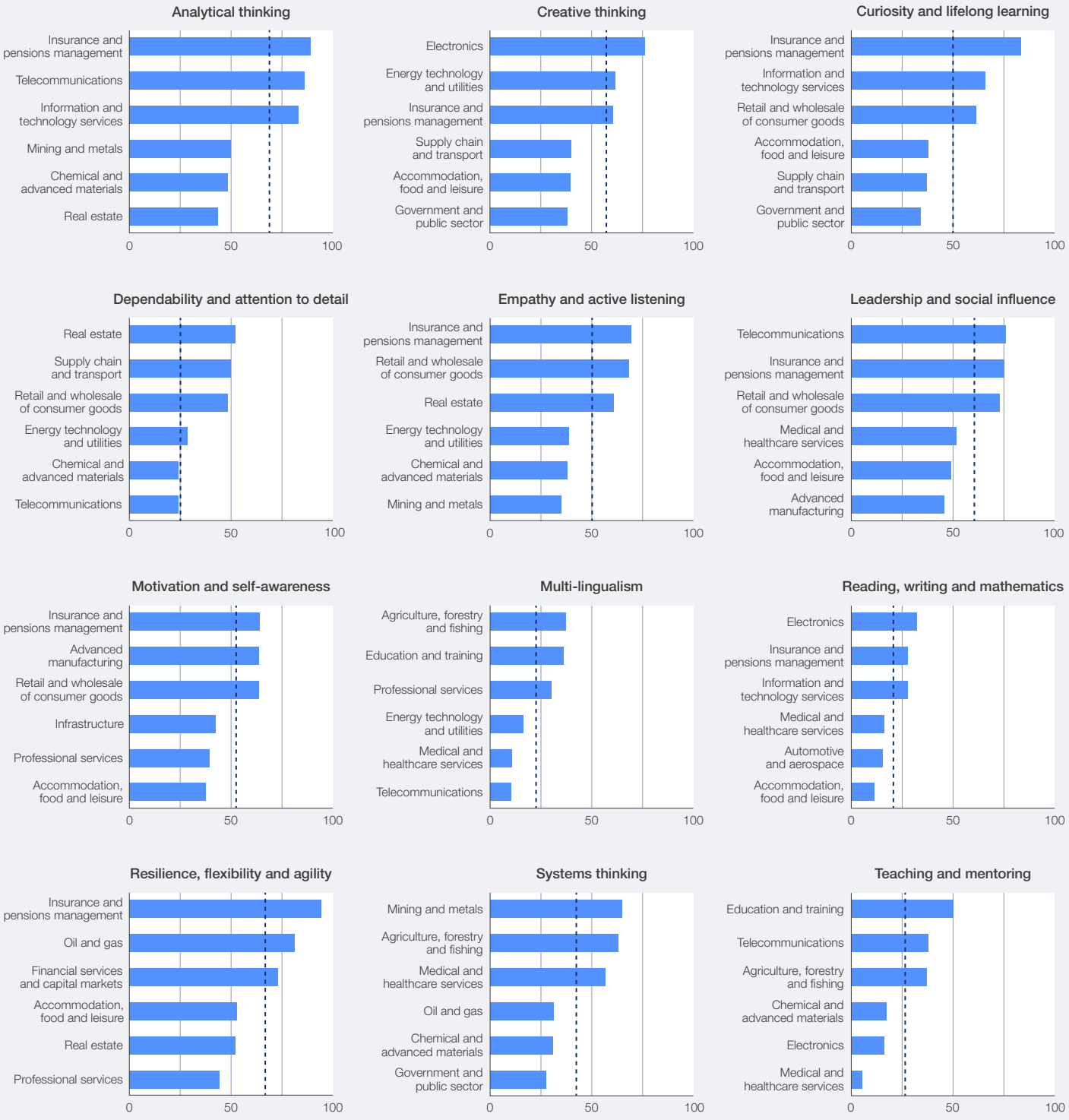
Notes: Percentage change in the share of total messages mentioning each skill compared to 2019 (2019 share shown in grey).

Source: Workhuman; World Economic Forum, Global Skills Taxonomy.

1.3 Industry and regional transformation trends

Shifts in the global labour market are reshaping how industries and regions prioritize human-centric skills. The type of skills emphasized varies widely, reflecting differences in business models, customer engagement and operational complexity.

FIGURE 15 **Human-centric skill importance, selected industries, 2025**



Notes: Share of employers that consider skills to be core for their workers (%). Chart shows the top three and bottom three industries by average share.

Source: World Economic Forum, Future of Jobs Survey 2024.

