DIGITAL EDUCATOR PROJECT
PROGRESS REPORT

Jon Gregson,
CDE Visiting Fellow
Development Dreamers Ltd

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www.devdreamers.co.uk
1. Introduction

About this report

At the start of 2018 the University of London Centre for Distance Education (CDE) commissioned a project to explore the future needs for digital education. This report provides a brief overview of the project scope and summarises the progress up to end of July 2018 and provides some of the preliminary insights from the activities conducted so far.

Whilst touching on other aspects of the project progress, the main content focus for this report is on the workshop held in June 2018 on ‘The Future of Digital Education and role of the Digital Educator’

About the CDE Digital Educator Project

The stated aim of the project is as follows:

To identify significant developments in educational technology and assess risks and opportunities for the educator. This will lead to an assessment of readiness of academics and the needs for skills development to prepare digital educators for the future. What can academics use now to take advantage of future opportunities?

We expect that the project outputs will contribute to ensuring that academics involved in using digital tools to educate distance students, take advantage of emerging opportunities for making effective use of educational technologies that are available now and likely to become available in the medium term (i.e. the next 2-5 years). Whilst the project is focussed on the needs of digital educators currently working within the programmes of University of London Worldwide, we hope that the project findings will be of interest and value to a wider audience.

The project has been broken down into four stages each of which builds on preceding stages and explores specific objectives:

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<th>Project Stages</th>
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<td><strong>Stage 1:</strong> Using available research, we outline the significant likely developments in Educational Technology within the medium term (2-5 years) for the HE Distance Learning sector. This includes identifying and exploring ‘big ticket’ technology disruptors, pedagogic shifts and cultural and business challenges.</td>
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<td><strong>Stage 2:</strong> Through interaction with educators, we identify a range of different future scenarios and explore the possible impact of technical and pedagogic innovations on the role of educator, identifying any specific risks and opportunities relevant to the different scenarios.</td>
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<td><strong>Stage 3:</strong> Focussing on specific technical and pedagogic innovations we assess the readiness of current academics involved as digital educators in distance education design and delivery, to adapt to these innovations. This assessment explores awareness, importance attributed to different innovations and willingness to adapt to new changes.</td>
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<td><strong>Stage 4:</strong> Finally, drawing on the learning from the first three stages, we will define and scope a potential skills development roadmap for the academics and support staff involved in distance education to ensure that they are fully prepared to be the digital educators of the future.</td>
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The slide below highlights key themes which the project is exploring, and at the centre three major across cutting areas of interest for the ‘digital educator project’:

- **Methodologies**
  The methodological approaches used broadly correspond to the four stages above, and include:
  - A literature review exploring developments in educational technologies
  - A workshop making use of foresight approaches to develop potential future scenarios reflecting differing use of technical and pedagogic innovation
  - A survey and one-to-one interviews designed to provide insights on current awareness and interest of academics regarding technical and pedagogic innovation
  - A stakeholder workshop with academics to provide final discussion and analysis of what has been learned in Stages 1-3 to inform the production of a roadmap report

- **Timeframe**
  By end of July 2018, the first two stages of the project had been significantly completed, and this interim report covers insights from those stages, focussing in particular on the foresight workshop.
  Whilst the literature review broadly corresponds to the first stage, it is being added to and developed as the project progresses and will be finalised on completion of the project.
  We anticipate that the study will be completed by the end of 2018.

- **Project Team**
  The study team comprises the following five CDE fellows:
  - Marco Gillies, Goldsmiths
  - Jon Gregson, SOAS CeDEP Tutor, and Independent Consultant, Development Dreamers Ltd
  - Jonathan San Diego, Dental Institute, King’s College London
  - Tony Sheehan (formerly London Business School)
  - Christine Thuranira-McKeever, Royal Veterinary College (RVC)
2. Activities to date

The two main areas of project activity up to end of July 2018, are now outlined:

2.1 Stage 1 Progress: Perspectives from Literature

A literature review is currently being carried out that focusses on educational technology trends. Substantive progress has been made and insights coming out of this review are already contributing to the design of subsequent stages of the project.

