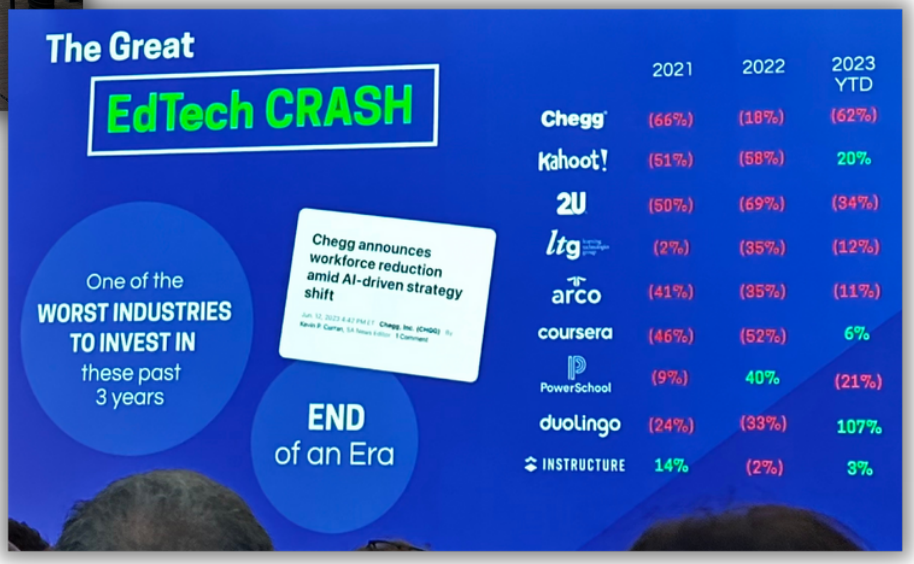
EDTECHXEUROPE JUNE 2023

As questions are being asked about the value of EdTech, especially since the advent of ChatGPT, it was timely and fitting to be at EdTechXEurope this year – held once again at the Tobacco Docks in London. Just as the industrial revolution heralded unprecedented changes to the work of many manual workers – today generative AI poses significant challenges and substantial change to the work done by knowledge workers/white collar workers and those in the creative industries.

Two photos from the day sum up the distance we've travelled with technology, and more recently EdTech, in the last 200 years and the last 8 months.



GENERATIVE AI - THE END OF EDTECH?

So is it all over for EdTech now that ChatGPT and other forms of generative AI have exploded onto the scene?

Not only did the opening keynote from the EdTechX co-founders Benjamin Vedrenne-Cloquet and Charles McIntyre tackle this issue - but they did so against the backdrop of what Vedrenne-Cloquet correctly referred to as the "regressive triumph of the lowest tech" that education institutions switched to during the COVID-19 pandemic.

The regressive 'EdTech' (ie video classrooms and powerpoint) that many students experienced during the pandemic, the inability of many teachers to adapt their teaching practices to an online environment, and the ongoing issue of business ethics in parts of the sector – led Vedrenne-Cloquet in his opening remarks to argue persuasively that "EdTech hasn't delivered on its promise".

Why not, and what can be done about it (ie what EdTech works) were the discussions that framed the remainder of another stimulating, engaging conference.

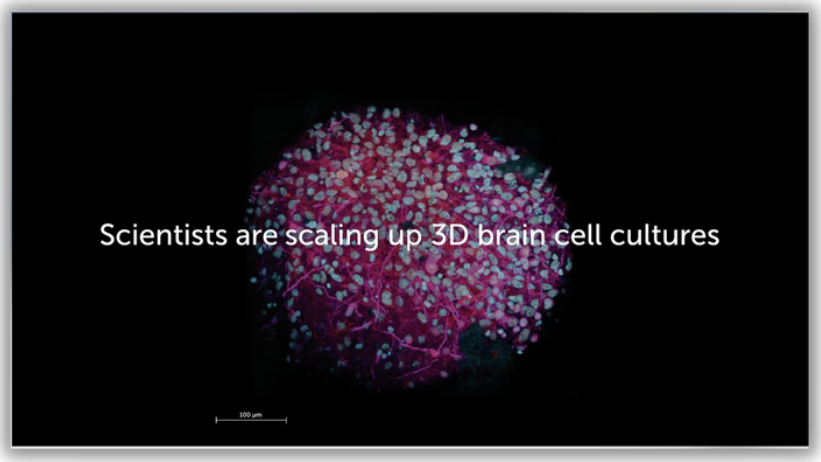
Vedrenne-Cloquet and McIntyre argue that because education is such a highly regulated industry it has been slow to take-up proven EdTech which enhances student learning. That's why, as a former education regulator, I've been most interested in the impact EdTech is having in workforce upskilling and reskilling. Corporate education is a less regulated environment and, with the rapid changes happening in the world of work, it is also where the demand for upskilling and reskilling is particularly strong. It is therefore one sphere of the EdTech sector where innovation is happening and where there has been a strong uptake.

