

Human Skills: The Missing Foundation of Human Capacity in the AI Age

By Martin Houghton-Brown, Secretary General of The Duke of Edinburgh's International Award Foundation



“Technology will shape what is possible; Human Skills will determine what is done.”

Young people are extraordinary. The joy of working with them these past thirty years is that they bring with them wonderful stories of their own life journeys and the evolving discovery of their own agency. I have met them in classrooms and on camping grounds, in palaces and in prisons and wherever I meet them I listen to their stories.

For too many the story is one of undiscovered capability. But consistently when I meet young people who have had support outside of the classroom, beyond the screens and even beyond the books, in development beyond their technical skills, I find young people who are exploring with curiosity, courage and compassion. Whilst AI is advancing our relationship with knowledge in extraordinary ways it is not the digital skills that predict how well connected a young person is to opportunity but something much more fundamental.

I have met more and more young people who feel disconnected, from society, from opportunity, and from a future they once assumed would welcome them. Where earlier generations looked forward with optimism, many now look ahead with uncertainty.

This is not a failure of intelligence. It is not a failure of education in the conventional sense. It is a failure to recognise and deliberately develop what I have come to believe are the most important capabilities of all: Human Skills.

The capability paradox of the AI age

No one doubts that we need a generation equipped with digital and AI skills. The World Economic Forum's 'Future of Jobs Report' identifies analytical thinking and creative thinking, alongside technological literacy, among the most important capabilities for the coming decade (World Economic Forum, 2023). The OECD, World Bank, and International Labour Organization similarly emphasise the importance of preparing individuals for workforce participation in an increasingly digital global economy (OECD, 2021; World Bank, 2019; ILO, 2021).

Yet these same institutions consistently identify another category of capability as equally important. Leadership and social influence, resilience, flexibility and agility, and collaboration now rank among the most important skills for workforce success (World Economic Forum, 2023).

OECD's Survey on Social and Emotional Skills shows that higher levels of most social and emotional skills are associated with better grades in mathematics, reading and arts, and with lower rates of absence (OECD, 2024). The World Bank has similarly concluded that behavioural and socio-emotional capabilities are core components of human capital and essential to economic development (World Bank, 2019).

We already know these capabilities matter. It is strange then that we have failed to agree even the starting point of a simple lexicon for unifying our efforts to promote these skills.

The language of Human Skills

For decades, we have described these capabilities using fragmented and often diminishing terms: soft skills, life skills, transferrable skills, metacognitive skills, socio-emotional skills. Each captures part of the truth, but none captures their full importance.

The term “soft skills” is perhaps the most well-known example. For most people soft skills implies something secondary or optional.

Yet there is nothing soft about the ability to lead others through uncertainty. Nothing soft about the resilience required to recover from failure. Nothing soft about the judgement required to navigate a world increasingly shaped by artificial intelligence. The Information and Communications Technology Council (ICTC, 2021) notes that ‘HR specialists we’ve spoken with suggest alternate terms like “human skills,” “life skills,” or “non-technical skills” as a replacement for “soft skills”.

This fragmentation of language has real consequences. When we lack clear and unified terminology, policy remains fragmented, and Governments struggle to embed these capabilities explicitly in education systems. Employers struggle to articulate what they are seeking. Practitioners struggle to advocate for their importance. And young people themselves struggle to recognise and value these capabilities in their own development.

What we need now is clarity: language that is precise, translatable, and compelling; language that reflects the true nature of these capabilities and their central importance to human development. This is why I argue that we must begin to describe these capabilities explicitly and unapologetically as Human Skills.

There is nothing soft about the ability to lead others through uncertainty.

The Human Skills Triangle



It may be helpful to conceptualise these as a Human Skills Triangle comprising three interdependent capacities: Agency (the confidence to act), Capability (the ability to act effectively), and Contribution (the commitment to apply those abilities in service of others).