The review is organised under five thematic headings, and under each heading important questions have already been identified which we are in the process of exploring further, through both the literature review process, the completed workshop (discussed below) and a survey and interviewing process which is currently being designed. The findings of this review will be shared more widely when it is finalised. Box 1 below sets out the five themes and related questions being explored:

<table>
<thead>
<tr>
<th>Box 1: Themes and questions identified for discussion when exploring future educational technology trends</th>
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| **(1) New technologies – what is emerging?**  
  - What technologies are the potential game changers for educators?  
  - In what ways could technology adoption be improved within educational institutions? |
| **(2) Teaching tools – what is changing?**  
  - How could educators be better supported in their use of digital technologies  
  - How quickly is digital learning evolving in practice |
| **(3) Learning practices – what is needed?**  
  - Are learner practices changing?  
  - What responses should educators develop to enhance engagement?  
  - How well are digital skills being developed? |
| **(4) Sector trends – what is changing?**  
  - How are MOOCs and MOOC providers likely to evolve?  
  - What forms of credentials be valued in future?  
  - How can MOOC innovations be transferred to common practice? |
| **(5) Industry trends – what else is happening?**  
  - How can educators design for knowledge development and decay?  
  - How can lifelong learning best be catalysed and supported? |

2.2 Stage 2 Progress: Foresight workshop

As part of this project, University of London CDE hosted a workshop at Senate House June 26th 2018 to explore the future of role of the digital educator. The workshop sought to engage a wider group of stakeholders with diverse perspectives and deliver outputs from the workshop that would be of interest and relevant to a wider group. Participants with wide ranging and relevant professional expertise, were drawn from among CDE fellows, University of London Worldwide and Colleges of the
University of London, University of East London, JISC and consultants with expertise in distance education and international development (as listed in Annex A).

The workshop programme was framed around use of foresight methodologies which helped us in a participatory manner to generate drivers of change and narratives for possible future scenarios. The foresight tools used for the workshop, represent a ‘lite’ version of the full foresight process\(^1\), which normally runs over a longer period, with follow-up workshops which explore a potential preferred scenario, and work back using a more extensive range of tools to develop strategic approaches and policy recommendations.

In the next section of this report the outputs of interactive group discussions, which produced drivers of change and four different potential scenarios are summarised. At the workshop participants also briefly considered timelines for major events which could contribute to their scenario arising, and suggested strategies that would enhance positive aspects of their scenario or reduce negative aspects. These scenarios are briefly documented and developed in this report. The programme for the day is also provided in Annex B.

Note that a small amount of further work has been carried out by the report author, and with input gratefully received from participants to develop the scenario narratives. The report concludes by highlighting some key areas for future consideration.

### 3. Foresight Workshop Summary Report

The workshop commenced with a brief presentation by Jon Gregson highlighting the purpose of the event, which is not about trying to predict change, but to explore different perspectives and consider different scenarios which digital educators may face in the future.

To set the context, the rapid pace of change in relation to exponential growth in use of digital technologies was emphasised. Each of the participants identified some headline topics that they felt were important considerations for the future of digital education, and Tony Sheehan presented early findings from the literature review. These inputs provided a helpful initial context for the discussions which followed.

#### 3.1 Drivers of Change

Participants were then divided into four groups, for the first main activity, and the groups commenced by reflecting on drivers of change that are likely to influence the future over the next fifteen years. The drivers of change were then classified using the five ‘STEEP’ headings:

- **Social - Technical – Economic – Environment - Politics**

Participants were invited to vote on the drivers they considered to be the most significant in each category, i.e. in terms of potential high level of impact or uncertainty.

The table below shows the drivers of change for each of the STEEP headings that rated highest in the voting exercise.

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\(^{1}\) School of international futures, [www.soif.org](http://www.soif.org)
Foresight Scenario Planning Guidance 2009, Government Office for Science
| SOCIAL                  | • People living longer driving changing employment and needs to work  
|                        | • The increasing need for high quality post graduate education to be available to parts of the developing world – demand already outstrips supply in terms of f2f learning  
|                        | • Increase of digital natives within workforce  
| TECHNICAL              | • Virtual and augmented reality  
|                        | • Artificial intelligence  
|                        | • Automation and machine learning (leading to more leisure time)  
|                        | • More personalisation  
| ECONOMIC               | • Changing skills needed in a digital economy  
|                        | • Change in economic balance across the globe  
|                        | • Change in types of jobs  
| ENVIRONMENT            | • Changing job market  
|                        | • Climate change impacting migration of people from different parts of the world  
|                        | • International standards e.g. pedagogy  
|                        | • Less space for physical buildings e.g. in Universities, difficulty in accommodating students in traditional classrooms  
| POLITICS and GOVERNMENT| • Nationalism, and rise of this in the West  
|                        | • Developing countries trying to catch up with new trends in education, via creating partnerships with western organisations  
|                        | • Private businesses have become the worlds’ powerful with governments becoming weaker and less relevant  
|                        | • Decline of neoliberalism  