Generative AI has undoubtedly changed the conversation about tech in education, and reflecting on the impact of generative AI on teaching and learning, McIntyre made the point that "if we… provide a test that the machine can answer, then what is the point of doing that test?" It is impossible to argue with his logic, and it leads inevitably to the need to shift our focus in education to rethinking what we are assessing as evidence of student learning. Which means being clear in an era of AI about defining/redefining what we value as learning and therefore what we assess.

But in grappling with AI and its impact on education and our broader society we also need to be conscious that "60% of all data that goes into the AI comes from the US, so how can we expect it to produce answers to questions that we want on the basis of such a skewed data set?" Another current AI bias is that "78% of all people involved in artificial intelligence (at the moment) are men." And then there are the privacy challenges of AI: "who owns these tools?"

McIntyre referred to the work of US-based SureStart, which is providing coding and AI related training opportunities to people from under-represented backgrounds to help ensure they can be part of building the next generation of artificial intelligence. SureStart also has an explicit emphasis on teaching ethics to their coding students, which is not always the case for students entering careers in tech from a science or maths background – leaving them less equipped to deal with the significant ethical dilemmas AI creates.

And finally Vedrenne-Cloquet blew my mind with a short video of where AI might lead us in the next decade - to Organoid Intelligence (OI). He observed that scientists have already identified that AI powered by silicon (ie today's tech) is much less sophisticated and less powerful than the human brain. So instead of trying to augment human intelligence with silicon-based computing, some scientists are creating biocomputers powered by lab-grown human brain cells. This link takes you to the video Vedrenne-Cloquet shared.



And believe it or not, the conference keynote left me optimistic about the future. Vedrenne-Cloquet summed up the potential of AI thus:

> "the keyword is 'chat', because (in engaging with AI) … we are basically domesticating AI. We are domesticating AI the same way we have domesticated fire and other tools, like technology, over centuries. And as fundamental activists, we should expect no less over the next 10, 30 years, a wonderful explosion in human productivity and creativity. And so what does this all mean for EdTech?... It's certainly time for EdTech to reinvent itself (and) it's also a time for all of us to reinvent our relationship with intelligence and knowledge."

WORKPLACE LEARNING REDEFINED

Jonathan Satchell and Piers Lea from Learning Technologies Group (LTG) drew on their significant experience in corporate education and upskilling to discuss how workplace learning is changing.[1]

They note that while training used to be something organised by HR departments (or individuals themselves) now the companies which are moving ahead are those where the company's skills agenda is a key priority for the CEO. LTG is even working with Microsoft to help them build processes and upskill their own staff on their new tools and innovations that they are releasing to the market…

LTG argue it is no longer a "question about whether or not these organisations are going to have to skill people in order to succeed", it is "a given."

"With the advent of AI you're now looking at corporate competitiveness and government efficiencies, all of those sorts of things, it's actually going to be how you keep the people up with the technology. And of course you've got to use technology in the process of doing that…"

Large companies now have hundreds of millions of dollars in their training budgets and LTG suggests they are looking for demonstrable impact – ie a focus on learning analytics using big data and algorithms which can "pull together not just what people are learning, but the relationship between learning and performance in the organisation."

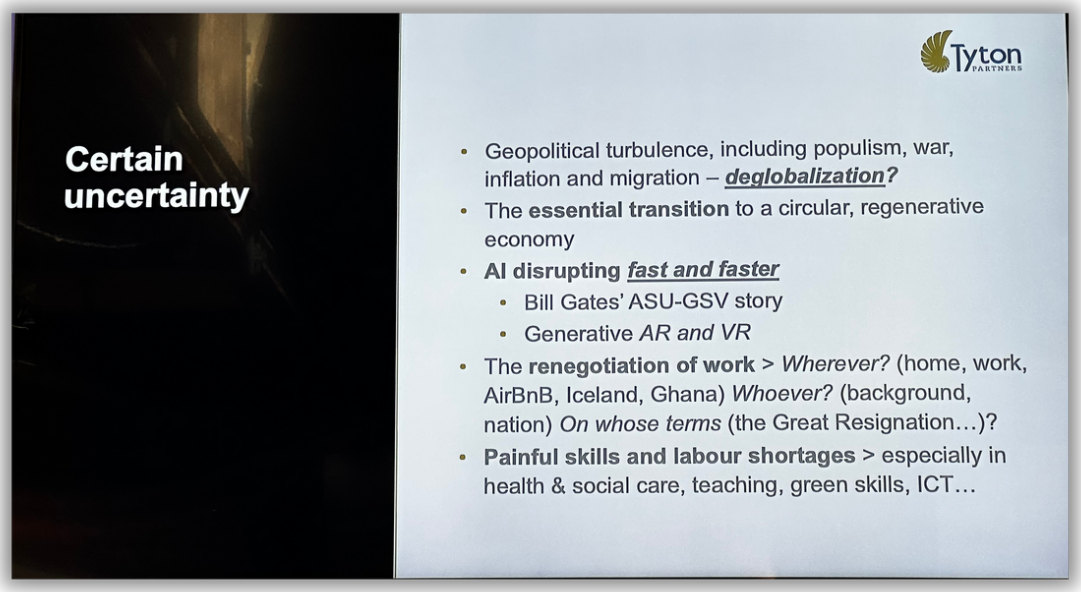
LTG align companies' organisational KPIs with their learning analytics data sets to help organisations see what's working and what's not. Although the LTG representatives went on to also share that over the last seven years that they have been collecting learner analytics data – the overwhelming majority of learning professionals (90%+) in companies they have worked with have said they wanted to measure the effectiveness of learning, but the number choosing to use LTG's tools to do that is much lower (about 50-60%) because of competing priorities - which would appear to imply that some CEOs know that training for their staff is important but they are more focussed on the fact training is happening rather than how beneficial the training is – a conundrum for efficacious EdTech companies.