Industry trends

Figure 15 shows that sectors such as insurance and pension management, which value technical complexity and intensive customer interaction, rank highest in demand for resilience, analytical thinking, curiosity, motivation and empathy. Electronics also stands out, placing strong emphasis on creativity and foundational skills such as reading, writing and mathematics, reflecting the need to blend innovative design and problem solving with precise technical communication. Similarly, telecommunications assign high importance to leadership, driven by the need to coordinate large workforces while adapting to rapid technological change. Industries built on complex processes, such as real estate, supply chain and transport, and retail, place greater reliance on dependability and attention to detail, while mining, agriculture and healthcare emphasize systems thinking. Education, telecommunications and agriculture stand out for their demand for teaching and mentoring. By contrast, the government and public sector consistently reports lower demand for creative thinking, curiosity and systems thinking compared to other industries.

FIGURE 16 **Human-centric skill importance by 2030**

Notes: Share of employers that predict skills will increase (light blue bars) or decrease (dark blue bars) in importance by 2030 (%). The dashed line represents the net difference between the share of employers anticipating an increase and those anticipating a decrease. The share of employers predicting skill stability is excluded from the calculation.

Source: World Economic Forum, Future of Jobs Survey 2024.

Demand for human-centric skills varies significantly by region, reflecting distinct labour-market priorities and cultural contexts.

Looking ahead, demand for human-centric skills shows great variation across industries, reflecting both structural changes and sector-specific needs. Figure 16 shows that creativity is the most in demand in insurance and pensions management, while problem-solving skills such as analytical thinking and systems thinking are considered most important in both the education and training and mining and metals sectors. Demand for emotional intelligence skills is also gaining traction in sectors such as real estate and automotive and aerospace where motivation is the most sought after, while resilience is critical in the agriculture and telecommunications sectors. Collaboration and communication skills remain central to workforce needs in telecommunications, where leadership is also highly ranked, and in automotive and aerospace where empathy and active listening is expected to grow in demand by 2030. Learning and growth skills, such as curiosity and lifelong learning, teaching and mentoring, and dependability, are expected to grow in demand in education and training, automotive and aerospace, oil and gas, and real estate.

By contrast, some sectors display weaker reliance on some of these skills. Accommodation, food and leisure, for example, places less emphasis on analytical and systems thinking, prioritizing instead creativity and leadership to meet customer-facing demands. Similarly, the government and public sector shows stronger demand for creativity and resilience but ranks lowest for curiosity and empathy compared to other sectors.

Regional trends

Demand for human-centric skills also varies significantly by region, reflecting distinct labour-market priorities and cultural contexts. Figure 17 shows that in 2025, analytical thinking and resilience stand out as the most valued skills across most regions. Eastern Asia places comparatively higher emphasis on curiosity and lifelong learning than other regions, while Latin America and the Caribbean focuses on resilience, systems thinking, leadership and empathy. Central Asia employers prioritize creative thinking more strongly than their peers, pointing to a focus on innovation and problem solving.

While multilingualism is deprioritized in most regions, it is particularly important for employers in Central Asia and Sub-Saharan Africa. Notably, curiosity and lifelong learning, often viewed as a future-ready skill, receives comparatively less emphasis in Sub-Saharan Africa than in other regions. This reflects a focus on more immediate workforce priorities, such as cultivating dependable and resilient workers who can navigate uncertainty and deliver consistent results. Over time, however, greater investment in curiosity and lifelong learning are essential to the region's adaptability and innovation capacity as technological transformation accelerates.

FIGURE 17 **Human-centric skill importance, by region, 2025**

	Analytical thinking	Creative thinking	Curiosity and lifelong learning	Dependability and attention to detail	Empathy and active listening	Leadership and social influence	Motivation and self-awareness	Multi-lingualism	Reading, writing and mathematics	Resilience, flexibility and agility	Systems thinking	Teaching and mentoring
Central Asia	75	68	41	47	34	62	62	45	18	70	59	59
Eastern Asia	71	64	64	41	52	66	59	23	27	54	43	30
Europe	71	54	58	30	56	63	59	21	17	71	35	25
Latin America and the Caribbean	74	58	54	38	67	69	48	17	22	81	67	22
Middle East and Northern Africa	47	57	29	26	28	46	32	23	18	50	33	13
Northern America	79	62	59	57	66	68	51	21	26	79	47	28
South-Eastern Asia	67	63	54	46	54	67	46	13	25	71	38	21
Southern Asia	71	55	29	45	39	29	29	10	26	36	26	26
Sub-Saharan Africa	61	49	24	49	33	61	58	27	30	64	46	24

Share of organizations 0% 100%

Source: World Economic Forum, Future of Jobs Survey 2024.

Figure 18 highlights where skill demand is expected to grow most by 2030. Creative thinking and resilience emerge as the fastest-growing skills globally, with the steepest increases projected in Latin America and the Caribbean, South-Eastern Asia, and Sub-Saharan Africa. Central Asia anticipates stronger growth in multilingualism and teaching and mentoring than other regions, while Europe expects significant gains in curiosity and lifelong learning. In Latin America and the Caribbean, employers forecast rising demand for creative thinking, empathy and motivation, while South-Eastern Asia anticipates growth in analytical thinking, resilience and leadership. Sub-Saharan Africa projects greater need for systems thinking, dependability and foundational skills such as reading, writing and mathematics, alongside stronger emphasis on motivation and self-awareness.

