

Smart Education for Transforming Lifelong Learning



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Hon Ministers, Excellencies, Prof Huang, Dr Liu Dejian, Director Tao Zhan Distinguished Colleagues, let me begin by saying what a pleasure it is to be here in person as part of this special GSE Summit 2023. In my presentation, I will reflect on smart education and how it can transform lifelong learning.

Over five decades ago, futurist Alvin Toffler wrote 'The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn and relearn'. The literate of the 21st century will be lifelong learners.

In this presentation, I will first review some global perspectives on lifelong learning followed by a discussion on what we understand by smart education. Finally, I will look at the ways in which smart education can transform lifelong learning and how various stakeholders can support this.

Life expectancy has gone up and those born after 1997 could live to be a hundred. Both young and mature populations, need learning that contributes to livelihoods or well-being. What should be our approach to lifelong learning?

UNESCO has played a leading role. Sustainable Development Goal 4 aims to ensure inclusive and equitable quality education and lifelong learning opportunities for all by 2030. This reflects UNESCO's rights-based approach to learning.

At the Transforming Education Summit held last year, the UN Secretary General urged member states to embrace the concept of lifelong learning, provide more flexible pathways and credentials that go beyond formal education.

According to the World Bank, lifelong learning must cater to diverse learning needs, be competency driven and contribute to the knowledge economy. Here we see a reference to competencies and the knowledge economy.

The World Economic Forum, another influential organisation, looks at lifelong learning within the imperative of economic growth and individual careers. Over the years, there has been a shift from a humanistic to a human capital development approach to lifelong learning, and this has become the dominant narrative today.

We see two competing visions of lifelong learning—one visionary and all-encompassing, the other driven by utilitarian considerations related to competencies and the world of work. Both approaches are needed and complement each other. How can we implement lifelong learning effectively? Is smart education the way forward?

First let us reflect on what we mean by smart education.

In the last ten years, we have seen the concept evolve—Prof Huang views smart education as a means of promoting a heightened learning experience and teaching efficiencies. Gabriela et al define smart education as a combination of latest technologies and advanced pedagogical practices. A more recent formulation highlights learner autonomy.

At GSE 2021, I had proposed a philosophy of smart education captured in the 5Es – education that is enjoyable, engaging, efficient, effective, and ethical.

While the 5 E's are still relevant today, it might be helpful to reimagine smart education within the context of contemporary realities—the pandemic, phenomenal advances in technologies and the climate crisis. SMART as an acronym provides a useful framework--education today must be sustainable, meaningful, accessible, resilient and transformative.

First, climate disasters are likely to be the biggest disruptors of education in the coming decade. The education sector contributes to both direct and indirect emissions, with an impact on environmental degradation.

As Bill Gates points out, the biggest emitter of greenhouse gases is the construction industry. As the need for education grows, smart learning approaches that go beyond 'brick and mortar' solutions will be needed.

The Open University, UK compared the carbon emissions of ICT-enhanced and face to-face courses and found that distance teaching models had significantly lower environmental impacts. COL conducted a similar study in Botswana and found that the average carbon footprint of the distance learner is nearly three times lower than that of their campus counterparts.

Recognising the urgency of the crisis, COL presented a report on transforming education through climate action to ministers of education. Climate action is integral to smart education.

Second, smart education must be meaningful and provide opportunities for livelihoods. The Open University of China used distance learning during the pandemic by adopting targeted interventions to support village communities, improving the livelihoods of about 50,000 people.

In the informal sector, COL's lifelong learning for farmers helped illiterate women, learn farming techniques in their own language, using basic mobile phones. Every \$ invested resulted in \$8 worth of income and assets.

Smart education must also be accessible to the most disadvantaged and marginalised sections of society.

This includes persons with disabilities. Studies show that more PWD join distance learning institutions because of flexibility, convenience, availability of content in various formats so learners can read, watch or listen to lectures. ODL provides a degree of anonymity where students with disabilities can interact with professors and peers without feeling discriminated.

Smart education must empower stakeholders to be prepared for any future disasters or shocks. This would require a focus on building the capacity of teachers, parents and siblings to support learning. During the pandemic families became a useful resource in Ghana; in Liberia and Sierra Leone, hotlines were provided by ministries for parental feedback. Parents supported radio lessons in Rwanda.

The pandemic experience also stressed the need to support the psycho-social well-being of students. Social emotional learning resulted in higher scores for students, as a study indicates.

Above all, smart learning is transformative. According to Mezirow transformative learning enables us to make our own interpretations rather than act on the beliefs, judgements and feelings of others—transformative learning develops autonomous thinkers.

This transformation can be achieved by integrating formal, non-formal and informal learning. The teacher-led sequential learning in formal education needs to be supplemented with unstructured learner-led approaches. This involves moving beyond pedagogy to the integration of three approaches: pedagogy, andragogy and heutagogy.

After reviewing the five dimensions of Smart education, we can conclude that Smart learning is a broader concept than online learning. In fact, it is a comprehensive approach that integrates technology, pedagogy, social inclusion and environmental conservation.

How can we harness the potential of smart education to transform lifelong learning?

Business as usual will not work. The present approaches have focused more on acquiring skills and competencies for livelihoods, with the main emphasis still on formal education.

The smart approach would move beyond acquiring skills and competencies to empowerment. This would mean not just adapting to changing circumstances but acquiring the ability to change circumstances.

Lifelong learning cannot be perceived as a mere course or programme. It is a culture that needs to be integrated in every aspect of life. Policies and programmes should focus on building a learning culture by promoting the development of skills knowledge and values on a continuous basis—it requires learning, unlearning and relearning. This is where smart education can contribute.

First, no smart education today can ignore the urgency of climate change. We need to adopt a green learning agenda at all levels of education. This would require developing the skills for green jobs for a low carbon economy; green life skills for behavioural change and skills for a green transformation that addresses social justice.

Second, Marc Prensky claims that learners should apply their skills and knowledge to real world problems, for a meaningful impact on the world. This would mean moving from a purely academic approach to an action-oriented one.

Third, technology innovations can make learning more accessible. COL has tailored audio-MOOCs to reach these gardeners through their basic mobile phones. The bottom billion can be reached by providing simple technology solutions for delivery in low bandwidth situations. Technology solutions designed for the last person in the queue have the potential to benefit even privileged constituencies.

Fourth, resilient systems prepared to deal with future uncertainties require the capacity building of policy makers, teachers and learners.

Fifth, the transformative approach would integrate the values of environmental conservation and global citizenship. The dominant educational paradigm values achievement rather than accomplishment. Achievement benefits only the individual while accomplishment benefits society, leading to transformation.

What will be the role of key stakeholders in achieving this transformation?

Since smart education addresses the goals of SDG4, intergovernmental organisations such as COL and UNESCO can provide advocacy and policy support. Sharing good practice and forging global partnerships, will be key interventions.

Governments must focus on developing policies for ICT infrastructure and governance. Existing accreditation and quality assurance mechanisms which focus on formal education alone need to be revisited to include non- formal and informal learning as well.

The role of institutions will be to provide seamless pathways between learning that takes place in different contexts and times. The Smart Education framework will need to be adopted and adapted. SMART approaches in ODL, OER and technology enabled learning will help implement lifelong learning for the progress and prosperity of the people and the planet.