Discussing the future of their business and potential M&A opportunities, Satchell noted that "the new technologies (like Generative AI) that are coming forward really matter to us. We think anything that can help to adapt and personalize learning experiences, create more intelligent business simulations, be able to ground learning in someone's mind in a very automated way, is very important to us."

[1] LTG is listed on the London Stock Exchange's Alternative Investment Market (AIM) and operates in 35 countries offering 13 different products and services focussed on recruitment, talent mobility, performance, learning, compensation, diversity and inclusion, affirmative action planning, contingent workforce management, compliance, succession, engagement and technical integration.

TRENDS & EMERGING OPPORTUNITIES IN THE FUTURE OF WORK

The Managing Director of Tyton Partners, Nick Kind, started by discussing the drivers of change in the world, in the work people do and in where they work – and these are the factors that in turn are driving the demand for upskilling and reskilling.



He then shared this great example of the pace of change we are confronting:

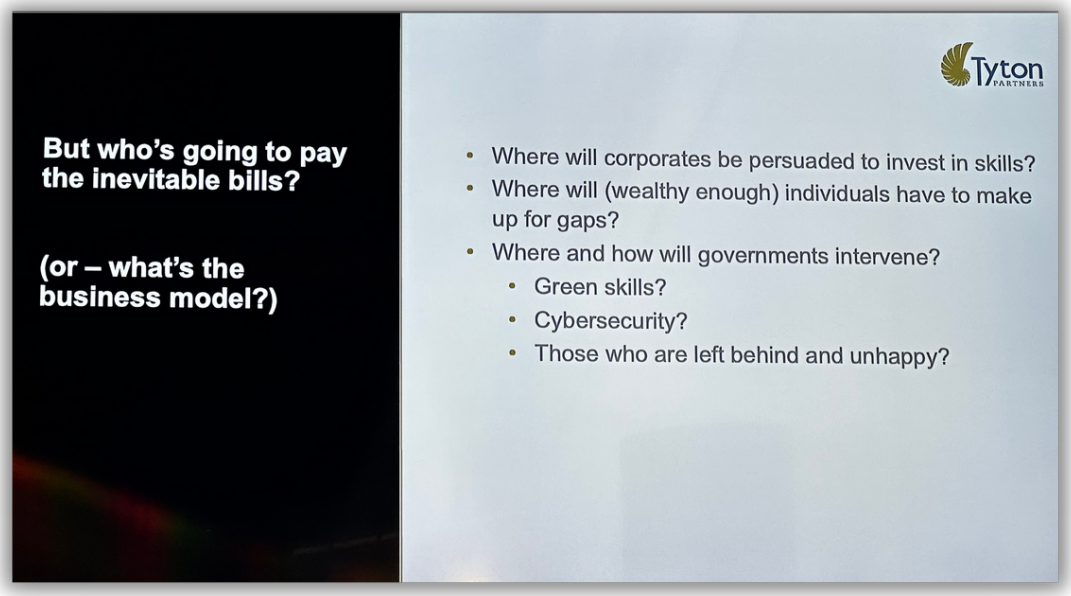
> "For those of you who weren't at the ASU+GSV conference in April earlier this year in San Diego, there was a wonderful story that Bill Gates told when he was on the stage. Which was that he was obviously in a little early around the development of ChatGPT and the large language models, and the summary of the story was as follows... They came to him last summer and they said, "Look, we've got some amazing technology which is going to be great, it's going to be really, really good." And he went, "Yeah, but until it can pass the AP Biology exam," which is a bit like an A-level biology for those in Britain, "I'm not really interested, I don't think it'll really work." And Gates thought, "That's going to take three years, I'm pretty safe, it's going to be fine." Three months later the folks from ChatGPT come back and say, "Yep, done it."
>
> And that's the kind of speed that we are seeing around these things."