Across regions, there is greater emphasis on adaptability and creativity, yet the pace of expected growth differs.

FIGURE 18 **Human-centric skill evolution, 2025–2030, by region**

	Analytical thinking	Creative thinking	Curiosity and lifelong learning	Dependability and attention to detail	Empathy and active listening	Leadership and social influence	Motivation and self-awareness	Multi-lingualism	Reading, writing and mathematics	Resilience, flexibility and agility	Systems thinking	Teaching and mentoring
Central Asia	52	55	38	14	26	45	40	59	-14	52	43	46
Eastern Asia	46	71	66	-5	55	61	52	23	-13	54	49	30
Europe	52	65	70	-1	47	57	49	5	-8	69	51	27
Latin America and the Caribbean	64	81	61	24	67	64	56	26	-4	65	59	28
Middle East and Northern Africa	55	62	52	30	25	60	33	18	11	64	48	20
Northern America	49	65	60	23	47	62	47	14	-8	67	42	25
South-Eastern Asia	78	74	52	17	57	65	52	22	0	83	63	44
Southern Asia	62	67	56	28	36	50	46	-8	4	64	52	33
Sub-Saharan Africa	70	72	33	37	46	62	56	11	21	79	75	37

Notes: Net difference between the share of employers that consider skills to be increasing and decreasing in importance to their workers, from 2025 to 2030 (%). The share of employers predicting skill stability is not used in the calculation.

Source: World Economic Forum, Future of Jobs Survey 2024.

2

Call to action: developing, assessing and credentialling human-centric skills

Clear frameworks are needed to measure, grow and validate human-centric skills, ensuring credibility, portability and equitable global recognition.

Towards global guiding principles

Despite evidence supporting the importance of human-centric skills, the world is still failing to meaningfully develop, assess and credential these capabilities. Practices to nurture and validate these skills remain uneven, fragmented and undervalued, with most education and training systems treating them as peripheral to technical knowledge. One challenge lies in the multiplicity of terms used to describe them – for example, "resilience", "adaptability", "perseverance" and "grit" are often used interchangeably. Without shared frameworks, these skills are hard to compare across systems and borders, reducing their visibility in hiring and education. Their persistent framing as "soft" skills further undermines their value, while risks of bias in assessment and credentialling weaken trust in their recognition. To unlock the full economic and social potential of human-centric skills, governments, businesses and educators must act urgently to establish clear frameworks for how these skills are cultivated, measured and validated worldwide.

This section sets out global principles for developing, assessing and credentialling human-centric skills. These principles help business leaders guide their skills strategies, enable governments to consider new approaches to understanding the supply of their human-centric skills, and support educators in nurturing human capabilities (Figure 19).

FIGURE 19 **Global principles to assess, develop and credential new economy skills**

Assessment

1. **See the whole human**: Use diverse tools to get a 360° view of skills and potential.
2. **Make it real**: Evaluate skills through authentic, performance-based tasks.
3. **Track thinking, not just results**: Monitor both progress and thought processes over time to track holistic growth.

Development

4. **Prioritize new economy skills**: Put new economy skills at the heart of learning.
5. **Create safe spaces**: Encourage growth through feedback, practice and reflection.
6. **Fuel purposeful learning**: Cultivate self-awareness and encourage hands-on collaborative experiences.

Credential

7. **Set shared standards**: Align on clear, consistent ways to recognize skills globally.
8. **Prove it in practice**: Use portfolios and real-world evidence to show skills application.
9. **Badge what matters**: Award modular, skill-specific and context-rich credentials, connected to clear career and learning pathways.

Assessing human-centric skills

Human-centric skills are far more difficult to measure than technical knowledge, as they are nuanced, context-dependent and expressed differently across cultures and settings. What counts as effective communication or leadership in one environment may not translate directly to another. Nevertheless, without effective assessment, learners are unable to monitor progress, educators cannot adapt instruction and employers face difficulties identifying and validating these capabilities. The following principles help leaders set new standards for assessing human-centric skills.

See the whole human: Leaders must move beyond static, one-dimensional measures and assess the whole human, capturing how individuals think, adapt and apply their skills across diverse, real-world contexts. The most effective systems combine standardized benchmarks for comparability, performance-based for authenticity and reflective tools for growth.

Technology is increasingly bridging gaps across these approaches. AI-powered adaptive testing can adjust to individual performance in real time, while virtual and augmented reality (VR/AR) simulations recreate complex, real-world problem-solving situations. Digital platforms aggregate results and peer feedback at scale, and offline or edge AI tools extend these opportunities to low-connectivity settings, ensuring scalability and inclusiveness.