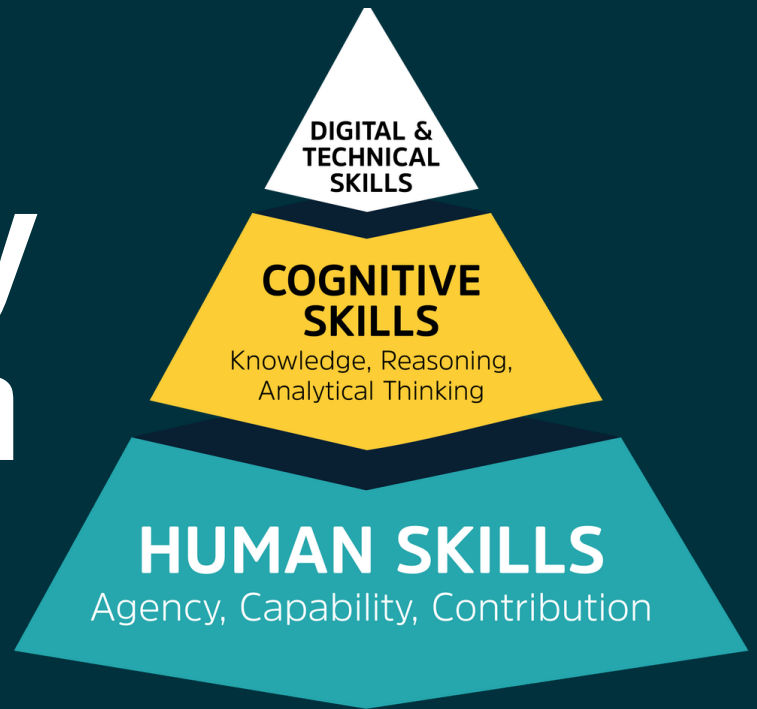
Leaders in workforce skills development increasingly emphasise the centrality of Human Skills. As Mike Howells, President of Pearson Workforce Skills, observes, ‘employers are now realising that human skills are the power skills that really help people stay relevant and adaptable in a changing world’ (Pearson, 2022). What this reflects is a simple truth: a young person entering the workforce who cannot engage in teamwork, apply themselves to solving problems, or persist when facing challenge will struggle to succeed, regardless of their technical proficiency. Language shapes what we recognise. And what we recognise shapes what we invest in.

Human capacity develops hierarchically

Human capability is not flat. It develops hierarchically in layers, one building on another. At its foundation are Human Skills: the capacity to exercise agency, to act with judgement, and to contribute meaningfully – the three corners of the Human Skills Triangle introduced above. These capabilities shape how individuals engage with learning itself, influencing persistence, curiosity, collaboration, and the willingness to grapple with complexity.

Building on this foundation are Cognitive Skills: knowledge, reasoning, and analytical thinking. These enable individuals to interpret information, solve problems, and make informed decisions.

The Hierarchy of Human Skills



On top of both sit Digital and Technical Skills, which amplify human and cognitive capability. Digital tools can extend reach, accelerate speed, and amplify scale, but they do not supply direction; they magnify what already exists beneath them.

When the foundation is strong, digital capability becomes transformative. When it is weak, technology risks amplifying confusion, passivity, and poor judgement.

Societally, we are investing heavily in the upper layers of this hierarchy. But the foundation has been under-recognised.

If Human Skills are foundational to human capacity, then their development must become a deliberate, collective responsibility, alongside academic and technical learning. (OECD, 2024).

Human Skills can be developed

Human Skills are not primarily developed through instruction. They develop when young people take responsibility for themselves and others. When they face challenge and discover their resilience. When they lead and discover their influence. When they contribute and discover their purpose.

Independent research demonstrates that structured Non-formal Education frameworks consistently develop the capabilities we describe as Human Skills. Evaluations conducted for The Duke of Edinburgh's International Award have found that participants report significantly higher self-confidence, leadership ability, and capacity to cope with change than comparison groups (International Award Foundation, 2019).

Similar findings emerge across other global youth movements. I met a group of young people in a teacher training college servicing a vast, rural region of Northern Kenya. The formal training they were pursuing would enable them to return home and teach literacy and numeracy - but what struck me, was something deeper.

As they worked toward their Gold Awards, they were pushing themselves through physical challenges, building new skills, undertaking adventurous journeys, and volunteering inside a local youth custody setting - working with young people whose life chances had already narrowed.

What was extraordinary was not simply what they were doing. It was who they were becoming by committing to all of it. You could see confidence emerging. Leadership taking shape. A sense of responsibility extending beyond self-advancement.

These young people were not only preparing to teach academic content. They were developing the Human Skills to activate potential in others. Many spoke of taking this model back to their communities. Not simply to teach reading and writing, but to awaken agency, capability, and contribution in the next generation.

Studies of Scouting programmes demonstrate improvements in Human Skills such as teamwork, problem-solving, self-confidence and caring for others, with these attributes linked to later civic participation (The Scout Association, 2024). Independent evaluation of the UK National Citizen Service (NCS) 2017 programme, using baseline and follow-up surveys with a matched comparison group, found positive impacts consistent with the programme's aims, including improvements in social engagement and aspects of social cohesion (Kantar Public, 2019).