He went on to suggest that 'generative VR' is something educators should be thinking about now – in terms of how we develop course content and how we teach. He then went on to observe... "I'm sure that generative VR is coming. I don't know when it's coming, I have not looked into the technology as deeply as I hoped I might, but I am sure we are getting to a situation where you're going to be able to type, **"Please create me a row entirely full of fluffy pink ponies who teach me about maths."**

He went on to explain how he thinks generative AI can and is changing teaching – from educators, instructional designers and publishers *creating* educational materials and lesson plans which *sequence* the learning - and instead these tasks increasingly being done by AI. To instead publishers, instructional designers and educators *curating* and *validating* the content in these new educational materials – before educators use them with their students.

He went on to ask some important questions in relation to corporate upskilling – which I think are particularly pertinent in Australia as we contemplate the Universities Accord recommendations and the new National Skills Agreement – both of which will shape the funding for traditional VET and higher education.

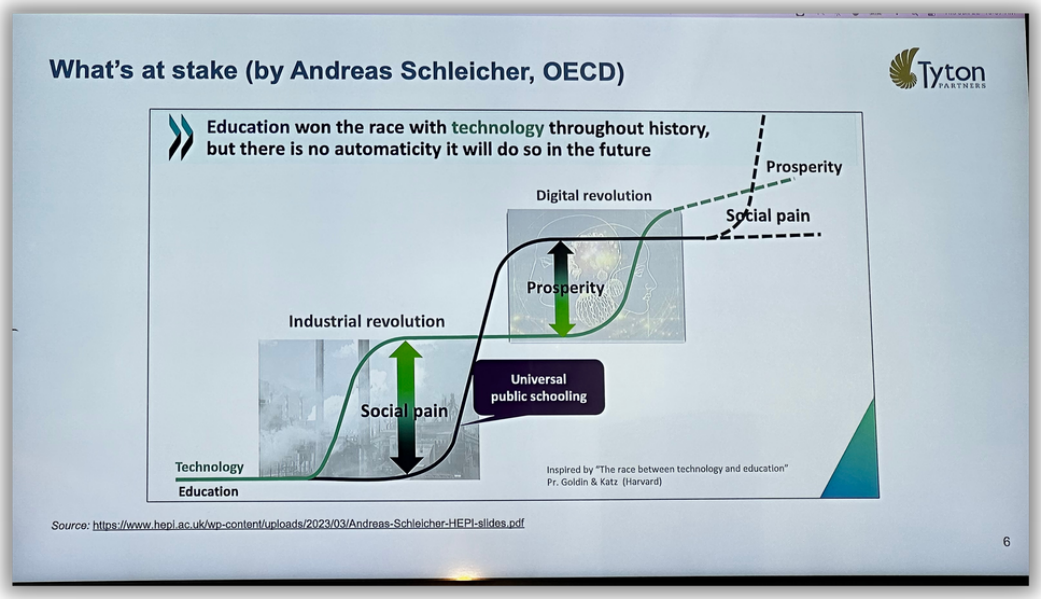
Kind's questions were:



He framed them in the context of a slide developed by the OECD's Andreas Schleicher, which frames the challenge we face in terms of the relationship between technology and education. As we grapple with the future of work, is the social pain going to be too great in terms of the way technology is developing?

Kind (and Schleicher) ask:

- How are we going to bend that curve?
- How are we going to make sure that these lines don't get too far apart?



INNOVATIVE INITIATIVES AND INSTITUTIONS

There were a number of EdTech education institutions and initiatives which were new for me at this year's Summit. I wrote about them in a recent article for **Koala News** and while the focus of that article was on the implications of these institutions and initiatives for Australian transnational education – they are worthy of consideration by all providers wanting to understand some of the innovations happening outside Australia.

Of particular note are:

UNICEF – LEARNING INNOVATION HUB

UNICEF's Learning Innovation Hub focusses on improving K-12 education globally using tested EdTech solutions. The Hub is a start-up within UNICEF's Office of Innovation, with a mandate to re-imagine the future of learning and how technology can play a role in transforming education.

UNICEF is looking to "identify the game-changing EdTech tools, digital learning tools, that can really work in multiple countries and with millions of children." The Learning Hub is focussing on improving educational outcomes for learners by helping identify proven EdTech that delivers real educational improvements by investing in pilots to test the efficacy of the EdTech, generating evidence, and working closely with governments to share information on what works.

As Angeles Cortesi, Head of Global Learning in the Innovation Hub, stated "we are obsessed with ensuring that… n**o matter where a child is born, that doesn't define the quality of education they receive, because talent has no GPS**."