Make it real: Standardized tests offer comparability but often reduce complex skills to simplified constructs and rarely capture their real-world application. Performance-based assessments such as simulations, role-plays or project evaluations provide richer, more authentic demonstrations and formative feedback. While they can be resource-intensive and difficult to scale, several AI-powered tools can reduce costs by enabling people to simulate real-world experiences. For example, a manufacturing firm could use a digital twin of its production line to evaluate how team leads coordinate under changing conditions – assessing adaptability, leadership and problem solving in real time.

Track thinking, not just results: Human-centric skills are expressed differently across contexts, and so one-off assessments rarely capture adaptability and growth. Instead, educators and employers should evaluate how people think and learn, not just what they produce. Digital portfolios and learning platforms can help track progress over time by curating projects, reflections and feedback that show development in real-world settings.

Skills should be evaluated through authentic, context-rich experiences that reveal how individuals approach challenges, adapt across settings and collaborate across teams and communities. Tracking both processes and outcomes better reflects the dynamic, context-dependent nature of these skills. AI tools can support this by analysing how people approach problems – the diversity of ideas explored, response times, collaboration patterns and openness to feedback.

To translate these principles into practice:

- **Educators** can redesign curricula and teaching methods to include real-world projects that promote collaboration and critical thinking; help learners reflect on thought processes and deploy human skills; and maintain digital portfolios that capture both outcomes and the thinking processes.
- **Employers** can use peer feedback to evaluate not just what employees did, but how they did it (i.e. were they collaborative?); signal the importance of human-centric skills by explicitly calling them out in job descriptions and assessing for them when hiring; and work with industry partners to set shared standards for these skills.
- **Governments** can establish national guidelines and funding frameworks that embed human-centric skills into curricula and qualification systems; support performance-based and reflective assessment methods; and ensure they are fair, scalable and comparable.

Developing human-centric skills

Human-centric skills are cultivated through deliberate practice, feedback and supportive environments rather than passive exposure. The following principles can help leaders set new standards for developing these skills.

Prioritize new economy skills: Embedding structured opportunities for human-centric skill development into education systems and workplaces is essential. Instructor-led and on-the-job training help learners integrate skills into daily practice. While creativity and problem-solving or communication skills are often embedded in curricula, emotional intelligence and learning skills are still assumed to develop naturally. Developing human-centric skills also requires a mindset shift – they must be treated as equally important to technical competencies across education systems, workforce training and policy agendas.

Create safe spaces: Human-centric skills grow best in environments that encourage experimentation, failure, feedback and reflection. Evidence from the SSES 2023 shows that students who receive regular feedback, especially on their strengths, report higher levels of motivation, persistence, creativity and trust. Balanced feedback, combined with supportive relationships and peer interaction, are essential for promoting self-confidence and socio-emotional growth.[20]

> “Leaders must move beyond static, one-dimensional measures and assess the whole human, capturing how individuals think, adapt and apply their skills.

Technology can enhance these opportunities: AI-enabled role-play can simulate difficult conversations with real-time feedback, while VR/AR platforms immerse learners in scenarios that replicate negotiation, teamwork or decision-making under pressure. Emerging tools, such as AI coaches, also create safe, low-risk spaces for practicing empathy, inclusive communication or conflict resolution, offering structured feedback while reducing the social risks of failure.

Yet these tools must be used intentionally. Overreliance on technology risks "cognitive offloading" – outsourcing complex thinking, emotional regulation or decision-making to machines – which can weaken deep reflection and active learning.[21] Sustaining higher-order cognitive and emotional skills requires desirable difficulty – the productive struggle that occurs when learners engage in effort-heavy tasks beyond their comfort zone.[22]

Fuel purposeful learning: Experiential approaches bring human-centric skills to life. Simulations, projects and role-play provide safe environments to test new behaviours, apply knowledge in authentic contexts and receive feedback. Active listening exercises, empathy-building activities and assertive communication training strengthen emotional intelligence, while presentations, team projects and challenge-based learning promote collaboration, resilience and problem solving. These approaches are powerful but depend on skilled facilitation, equitable access to resources and well-designed contexts to ensure consistent outcomes and inclusion.

To translate these principles into practice:

- **Educators** can design curricula that prioritize hands-on learning, reflection and feedback; create psychologically safe classrooms and learning environments that allow failure and experimentation; and emphasize the importance of human-centric skills development to parents.
- **Employers** can build mentoring, feedback and peer-learning loops into organizational culture, training and leadership programmes; use AI tools to create safe spaces for experimentation; and explicitly list human-centric skills in job descriptions and performance frameworks to signal their value.
- **Governments** can incentivize partnerships between education institutions, employers and edtech providers to design safe, authentic practice environments and make human-centric skills a national policy priority – setting clear learning standards and funding scalable, equitable models of experiential learning.

Credentialling human-centric skills

Credentialling human-centric skills remains perhaps the most challenging area. Skill recognition must be meaningful, portable and trusted across borders, sectors and systems – qualities that are still unevenly achieved today.