### 3.2 Developing Scenario Narratives

Following the identification of key drivers of change, the participants were now invited (in groups) to develop different scenarios expressed as narratives or stories describing how the future might look in 2028.

The ‘4-quadrant method’ for developing contrasting scenarios was selected as the tool for developing four scenario narratives. This requires selection of two axes drawing on drivers of change that have high levels of uncertainty. The variables for the two axes illustrated below were proposed by the workshop facilitators.
As shown in the diagram the axes selected represented the following variables:

- **Horizontal**: Location was used as an alternative geographical descriptor to ‘developing’ and ‘developed’ country differentiators as it was noted that in most countries digital access is now uneven, with some of the population having 2nd order digital access i.e. fast affordable services and skills and income to enable effective use of many online services, and others struggling (whether or not they have a mobile phone) to get or afford basic access and lacking skills or literacy to make effective use of digital technology they can access. Students with digital access could be anywhere on this range.

- **Vertical**: This axis contrasts the nature of intellectual property, which can be a free publicly available good, or owned by private individuals or private sector organisations under copyright or patent legislation. In the latter case knowledge is only accessed at a price determined by the market. Creative commons licences provide a range of licences which are closer to the centre where ownership is protected in different ways, but users can have free access and some rights to change and adapt materials.

With reference to the drivers of change, and the inputs reflecting diverse perspectives from earlier discussions, the four groups of participants developed potential narratives for each of the quadrants, which are introduced below.

### 3.3 The Four Scenarios
Participant groups took slightly differing approaches to developing their scenario narrative, and due to time constraints, there was variation in terms of how developed the narratives had become. Nevertheless, valuable insights were generated, and in this report these narratives have (to an extent) been further developed based on the workshop material, with the help of some of the workshop participants. Every effort has been made to stay true to the ideas generated at the workshop, though group participants may well have diverging views on how well this has been done!

Scenario One – Open/Public Knowledge with location characterised by 2nd Order Digital Access

Title: Digital Heaven - too good to be true?

It’s surprisingly difficult to distinguish people in this 2018 scenario, as we all have such good access to technology, knowledge and education. A lot of divisions and inequities have dis-appeared, and most people have a great range of choice - somehow the anticipated dominance of major private sector tech companies and oppressive regimes hasn’t materialised, but they still carry significant influence. Perhaps, some of this change started in the 2016 USA elections and the uproar that started going back to the Cambridge Analytica scandal. Wikileaks and advocates for a more free, transparent and open world somehow garnered a lot of support, despite a temporary rise in Nationalist / protectionist regimes that started to wane around 2023.

So, what is life like for us in this unlikely digital heaven? Well maybe not everyone inhabits this place yet (and some don’t even like it!) but it’s hard to see beyond our situation (even if it maybe a bubble).

We now have open access to content that is available to support all kinds of education - degree courses, CPD, and subjects of personal interest, and importantly we all benefit from affordable high-performance technology with a great infrastructure that is open and fast and where broadband is
freely available, and high speed mobile technology is embedded in a range of innovations and gadgets that can support learning.

These days we benefit from a lot of innovation in relation to technology and pedagogy. Here are just some that come to mind:

- There is multi-platform curation of course content though ‘plug-ins’ and application programme interfaces (APIs)
- AI, Machine learning, AR and VR have been gradually introduced and really enhance the nature and speed of feedback and student support
- We have increasing access to open source content that even feeds into closed degree (more expensive) course content making even the high-end courses more affordable
- As students we can switch between platforms accessing dynamic course content that branches off to specific content on other University VLEs
- Course content is in effect ‘MOOC-like’ and provided as definitive chunks of learning in a particular area. There is no need for hard copies of learning materials to be provided by Universities or commercial partners who may be driving the way education is conducted
- Student communication tools are dynamic and respond to student behaviour. Students can instantly talk to one another, even across language barriers, through a range of communication tools accessed through APIs
- The role of the librarian has changed a lot. Librarians have great ICT and curation skills and play a significant expert role with others in conducting educational activity, and in creating packages of content rather than designing new programmes. They help to shape and define what the content of the course is rather than being restricted by licences. They also provide guidance in how these services are accessed and have improved the provision of information and digital literacy to anyone who need it.
- There is a range of payment options that make accessing education flexible and accessible. These range from pay as you go (modular approaches), to subscription models
- The student experience is increasingly influenced (some would say governed) by metrics which track student behaviour, satisfaction, confidence and achievement. This data informs University strategy, and course content is being dynamically improved and enhanced to respond to student metrics

Digital educators see their role as curators of academic content. To reach this point over the last 10 years there has been a strong focus on change management, requiring changing role description and the re-designing role of library, educator, and culture of educational organisations to enable them to become more open and equipped in terms of digital literacy. This at times slow transformation has been helped by a reassessment of IT budgets, and a commitment to skills development for digital educators/curator, library and support services. The change process has benefitted from budget commitment and a clear sense of training needs, met through a training of trainers approach, and high level mandate to transform staff in the new methods needed to support students.

The library environment and infrastructure has also developed. Digital literacy needs are being met, and digital licences provide rapid connection to OERs and catalogues from different publishers who operate a range of business models. This process is more seamless these days, but one drawback is that publishers remain powerful and so there is an ongoing need to lobby and influence and work closely with others to get them to relinquish tightly controlled access to content ranging from published articles, books, datasets to those that are in the processing of research including research tools, methods, lab notes and instruments/equipment.
Comments on the role of Digital educator and Universities:

In this scenario upskilling is required to raise digital education to a very high level and this permeates across all roles, that digital educators undertake. Universities become experts in curatorial aspects and need the ability to deliver rather than create. They focus on platforms, and how content is delivered, shared, used and reused. The challenge is to develop the style of learning to a global audience in order to get to this point where participation is frictionless from all sides of the platform (producers and consumers).

Note: If all new knowledge is open licenced, where is the Universities’ or author’s value?

Scenario Two – Closed/Private Knowledge with location characterised by 2nd Order Digital Access

Title: The Rising East and ‘Rock star’ Gurus

We envisioned an imaginary future in 2028 where the economic advancements of the BRIC (Brazil, Russia, India, China) countries and the over nationalisation and privatisation of the western world has seen countries such as India become predominant global leaders in distance learning and the UK as a sort of aid to this success.
Due to the weakening in value of the British degree, Indian practitioners and professionals require potential job candidates to have degrees from a certified Indian institution.

Rajni is a freelance radiologist in Mumbai working in several hospitals in the Mumbai City District. With the boost of the Indian economy and the recent heavy investment in state education and health, Rajni is no longer required to work full time in the radiology department at one hospital. To keep her job in medicine, Rajni has decided to retrain and embarks on a degree course in Genetic Medicine through the Indian Institute of Technology. She works full time and due to her long travelling schedule tends to study and complete elements of her course on the train. The growth and demand in retraining has led to an increasing need for online education and due to heavy nationalisation, this has subsequently lead to institutions being centralised to just a few ‘renowned’ colleges.

The centralisation of institutions has also led to people putting their trust and faith into a select few academics. In the growing age of YouTube and Instagram stars/influencers, Professor Singh has become the ‘David Attenborough’ of Genetic Medicine and therefore all the main lectures at IIT are given by him. He is the ‘recognisable brand’ for genetic medicine and has a huge team of people working behind him (writing the scripts, teaching assistants preparing the programme, researchers, camera crew, cosmetic details such as hair/makeup).

Top lecturers and academics are desperate to work for his team to do the latest research in that field.

The course is taught online through a series of lectures, interactive quizzes and practice test questions, and VR headset (virtual 3D) patient/lab sessions. Students are assigned a lab partner for each assignment which is determined by their grades, personality type and where they are on the student ‘league table’ (for example, a struggling student may be assigned with a stronger student to help them improve their grades). All the grading and marking is completed by Artificial Intelligence (AI) and there is an automated chat bot system to answer general student queries.