She went on to explain that:

> "The whole idea is to be able to improve the learning experience for children. But although we are powered by technology, we are engineered by humans and we work a lot with the human ecosystem to ensure that we help the different countries, the system to really be able to understand what works and to strengthen their systems…"

One of the recent EdTech platforms they have seen work well is Eduten, which is a spin off of Finland's University of Turku, and is an AI, gamified adaptive math platform. It's been used by more than 1.4 million users since 2011 and was a winner in 2022 of UNICEF's Blue Unicorn Award. It has been independently proven to improve student learning using a personalised, adaptive learning approach.

Cortesi shared the results of a recent pilot in Mongolia which ran for just 12 weeks with a randomised, control group. Eduten delivered a 22% improvement in the learning outcomes of children using the platform and 94% of the children involved said that it had helped make it easier for them to learn maths.

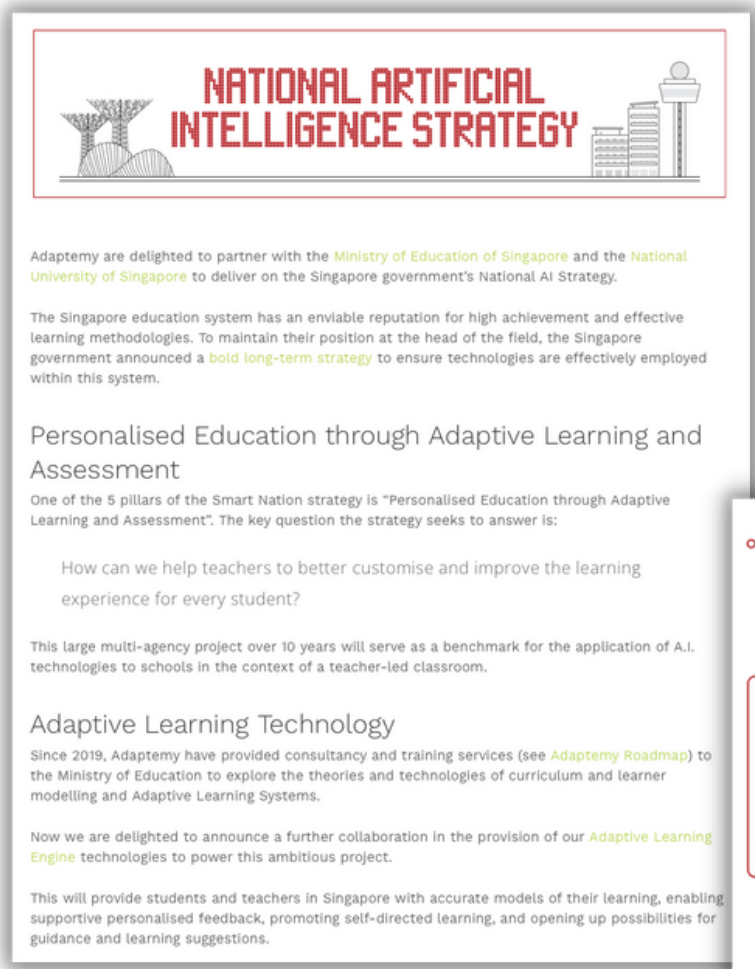
The Learning Hub is now looking to accumulate "more and more and more" evidence at what works in EdTech to improve learning but they are doing so against the backdrop of a "learning crisis" where "70% of children in low- and middle-income countries reach the age of 10 years old and they are not able to understand a single text they're reading.

ADAPTEMY – ADAPTIVE LEARNING THROUGH AI

Adaptemy was founded in 2015 and focuses on improving learning through AI and adaptive/personalised learning technologies. Based in Ireland but with operations in Europe and more recently Singapore, Adaptemy works with governments, schools, higher education and training providers to improve student learning.

Their key solutions are an adaptive learning API which can be integrated with providers' existing learning platforms to enable them to use adaptive learning technologies to improve learning outcomes or there is an option to integrate adaptive learning courses into an existing LMS (eg Canvas, Moodle, Blackboard, etc). Their clients include:

- The European Union Agency for Law Enforcement Training (CEPOL) to improve its learner analytics for the training CEPOL provides to law enforcement officials across the EU
- A Belgian EdTech company, die Keure, to deliver a 'co teacher' for primary school aged children learning maths, social sciences and languages, and
- Singapore's Ministry of Education, following a pilot with Adaptemy launched in 2019, the government is now rolling out adaptive learning across Singapore schools. The National University of Singapore is involved as a research partner for the program – ensuring the educational improvements being delivered are real. The program is being delivered as part of the Singapore government's **National AI Strategy.**



NATIONAL ARTIFICIAL INTELLIGENCE STRATEGY

Adaptemy are delighted to partner with the Ministry of Education of Singapore and the National University of Singapore to deliver on the Singapore government's National AI Strategy.

The Singapore education system has an enviable reputation for high achievement and effective learning methodologies. To maintain their position at the head of the field, the Singapore government announced a bold long-term strategy to ensure technologies are effectively employed within this system.