Set shared standards: Traditional qualifications like degrees and diplomas provide well-recognized signals of competence but often capture what people know rather than how they adapt, collaborate and lead. Yet, alternative credentials – micro-credentials, digital badges and endorsements – are emerging to certify specific human-centric skills, such as creativity, resilience, leadership or collaboration. Their modular, stackable format helps people build and showcase skills over time. Still, without shared standards and employer recognition, their value risks being inconsistent. Establishing common frameworks for validation and interoperability at national and global levels is essential to prevent fragmentation and ensure credibility.

Prove it in practice: Portfolios and real-world evidence offer deeper insight into how skills are applied. However, they remain concentrated in creative or technical fields and often lack trusted verification mechanisms to be credible in hiring or admissions. New hybrid models that connect formal qualifications with modular credentials can make lifelong learning more visible and credible. Documented performance – such as projects, reflections and peer evaluations – can provide robust proof of skills in practice, but only if embedded in systems that employers and education providers trust and recognize across hiring, promotion and lifelong learning.

Badge what matters: To ensure recognition is both meaningful and portable, credentials must clearly reflect context, process and learning outcomes. Digital badges, portfolios and other forms of micro-credentials should include metadata detailing how skills were acquired, assessed and endorsed. This transparency enhances trust and comparability, helping employers and educators interpret credentials accurately while avoiding credential inflation.

Technology can help address these challenges. Blockchain-based systems and secure digital portfolios allow credentials to be portable, transparent and verifiable across borders. QR-coded badges and embedded metadata provide additional layers of trust by linking credentials to verified evidence of learning and assessment. Offline and hybrid solutions expand recognition to low-connectivity environments, so that credentialling is equitable and inclusive.

To put these principles into practice:

- **Educators** can integrate digital portfolios and skills tagging into coursework so that learners can document, reflect on and demonstrate human-centric skills developed through projects and experiential learning.
- **Employers** can formally recognize digital portfolios, badges and verified skills records in hiring, promotion and professional development to reward human-centric skills. They can collaborate within and across industries to set shared standards.
- **Governments** can develop national standards and frameworks that embed human-centric skills into formal qualifications, recognize micro-credentials and support interoperable digital credentialling systems. They can collaborate across regions to promote shared standards.

Enabling conditions for a human-centric skill ecosystem

These approaches will only succeed if supported by enabling conditions that guarantee equity and trust. Access must be guaranteed so that all learners, regardless of background, can benefit from opportunities for development, assessment and credentialling. Equally important is the adoption of a common skill language to align learning outcomes, hiring practices and recognition across systems. Assessments, development practices and credentials should be designed to recognize different cultural and gender perspectives while actively minimizing bias. Embedding inclusivity not only strengthens trust in skill recognition but also ensures their relevance and applicability across borders and industries. Finally, technology should serve as an enhancer rather than a substitute for human judgement, expanding access, enabling scalability and supporting reflection, while upholding transparency, privacy and equity.

Taken together, these principles provide a pathway to strengthen global practices around human-centric skills. By embedding them in development, assessment and credentialling systems, and by anchoring them in enabling conditions of equity, common language, context awareness and responsible use of technology, societies can ensure that these essential skills are visible, valued and nurtured for the future of work and learning.

> “Technology should serve as an enhancer rather than a substitute for human judgement, expanding access, enabling scalability and supporting reflection.

3

From principles to practice: case studies for assessing, developing and credentialling human-centric skills

Selected case studies illustrate real-world methods for nurturing, measuring and recognizing human skills across diverse contexts.

The following case studies bring the principles outlined in earlier sections to life. Each has been selected based on their alignment with the global principles and was developed through a combination of expert consultations and in-depth research. They showcase a variety of practical pathways for embedding human capabilities into skills systems at scale. Moving forward, the World Economic Forum will continue to collect and share innovative examples of organizations, governments and systems that value and recognize human-centric skills.[23]

CASE STUDY 1

AWS SimuLearn's AI-powered learning innovation: bridging technical and human-centric skills

Context: Through its work with global customers and partners, Amazon Web Services (AWS) identified a critical gap: while digital platforms effectively teach technical skills, they rarely build the human-centric interpersonal and strategic competencies that make technology teams effective. This gap left learners underprepared for customer engagement and forced employers to rely on costly, time-intensive shadowing programmes. In response, AWS has developed an AI-powered simulation platform that scales business-technical conversations in realistic, low-risk settings – one that measures performance and captures how learners think through problems and communicate solutions.

Approach: AWS developed SimuLearn, an online learning experience that pairs generative AI-powered simulations with hands-on training. SimuLearn helps individuals learn how to translate business problems into technical solutions through simulated dialogues between customers and technical professionals. Through realistic scenarios powered by generative AI, learners engage with virtual customers to gather requirements, iteratively develop architecture proposals, receive constructive feedback, build solutions in the AWS Console and validate implementations – developing their communication, problem-solving, decision-making and solution design skills.