Unbeknownst to students such as Rajni, when she asks the system a question that requires a sensitive or personable answer, she is immediately put through to an academic specialist in the field of genetic medicine who then works with her to help answer any complex queries or concerns.

This is where Research Assistant Dave comes in...Dave works a remote nightshift in South West London with several universities across Asia on their online degree programmes. He answers complex student queries and monitors student lab sessions from numerous computer monitors at home. After nationalisation in the UK and the privatisation of the higher education sector (and medicine), many European academics saw value in becoming freelance/self-employed and chose to provide their academic services remotely to renowned universities in other parts of the world.

Dave’s workload is managed by an algorithm and he is competing with other academics in his field to be sent through as many queries as possible. Here we see the ‘uberisation’ of academia, whereby academics are paid per student for each query that they successfully solve. Luckily for Dave, he is very knowledgeable and good at his job. His new work/balance lifestyle ensures he can take his kids to school in the morning and complete a bit of research on the side before working through the evenings.

So let’s now imagine Rajni on the intercity train back to the suburbs of Mumbai after a day spent doing radiography work. Wifi is not a problem, and she has enough power to access the virtual lab via her VR headset.
After watching a lecture by Professor Singh, Rajni is instructed to go to the virtual lab with Riya, her lab partner, to work on an ongoing assignment and provide a diagnosis.

Rajni is provided with some personal information regarding the ‘patient’ and raises her virtual ‘hand’ to ask the AI system a question (who is in the meantime is providing her with real time grading and observation).

The AI cannot answer the query and Rajni is therefore immediately directed to Dave who steps in to help. Rajni and her lab partner are pleased with the help Dave has provided and at the end of the lab session provide him with a 5-star rating, which automatically bumps him up the queue for further student queries.

**Desirable strategies**

If this scenario is the world we envisage, then

- Ensuring that academics have ‘information and AI literacy’ when it comes to distance learning. There is transparency in the AI algorithms that are used.
- Ensuring that academics are already becoming familiar with online learning tools and are confident in using and understanding these tools.
- Start this process with MOOCs + blended learning (should CPD regs for academics be a national policy?)
- Online platforms should provide a social space for students and tutors to build relationships and trust.
- Academic workloads should be mapped online
- Measures of success should be identified through skills (knowledge of students)
- Teams within academic institutions across departments should collaborate and share knowledge (academics in sciences and B&M working with those in social sciences and humanities)

**Comments on the role of Digital educator and Universities:**

Academic careers will still be needed in this scenario so ‘don’t build structures/ways of working that damage the profession’!

Technology provides sophisticated data analytics to mediate between students and tutors, to make the best use of tutors/academic’s time. It remains important to retain student/tutor relationships that are personal. VR provides a (sophisticated) simulation, that could be important in online education, but it is expensive

**Scenario Three – Closed/Private Knowledge with location characterised by 1st Order Digital Access**

**Title: The ‘Bot’tom Line**
This scenario is characterised by inequity. Let’s explore some of the characters.

Firstly, meet Marie in Ghana. She lives in a rural community, her access to technology is not cheap and this is a major barrier, but she has a need to learn. The way she accesses online learning is at the ‘free end of the freemium business model’ so she is constantly bombarded with customised highly targeted adverts. She has access to card based virtual reality and can choose from a monolithic range of qualifications offered by a very small choice of providers. There is also access to a much smaller range of lower quality options ‘taught by basic bots’. Most students in her position are engaged in Higher education but where the focus is on vocational skills.

Contrast Marie with Simon in Singapore. He lives in an urban centre where the best digital access is concentrated in pockets. He can access online education using VR headsets and haptics and he doesn’t have to be disturbed by any adverts. Over time he is stacking his own credentials through micro-learning, and carefully picking and choosing providers. His learning context is personalised, with live engagement and even additional support through human tutors. His learning experience is enhanced by sophisticated AI and human feedback, and he can afford to take a liberal humanist approach to HE.
Simon has the luxury of time to learn and can pay to restrict his data from being monetised (but in practice he is unlikely to bother).

By contrast Marie is left behind on the wrong end of the digital divide and her progress is capped by a socio-economic ceiling. She is on a 2-year compressed bachelor’s degree course. Commercial providers have a monopoly but are restricting choices and federating access. She has no control of her own data, and in effect you are defined by what the data says about you and what you are capable of ‘online’. The state may be the data controller, and despite progressing her education, the online data is used to generate a ‘social credit score’ which constrains what jobs you are qualified for.