Personalised Education through Adaptive Learning and Assessment

One of the 5 pillars of the Smart Nation strategy is "Personalised Education through Adaptive Learning and Assessment". The key question the strategy seeks to answer is:

> How can we help teachers to better customise and improve the learning experience for every student?

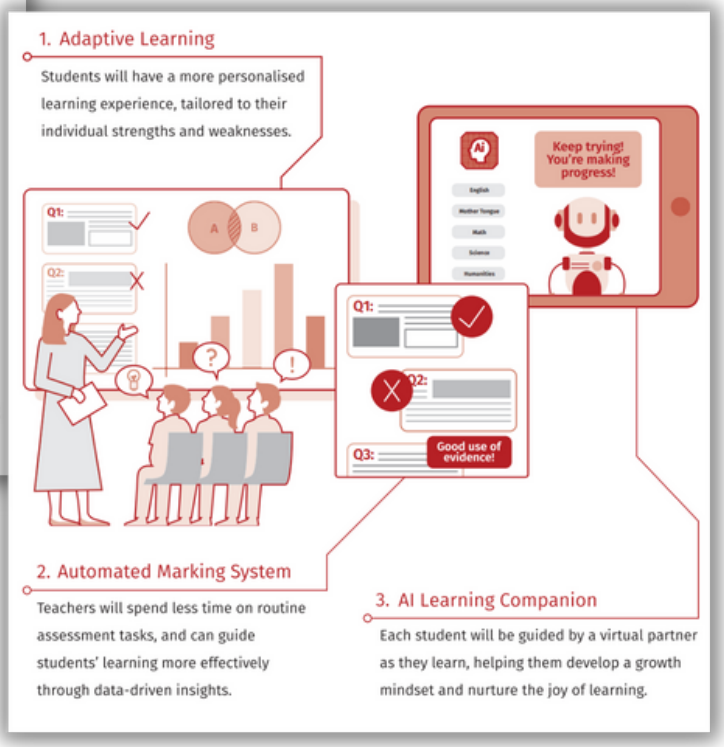
This large multi-agency project over 10 years will serve as a benchmark for the application of A.I. technologies to schools in the context of a teacher-led classroom.

Adaptive Learning Technology

Since 2019, Adaptemy have provided consultancy and training services (see Adaptemy Roadmap) to the Ministry of Education to explore the theories and technologies of curriculum and learner modelling and Adaptive Learning Systems.

Now we are delighted to announce a further collaboration in the provision of our Adaptive Learning Engine technologies to power this ambitious project.

This will provide students and teachers in Singapore with accurate models of their learning, enabling supportive personalised feedback, promoting self-directed learning, and opening up possibilities for guidance and learning suggestions.



MEDVARSITY'S USE OF AI

Medvarsity is India's largest healthcare EdTech organisation offering 200+ Fellowship, Post-Graduate Programs and Certificate level courses to students in more than 70 countries. In his presentation to the Summit, CEO, Gerald Jaideep discussed how Medvaristy is using AI:

> ""We have two content organisations, one is of course the content organisation that develops large volume of clinical content, and then we have a content organisation that is our marketing engine (ie what digital ads we put out, the content we put out on our social handles). We've invested very heavily on training both those functions to use AI tools.
>
> And our realisation was in one function, the creative copywriting… we actually have to scale down certain roles and change certain roles because technology has allowed us to do much more with the capacity that we had.
>
> Whereas on the medical content side of it, we realised that we have to build new roles while we are using technology tools like ChatGPT and others… we have to bring in more technical language model people to frame the tool on our end. That was a requirement we never had before. We have 30,000 hours of content, which now becomes a training source, but we also required more medical doctors to come to do more clinical reviews because (of our introduction of ChatGPT)… As a nonclinical person, if I read (what ChatGPT has created) it sounds very intelligent because it's using all these Latin and big words but how do I know it's real? And that's a competency that we had to consciously invest in.
>
> But the bigger challenge is not knowing the competency that we need to develop as you look at the next six months or the next year..."