There are five specialized AI agents working together at the core of SimuLearn:

- A business stakeholder agent simulating non-technical perspectives
- A technical customer agent presenting challenging scenarios
- An evaluation agent assessing solution accuracy
- An AWS assistant providing real-time guidance
- A skills assessment agent scoring learners on communication skills, problem-solving skills, customer focus, decision-making skills, technical knowledge and strategic thinking skills.

This multi-agent system creates a safe, scalable environment for developing both technical and human-centric skills. With over 200 training scenarios, learners gather requirements, develop architecture proposals and receive immediate feedback across various roles and industries.

Results: SimuLearn helps learners surface their reasoning, experiment safely and refine the judgement and critical-thinking skills that will distinguish top performers in an AI-augmented workplace.

The tool enables:

- Scalable, risk-free environments for practicing customer interactions
- Immediate feedback on technical solutions and soft skills
- Accelerated development of capabilities typically requiring years of experience
- Engaging learning through gamification and realistic scenarios
- Seamless integration of technical training and human-centric skill development

CASE STUDY 2

PwC: badging human-centric fluency

Context: PwC has built a global framework to accredit learning and skills across its 340,000 people, recognizing human-centric capabilities to make progress visible, portable and understood across teams and markets. The portfolio includes badges such as Inclusive Mindset, which develops awareness of bias, intersectionality and micro-inequities while fostering curiosity and empathy. Issued via Credly, these digital credentials serve as verified, shareable records.

The PwC Professional framework defines expected behaviours and anchors development to how work is delivered as well as what gets done – placing human-centric skills on par with technical expertise and business outcomes.

Approach: Credentialling sits within a wider upskilling model. Starting with PwC's "New world. New skills." programme, PwC's skills journey supports continuous learning at scale and places an emphasis not only on the technical skills required of the workforce but also the human skills that are foundational to how PwC delivers outcomes, lives its values and demonstrates its purpose. The PwC Professional behaviours define the standard that leaders and managers use to evaluate performance, coach and develop others, provide in-the-moment feedback, and support staffing decisions. Some business units across the PwC network reinforce what's learned through badging via practice-based experiences, such as empathy-building interventions, so that learning translates into observable behaviour. Together, these mechanisms create consistent expectations, evidence-based reporting and repeatable recognition paths for human-centric skills.

PwC badges are learning curricula across a range of strategically important topics, with transparent criteria that require learning, application and assessment. For human-centric badges like Inclusive Mindset, participants complete curated learning, reflect on their role in creating inclusive environments and demonstrate practical steps to shift everyday interactions. Some member firms have even made the Inclusive Mindset curricula a requirement for new joiners. Each individual's learning is reviewed before a verifiable credential is issued, enabling individuals to share validated achievement internally and externally.

Results: Individuals gain recognition for behaviours to not only acquire technical knowledge, but to benefit their client work. Badges signal strengths in communication, collaboration and inclusion – 90.9% of badge earners agreed that it improved their ability to practice more inclusive behaviours in daily interactions – supporting confidence and mobility across service lines and geographies. Managers use verified evidence of skills rather than course completions as one factor in staffing decisions, and teams benefit from clearer expectations about how to work together. At the firm level, aggregated badge data provides a view of capability supply that informs investment, while a common language for human-centric performance strengthens culture and delivery quality.

In this case, PwC embeds human-centric capability in the same evidence-based way it treats technical skills, to recognize the value of both essential skill types. The result is a practical credentialling model that supports trust, inclusion and consistent outcomes in complex, real-world settings.

CASE STUDY 3

Tec21 at Tecnológico de Monterrey: learning by doing – together

Context: The Mexico-based Tecnológico de Monterrey redesigned undergraduate education through the educational model Tec21, a national reform that moves beyond lectures to challenge-based learning. The goal is to comprehensively prepare students for the workforce and to be agents of transformation in their regions, equipping them not only with academic knowledge but also with the critical human-centric skills needed to solve real problems in society and the economy. More than 50% of the curriculum now centres on real-world challenges co-created with industry, government and community partners. The model combines hands-on development with competency-based assessment and portable digital credentials so students can demonstrate what they can do, not only what they know.

Approach: The University embeds a competency-based system, including human-centric skills, throughout the curriculum. Institutional rubrics place sub-competencies on four levels and are applied to performance tasks such as challenge deliverables, simulations, pitches and lab work. Peer and self-assessment capture teamwork and reflective practice. Digital portfolios and learning analytics compile evidence of both outcomes and decision-making processes, enabling comparable, fair feedback across cohorts and informing continuous improvement.