In this 2028 scenario there is gatekeeping of digital access, which divides people by class, gender, rural/city. Digital has become a central focus of ‘cultural capital’. Those who are digitally empowered are those who have acquired the skills needed in a changing world and who make the £s!

This all started to happen in 2020 when VR took off in education. By 2023, teaching bots were becoming more common, and VR was by now ubiquitous at top (expensive/elite) end of education. By 2028 the AI bots had more or less replaced most human tutors, and data had become owned and monetised by monopolies. The winners in this scenario has rich gamified personalised curricula and impressive systems that support adaptive learning.

By 2028, research and teaching roles are separate, and the ‘digital educator’ role has become that of a manual aggregator of content. Digital educators for the low-quality schools are by now very depressed and about to be usurped by ‘bots’ but looking at the positives AI bots are not all bad – they are pedagogically sophisticated and can handle high volumes of work/students. Full time employed ‘digital educators’ can afford to develop and upskill, and an important role has emerged for ‘Digital education experts’ to support digital educators. Access to VR is supporting personal psychosocial development.

Desirable strategies

If this scenario is the world we envisage, then there are clearly some negatives to try to combat and this could be done by:

- Giving educational resources away for free, e.g. open educational resources
- Local capacity development cf Siemens in energy
- Developing partnerships that work across national borders and barriers related to location
- Supporting consortia bodies to distribute power and increase access

There are also strategies to support positive outcomes in this scenario:

- Invest R&D into adaptive learning and AI
- Support differential pricing models for high quality DE providers to promote access
- Policy incentivisation to private sector to produce non-proprietary solutions to AI teaching

Comments on the role of Digital educator and Universities:

At the low end, digital educators are manual aggregators of content, whilst at the high end there is a need for personal development, and a role for experts. So, there is a spectrum of roles. This is the
current situation for much of the world today. There is an ongoing role for responsible providers to maintain high quality and affordable education.

This suggests there is a need to find effective ways of facilitating learning without lots of contact. This requires collaboration and a learning environment that scales and doesn’t require a lot of tutor input. Consider use of VR to grow provision and access and invest in adaptive learning approaches.

**Scenario Four – Open/Public Knowledge with location characterised by 1st Order Digital Access**

**Title: Everything in time**

*(Things are gradually opening up and localising!)*

Jean is a student aged 25 who lives in Kinshasa, the capital of the Democratic Republic of the Congo. She left school with no formal education to go into the family business. Many of her friends have qualifications so she has decided to take an online course produced in DRC which provides a practical introduction to Financial Management and accountancy.

The wi-fi coverage is better than it used to be, so is quite reliable these days and there are far fewer power-cuts than in the past. These days everyone has a mobile phone, but these are expensive and data for mobile remains expensive. Phones and eBook readers are also being used to access MOOCs and e-books. Local teachers and institutions are leading the course that Jean is taking but there is not much digital content produced locally. Pay for teaching is mixed with some reasonably well paid and others not. Most people are also in a situation where they also have to learn while they are earning, and when they study they need to pay a small fee to the Government.

The Government itself is quite stable and they have contracted the ‘Edz’ platform who provide MOOC courses with the local teaching by DRC teachers. The teachers graduated from a local institution and have some industry experience and a teaching qualification.

Jean benefits from some peer support from fellow students, as do the teachers who are enthusiastic and take part in a community of practice, but they do struggle with not having enough time. They have to work part time in different industries and work on teaching preparation while they are employed in other work. They teach and learn in French language which is auto translated by an app linked to ‘Edz’.

Technology is not particularly fit for purpose, but machine learning is being promised and it will take more time for African/French languages to be translated 100%. The library is largely virtual these days with few hard copy books. Facilities generally are good, in terms of the building provided in a warming country.

Technology innovation was already evident in 2018, and many people grew up as digital natives/residents since 2020, and by 2023 there was good satellite coverage and strong regulation relating to the cost of data. Digital education has become more and more team based. By this time
there was also recognised accreditation by business accepting the value of open education and MOOCs. Governments have been trying to pay more towards teacher’s salaries but this is taking time. In the short term a salary agreement contribution from EdX has been introduced in 2025 which is progress. Since 2020 the country has also become far more stable politically benefitting from effective conflict resolution processes.