The Outcomes Framework for Young People developed by YMCA George Williams College synthesises evidence that high-quality youth provision primarily develops social and emotional capabilities, not academic attainment. It highlights domains such as confidence and agency, resilience and determination, relationships and leadership, planning and problem-solving; and links gains in these capabilities to later outcomes in education, employment, health and community life (YMCA George Williams College, 2019). I previously served as Chair of YMCA George Williams College, and worked with Bethia McNeil, co-author, which informs but does not determine this interpretation of the Framework.

Taken together, these youth work settings show that when young people are given real responsibility, meaningful challenge and opportunities to contribute, they reliably develop confidence, resilience, social connectedness and a sense of purpose.

These are precisely the Human Skills captured in the Human Skills Triangle: Agency, Capability and Contribution. Research on outdoor and adventurous education using a self-determination framework similarly finds that such experiences can satisfy young people's needs for autonomy, competence and relatedness while strengthening problem-solving, collaboration and communication skills (Sproule et al., 2013).

Self-determination theory (SDT) proposes that people thrive when these three basic psychological needs are met, leading to more self-directed, internally motivated behaviour (Deci and Ryan, 2000). In this sense, the Triangle can be read as a practical synthesis of SDT in youth settings, translating autonomy into Agency, competence into Capability, and relatedness into Contribution.

In a world facing increasing conflict and social division, the role of Human Skills development becomes even more important. Studies of youth work settings that focus particularly on cultivating empathy among adolescents suggest that active, compassionate responses can be strengthened over time through relational support and opportunities for civic engagement (Dolan, 2022). When youth programmes intentionally create environments that meet young people's needs for autonomy, competence and relatedness, and invite them to act with empathy in their communities, they are doing more than enriching individual lives; they are cultivating the Human Skills that form the very fabric of society.

The defining challenge of our time

We are living through the most profound shift in learning since the invention of the printing press. The speed of change is extraordinary, and the opportunities are vast. Artificial intelligence can provide information instantly, but how will we test that information, use that information, and on what moral compass will we rely?

Large language models are placing unprecedented knowledge at young people's fingertips. But an algorithm cannot provide context. It cannot teach empathy. We are already seeing the friction of this gap: young people with access to infinite answers, but who are unsure how to ask the right questions, how to navigate differing viewpoints, or how to tell what is true.

What happens when we hand the most powerful technological tools in human history to a generation without equipping them to steer them? The defining question of the coming decade is not whether young people can use artificial intelligence. It is whether they will develop the Human Skills to shape its use. Technology will shape what is possible; Human Skills will determine what is done.

From recognition to action: The Global Human Skills Forum

Despite growing recognition of their importance, Human Skills remain fragmented in policy and under-supported in practice. We lack a shared frame that can connect this evidence across sectors and translate it into coherent policy and investment. This must change.

I believe we need a shared narrative, a story that connects all of us who are committed to investing in the younger generation, a story that helps us move from rhetoric about youth opportunity to practice that is genuinely aligned with policy. The Human Skills Triangle offers one such integrative frame, linking Agency, Capability and Contribution in a way that is intelligible to policymakers, practitioners and young people alike.

This is why we are proposing the creation of a Global Human Skills Forum. A dedicated Global Human Skills Forum would provide that shared frame. It would convene existing initiatives rather than replace them, creating a space where evidence from youth work, education, labour markets and psychology can be brought into one conversation.

The Forum will bring together governments, international organisations, technology leaders, civil society and youth movements to establish Human Skills as a foundational complement to formal education and Digital Skills. It will align evidence, policy, and implementation, and help ensure that as the world accelerates investment in emerging technologies, including artificial intelligence, it invests equally in human capacity.

To build a generation that is digitally and AI-empowered, we must build on the foundation of Human Skills. That requires a shared commitment to understanding how young people develop these capabilities, and how they can apply them with confidence for the good of our societies. This is why it is time to come together around Human Skills.



THE DUKE OF EDINBURGH'S INTERNATIONAL AWARD FOUNDATION

The Award challenges young people age 14–24 to build essential Human Skills such as resilience, leadership and empathy through a globally recognised non-formal education framework. By stepping beyond the classroom into self-guided learning, participants develop the foundational capabilities needed to thrive in a rapidly changing world. It is through experiences that require persistence, focus, teamwork and character that young people develop vital skills for life and work.

- Founded in 1956 by HRH Prince Philip, The late Duke of Edinburgh
- Delivered in more than 130 countries and territories
- 1.2 million young people from all backgrounds participate annually

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