LYNX EDUCATE

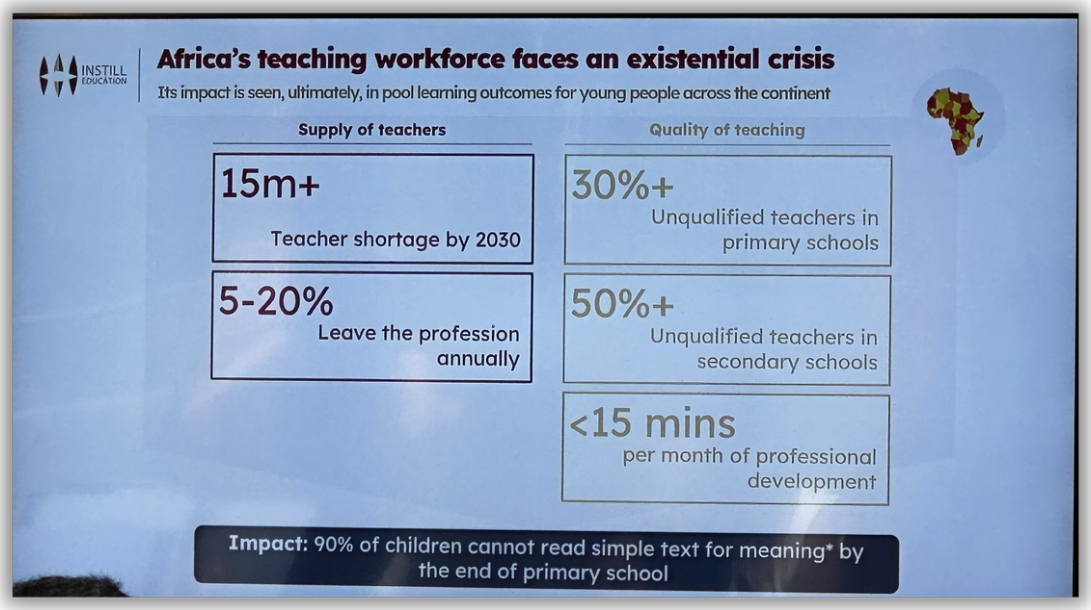
France's Lynx Educate is a start-up, founded by experienced education professionals and with an impressive advisory board, which partners with universities, bootcamp providers, certificate (ie VET) providers, and other workforce training organisations to take their myriad offerings and tailor them specifically for companies to help meet their upskilling and reskilling needs. Lynx's focus is on helping companies access the education and training solutions they need, without them having to find the specific courses and providers themselves.

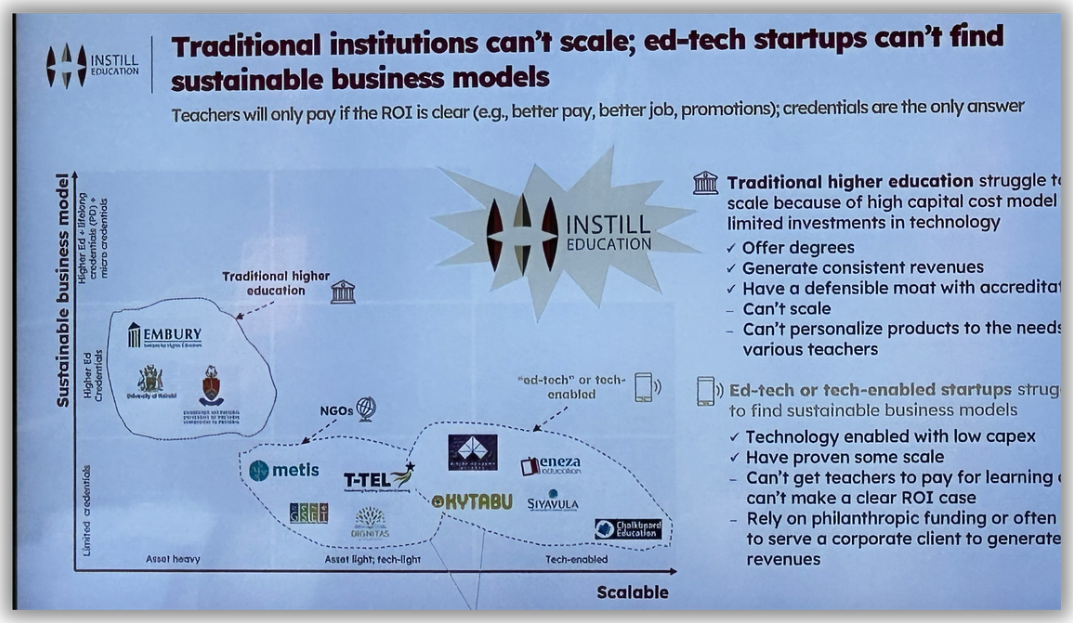
More than an aggregator, Lynx curates courses specifically for individual companies based on their skills needs and the learning options available on Lynx's platform, and they provide individual tuition support to learners. And Lynx also provides companies with meaningful ROI data on their skills investment.

With a specific focus on frontline staff, often overlooked in corporate training programs, Lynx is currently looking at ways to improve the skills of the health care workforce. Their work to date includes working with Chipotle (the fast food restaurant chain), a major European retailer and an energy transition scale-up firm.