Desirable strategies

If this scenario is the world we envisage, then are a number of positive strategies that can help enhance the good progress being made in DRC:

- Education should be made compulsory to 18 years old
- Strong innovative leadership needs to be encouraged
- Strong financial commitment to Higher Education needs to be promoted
- The country should be empowered to replace ‘Edz’ course resources with local content
- All teachers should have a compulsory digital skills certificate with accreditation
- Collaboration with Africa rising, and Africa Virtual University should also be encouraged to promote relevant courses and content

To reduce negative aspects of this scenario, DRC needs to consider:

- Intellectual property / knowledge transfer with an NGO partner or local African partner to plug the skills gap
- Negotiating partnerships with local business (e.g. skills swap) will enhance employability of students
- Discounts and vouchers for food, housing etc will benefit those who need to find more time to teach and study
- Grants for tuition fees to cover the cost of teaching need to be considered

Comments on the role of Digital educator and Universities:

Digital education is benefitting from disaggregating academic and other roles and this is leading to more team-based approaches. MOOCs have become more relevant and useful due to repurposing of local context. There is more involvement of local people and organisations from the local context in developing and delivering courses and there is more choice of modes of delivery. Digital literacy upskilling is particularly relevant.

3.4 Strategies for achieving (more) desirable outcomes
Following the group work on the four scenarios, the participants were invited to identify whether strategies that worked well to strengthen positive outcomes for other scenarios, and reduce negative ones, would work or not for the other three scenarios. They could respond by saying they would be ‘robust’, would ‘need modification’ to be useful, or they ‘wouldn’t work’.

The ‘top five’ strategies that came out as having the most potential to benefit other scenarios were as follows:

**Beneficial to all four scenarios:**
- Speed up change process within institutions – invest in change management, and skill set development.
- Build relationships with other providers, e.g. publishers, who can support the vision for a digital education future in 10 years’ time.
- Find ‘win wins’ for the educators, educated, Universities and 3rd parties. Data can play a role. This can be a driver, which adds agility within a change management process
- Institutions with high quality education give some away free (n.b. this highlights the value of scholarships)
- Digital skills training for teachers supported by accreditation/certificates for all teachers

**4 Conclusions**

The workshop provided the opportunity for sharing on a wide range of topics relevant to the future contexts for digital learning. A wide and diverse range of insights were reflected through the activities focussed on:

- Generating headline ideas of future priorities
- Discussion around overview of relevant literature
- Identification of drivers of change
- Development of narratives for contrasting future scenarios

The purpose of the workshop was not to predict the future, or to develop solutions for problems identified, but to create a structured space and set of activities, for gathering this wide range of insights and perspectives drawing in different types of evidence from literature and personal experience.

This was successfully achieved in a short space of time, and it is hoped that this progress report with its focus on the outputs from the foresight workshop will be of value for those with an interest in digital education. It is also an input for the next stages of the CDE ‘Digital Educator’ project, where a survey will be designed to explore further some of the priority topics coming out of the project draft literature review and from this workshop. After the survey has been analysed a further workshop will take place with key stakeholders to develop a roadmap for skill development for digital educators for the next 2-5 years.
There are many important points and topics that can be the subject of further exploration. The list below is indicative of some of the main themes that came out of this workshop that will need to be explored further to inform the skill development needs of future digital educators are as follows:

- We need to learn to use existing technologies better, making more informed use of what we already have to support improved digital education
- The ‘new’ technologies mentioned most, which need to be better understood by digital educators are artificial intelligence, machine learning and virtual and augmented reality. In addition, the need for more personalisation was stressed, which implicitly requires effective use of data
- The different scenarios described highlight the need to understand better the future role and needs of academics involved in distance education, and more clearly set out how a team-based approach to support distance learning course design and delivery can be undertaken
- The scenarios also highlight the importance of monitoring geopolitical events and understanding how different business models for HE/DE present new challenges and opportunities for the digital educator.
- This further links to a need for a University to be clear on its values, and how it can promote affordable access to high quality education. Open access approaches need to be understood and integrated in ways that support localisation, and improvement of course relevance and accreditation, without removing the incentives needed by authors and institutions to produce and market quality materials and courses
- The changing nature of jobs (casualisation and the gig economy) need to be understood, and in particular we need to understand how this affects those involved in digital education. Furthermore, we need to recognise the drive to either ‘Westernise’ or ‘Easternise’ HE/DE approaches, and consciously reflect and draw on good practices from different parts of the world, in order to remain competitive and cutting edge in relation to digital teaching and learning.