Students work in multidisciplinary blocks (5, 10 or 15 weeks, depending on the competences that are being developed) where teams tackle authentic problems, e.g. redesigning a sustainability strategy or creating a social innovation for a non-governmental organization (NGO). Faculty teams and over 3,000 external partners jointly design challenges to ensure relevance and diversity of perspectives. Alongside disciplinary knowledge, learners practice transversal human-centric skills such as self-awareness and self-management, social intelligence, reasoning for complexity, digital transformation, innovative and entrepreneurial mindset, ethical and civic engagement, and communication, all of which are strengthened through meaningful international experiences. Technology is integrated as an instrument that increases learning gain, creating flexibility and amplifying collaboration and self-management in the development of competencies through digital learning experiences such as immersive simulations, access to complex scenarios in virtual worlds and the use of AI to address different disciplines.

Verifiable digital badges are created and integrated with student records and a competency transcript. Credentials are globally verifiable and shareable on professional platforms, giving employers transparent evidence of how competencies were developed and applied in authentic contexts.

Results: Graduates leave with portfolios and credentials that showcase human-centric strengths alongside technical work, improving mobility and early-career readiness. Students graduate with skills in using innovative technologies such as AI and extended reality, but also with competencies enriched by experiences based on these technologies; for example, with the use of adaptive technologies and methodologies, research shows more than 15 points in learning gains in more than 1,500 students.

Partners report graduates integrate more smoothly into organizational contexts, bringing strong communication, teamwork, resilience and ethical reasoning. The combination of challenge artefacts, rubric levels and digital badges offers a clearer hiring signal than grades alone and shortens onboarding to productive contribution.

Institutional indicators show employability within three months, rising from 81% to 89%, with retention and graduation efficiency at historic highs. By making purposeful learning a structural component of its learning ecosystem, and by connecting development, assessment and credentialling into one life cycle, higher education is turned into a scalable engine for adaptability, innovation and shared value creation.

CASE STUDY 4

Udemy: creating safe spaces for human-centric role plays in the age of AI

Context: Udemy built AI Role Play to give people a safe, low-stakes way to practice human-centric skills, including communication, conflict resolution, inclusive leadership, ethical decision-making and critical thinking. This approach addresses the limitations of live role-plays, which are costly to deliver, challenging to scale and often carry psychological risks. The AI-driven simulations adapt to each response and provide real-time, actionable feedback, letting professionals rehearse high-impact workplace conversations without reputational risk. Available in five languages (and expanding to four more) Udemy's AI Role Play reaches 81 million learners and 17,000 organizations across 225 countries and territories, making human-centric skill training practical, repeatable and measurable.

Approach: AI Role Play blends instructor expertise with adaptive AI to deliver private, psychologically safe simulations in which learners practice behaviours such as active listening, de-escalation, constructive feedback, negotiation and decision-making. Instructors and organizations design scenarios that mirror authentic organizational challenges such as resolving team conflict, running an inclusive design critique or handling a performance conversation, while the AI dynamically responds to the learner's choices and language.

Learners receive personalized feedback and guidance on what to try next, enabling rapid iteration without social penalty. To strengthen fairness and relevance, Role Play also provides standardized feedback that tracks engagement, progression and completion, with organizations and learners able to align scenarios to their values and competencies.

Results: AI Role Play has established a repeatable, risk-free practice loop for human-centric skills. Most AI Role Plays designed so far are designed to sharpen high-impact skills related to leadership, management and strategic thinking. Learners report higher confidence navigating difficult conversations; teams use analytics to target coaching where it matters; and organizations gain a scalable alternative to resource-intensive live simulations. Profiles of learner progress are enriched with performance evidence from realistic tasks, while private practice, immediate feedback and the ability to repeat attempts promote a culture of continuous learning.

CASE STUDY 5

University of Cape Town: empowering principals to transform schools through human-centric leadership

Context: In 2012, the Principals Academy Trust partnered with the University of Cape Town's Graduate School of Business, with funding support from Capitec Foundation, to professionalize school leadership at scale. Recognizing principals as the key levers for change, particularly in a context of high poverty and crime, the goal was to move to durable, systems-based, people-centred leadership, grounded in new-economy skills like systems thinking, creative reasoning and personal mastery. Over time the initiative evolved into a multi-year leadership journey that builds school cultures where academic outcomes and human outcomes rise together.

Approach: The co-designed programme is a flexible executive course that builds technical and people-focused skills, with the selected participants receiving a full bursary. The curriculum includes critical new economy skills including systems thinking and personal mastery (self-awareness, resilience, empathy) that is applied directly to each school. Learning continues beyond the classroom: principals receive at least three years of one-to-one coaching from veteran former principals and targeted teacher/classroom support to anchor systemic change. A principal peer network strengthens collaboration across schools and districts. In 2023 the programme expanded to include deputy principals and two high-potential teachers per school, creating a shared language and leadership bench so gains endure when principals are promoted.

Results: The programme has significantly shifted leadership behaviours and school outcomes, reaching 273 school executives across 11 cohorts since launch. Participating schools recorded gains in independently assessed systemic tests and school-leaving results. In the first secondary-school cohort, Bachelor-pass rates rose by 16.4 percentage points, versus 5.8 points provincially, despite starting from a far lower base (19.7% in participating schools vs. 36.5% provincial). By the end of the period, the cohort surpassed the national pass rate by 2.5 percentage points.