INSTILL EDUCATION

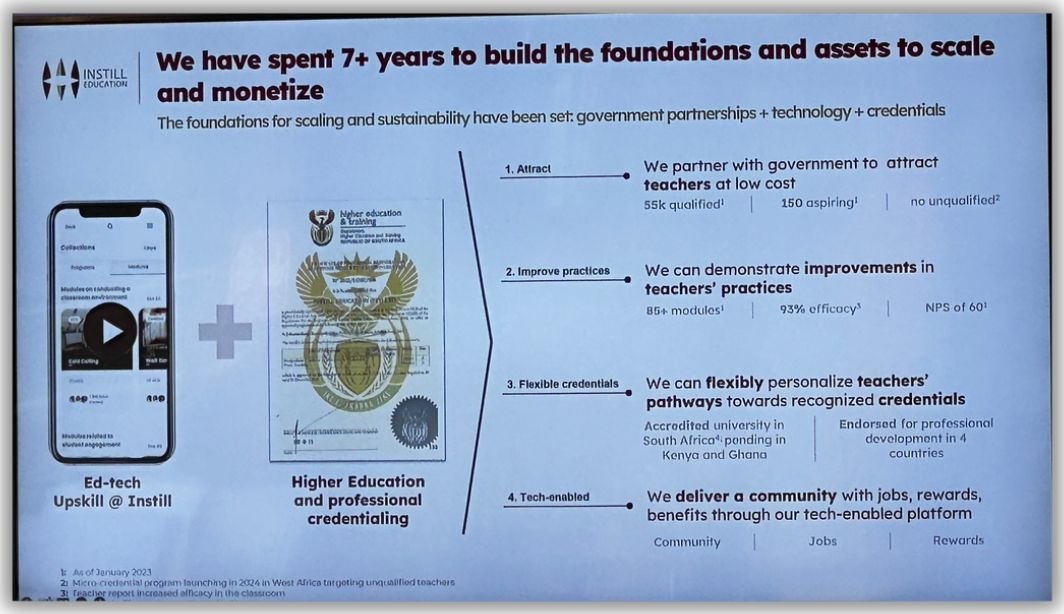
South Africa's Instill Education is working with African and international universities to address Africa's school teacher shortage of 15 million qualified teachers by 2030. The data shared by Alim Ladha, Founder and CEO of Instill on the shortage of qualified teachers across Africa and the subsequent impact on student learning and attainment was shocking.

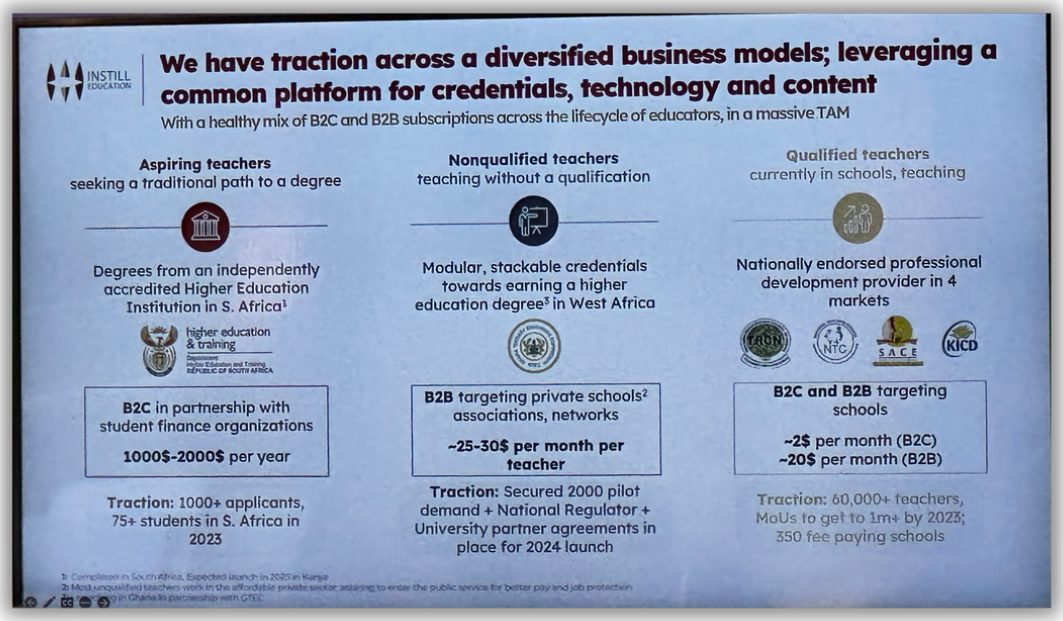




Ladha's passion to tackle these problems in Africa's schools was inspiring. Instill's Upskill platform is a mobile-first solution offering existing teachers, and those interested in joining the profession, with short courses targeted to their personal learning needs.

Instill partners with universities and governments and offers low-cost, high quality education with proven effectiveness: almost 100% of teachers who have undertaken courses on their platform report increased efficacy in the classroom.





There were many other speakers, EdTech companies and ideas which sparked my interest and imagination – but this summary provides a snapshot of the issues being discussed and the innovation happening in the sector.

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12 July 2023
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*Claire is a Non-Executive Director of EduGrowth, Australia's EdTech innovation hub. Claire attended EdTechX Europe in her own capacity and the views expressed here are her own.