In summary, teams and individuals focussed on design and delivery of digital education, need to have a very good understanding of the tools available to them now and in the future, and also need to assess carefully their aims, and how they may reflect different values in the manner in which they license and use learning materials and explore the scope for wider international or cross-sectoral collaboration

Finally, it is clear that it is important to plan now for the situation in ten years’ time, as that is not too far away, and the technologies that are emerging now will be mature by that time.
Annex A - List of Participants Present

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jonathon Thomas</td>
<td>University of London Worldwide</td>
</tr>
<tr>
<td>Nic Charlton</td>
<td>University of London Worldwide</td>
</tr>
<tr>
<td>Gemma Shields</td>
<td>University of London Worldwide</td>
</tr>
<tr>
<td>Caroline Tutty</td>
<td>University of London Worldwide</td>
</tr>
<tr>
<td>Larisa Grice</td>
<td>University of London Worldwide</td>
</tr>
<tr>
<td>Linda Amrane-Cooper</td>
<td>University of London Worldwide</td>
</tr>
<tr>
<td>Marco Gillies</td>
<td>Goldsmiths College</td>
</tr>
<tr>
<td>Christine Thuranira-McKeever</td>
<td>RVC</td>
</tr>
<tr>
<td>Sarah Sherman</td>
<td>Bloomsbury Learning Environment</td>
</tr>
<tr>
<td>Sam Brenton</td>
<td>Cass Business School</td>
</tr>
<tr>
<td>Sally Parsley</td>
<td>LSHTM</td>
</tr>
<tr>
<td>Santanu Vasant</td>
<td>University of East London</td>
</tr>
<tr>
<td>Dr. Paul Dudley</td>
<td>Royal Holloway</td>
</tr>
<tr>
<td>Meaghan Brugha</td>
<td>Jigsaw Consulting</td>
</tr>
<tr>
<td>Jo Fung</td>
<td>SOAS</td>
</tr>
<tr>
<td>Nason Bimbe</td>
<td>Independent (formerly IDS)</td>
</tr>
<tr>
<td>James Earl-Fraser</td>
<td>JISC</td>
</tr>
<tr>
<td>Tony Sheehan</td>
<td>CDE Fellow (facilitator)</td>
</tr>
<tr>
<td>Jon Gregson</td>
<td>CDE Fellow / Development Dreamers (facilitator/organiser)</td>
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Annex B - Indicative Workshop Programme

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>9.30am</td>
<td>Arrivals, Senate House</td>
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<tr>
<td>10.00am</td>
<td>‘About the workshop’, introductions, and ‘headline ideas (1-3)’</td>
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<tr>
<td>10.30am</td>
<td>Introduction to foresight methodology and short presentation on challenges and opportunities for digital education (based on ongoing literature review)</td>
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<tr>
<td>11.15am</td>
<td>Tea/Coffee</td>
</tr>
<tr>
<td>11.30am</td>
<td>Digital education - Drivers of Change Group Work and feedback from groups</td>
</tr>
<tr>
<td>12.30pm</td>
<td>Introduction to scenario group work</td>
</tr>
<tr>
<td>1.00pm</td>
<td>Lunch</td>
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<tr>
<td>1.45pm</td>
<td>Developing scenario narratives group work – highlighting the role of the digital educator and digital technologies</td>
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<tr>
<td>3.15pm</td>
<td>Tea/Coffee</td>
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<tr>
<td>3.30pm</td>
<td>Groups share their scenarios in a plenary session</td>
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<tr>
<td>4.00pm</td>
<td>Discussion of key features of a preferred scenario for digital educators</td>
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<tr>
<td>4.20pm</td>
<td>Planning a wider survey – Key ‘take aways' for this from the scenario narratives</td>
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<tr>
<td>4.50pm</td>
<td>Wrap up</td>
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<tr>
<td>5.00pm</td>
<td>End of Workshop</td>
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