In primary schools, the first two cohorts improved by 20.23% on average on the Principals Academy Trust Performance Index, which aggregates results from externally administered, internationally benchmarked assessments. In 2023, 11 programme-alumni schools ranked in the provincial top 10 for performance, and four others won Most-Improved Subject awards. Beyond the numbers, systems and culture are sticking as alumni are regularly promoted to circuit manager roles, extending the model's reach as they eventually coach other principals.

CASE STUDY 6

University of Los Andes, Colombia: prove competence in practice

Context: Based in Bogotá, Colombia, the University of Los Andes is introducing undergraduate digital credentials to make specific competencies with high professional value visible, verifiable and portable before degree completion. Soon, this will also include competencies in interdisciplinary areas related to critical global challenges, such as global environmental change and public management, and in human-centric skills such as leadership. The initiative recognizes that employers increasingly prioritize evidence of competency in real contexts over traditional transcripts.

Approach: Each credential is built around a formative pathway of at least 10 academic credits, combining courses, internships and experiential learning. Completion alone does not confer a credential: students must pass an authentic performance evaluation that provides concrete evidence of applied competence in real or simulated work. Credentials are student-initiated yet centrally verified for integrity; once requirements are met, the Registration Office issues a blockchain-secured digital badge to ensure authenticity, portability and employer-friendly validation.

Digital badges and micro-credentials are recognized within formal programmes, not merely as co-curricular add-ons. The model is designed for scale: three undergraduate credentials were approved in September 2024 from the School of Faculty of Arts and Humanities, with additional offerings in development across the university's 11 schools that will be underpinned by critical human-centric skills including active listening, communication, emotional intelligence and collaboration. To keep offerings aligned with emerging labour-market needs, the institution uses an AI-powered trend analysis tool to identify high-demand topics in both academic and professional fields and inform the design of new pathways courses and programmes.

Results: Though early in implementation, the approach modernizes academic options or minors into competency-based, credentialled pathways. The initiative aims to improve employability and entrepreneurship preparation to current students and future graduates by certifying competencies prior to graduation and offering meaningful recognition for students who exit early. The assessment's first design, grounded in authentic performance evaluation, assures employers that credentials represent proven capability, while blockchain-verified badges streamline verification and reduce administrative burdens. It builds on the model of micro-credentials offered through the continuing education portfolio, which certify employability-valued competencies through digital badges, based on verified evidence that learners have acquired these skills.

CASE STUDY 7

United Arab Emirates National New Joiner Learning initiative by Majid Al Futtaim

Context: In the United Arab Emirates, a significant opportunity exists in aligning the skills of United Arab Emirates nationals with the evolving demands of key economic sectors such as government, real estate and retail. By capitalizing on this opportunity, the United Arab Emirates can accelerate its strategic goals of economic diversification and greater Emirati participation in the private sector, while applying the principle of seeing the whole human to talent development. This approach ensures that upskilling initiatives not only align with market needs but also recognize the individual ambitions, potential and lived experiences of United Arab Emirates nationals, facilitating both national progress and personal growth within a rapidly evolving economic landscape.

Approach: Majid Al Futtaim has deployed a United Arab Emirates National New Joiner Learning initiative which is a structured, tiered programme that provides targeted workshops focusing on human-centric skills necessary for modern workplaces. These skills include communication, resilience, critical thinking, adaptability and change-readiness. The programme is distinctively designed to cater to Emirati talent at various career stages, from frontline employees to entry-level managers for a duration of 6–8 months, with learners attending five in-person workshops at 6–8 week intervals.

The programme is government-funded for eligible United Arab Emirates nationals at AED 11,000 (United Arab Emirates dirham) per person and Majid Al Futtaim supports this with its education allowance. A notable feature of the initiative is its funding model, a public-private partnership where the government funds 70% of the costs through the Abu Dhabi Global Market (ADGM), and employers cover the remaining 30%. This model not only ensures substantial financial support but also fosters a collaborative responsibility sharing between the public and private sectors.

Results: Since its inception in 2023, the programme has successfully engaged 650 beneficiaries, with 50% female participants. It has enrolled 534 frontline employees and 15 entry-level managers, achieving an average net promoter score (NPS) of 9 out of 10, meaning the participants would strongly recommend this learning to others. The pre- and post-training evaluations reveal a 44% increase in knowledge, underscoring the effectiveness of the workshops and helping participants to perform more strongly in their roles.

The initiative's sustainability is underpinned by continued government support through ADGM, ensuring long-term funding and alignment with national economic goals. The programme's design allows for adaptability to future economic and job-market shifts. In line with the principle of seeing the whole human, organizations seeking to replicate this model should align programmes with national priorities, focus on specific workforce cohorts to maximize impact and embed community feedback from the outset. This ensures initiatives are shaped by real needs, lived experience and industry best practice to support holistic human and professional development.

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