DIGITAL GLOBALISATION OF KNOWLEDGE AND THE IMPACT ON HIGHER EDUCATION IN SOUTH ASIA

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Abstract

Globalisation is “the integration of economies, industries, markets, cultures and policy-making around the world.” Globalisation of knowledge, in turn, is the free flow of ideas around the world determined by factors such as communication costs and the degree to which societies are integrated (Borcuch, Piłat-Borcuch & Świerczyńska-Kaczor, 2012).

The impact of this globalisation of knowledge poses opportunities, challenges and critical ethical questions for Higher Education institutions and their role within societies. British Council Pakistan proposes a study to investigate the state and influence of the digital globalisation of knowledge and its relation to Higher Education in South Asia, and Europe, seeking to present two distinct case studies rather than suggesting directly comparable findings. Where there are common or ‘globalised’ trends observed in both regions, these will be noted and discussed.

The research aimed to investigate the state and influence of the digital globalisation of knowledge and its relation to Higher Education in South Asia. The following themes were looked into:

- Trends, flows of information and use of data (frequency, modes or means, governance)
- Networks, communities of practice and instances of collaboration or competition
- Known influence of digital globalisation on research, education and student experience
- Questions of intellectual property, use of data and ethics
- Known impact (opportunities and challenges) on quality of higher education

The study also looks at the level and nature of digital flows of ideas and knowledge exchanged between each country with respect to its impact and interaction with higher education systems, institutions and communities. It will aim to capture the influence (positive and negative) of the respective flows.

For the purposes of this study, four countries in South Asia (Pakistan, Sri Lanka, Afghanistan and Nepal), were focused with the aim to inform future interventions to enhance the positive influences of digital globalisation of knowledge in relation to Higher Education.

The study also looks at the cross section population in higher education, women and girls and youth.

Keywords: Digital, South Asia, Higher Education.

1 INTRODUCTION

The paper assesses the impact of digital technology on Higher Education in South Asia. The region is at the beginning of a Fourth Industrial Revolution that is fundamentally changing the way we live, work and relate to one another. The region also share the view that the digitalisation of knowledge can bring enormous benefits and unprecedented opportunities for everyone, as it contributes to more prosperous, sustainable, and equitable societies.

Higher Education has an absolutely crucial role to play, but our research shows that more needs to be done. It finds that there is a generally shared understanding at the level of academic leadership, and of those who are passionate advocates of digitalisation in Higher Education, of what needs to be done and how that needs to happen.

There are opportunities, but there are also challenges.

We asked leading educators, policy makers and academics what their views were on the impact of digitalisation in Higher Education on a range of topics:
The democratisation of education: What is understood by democratisation? How can Higher Education meet increasing demand?

Access to knowledge: We live in an increasingly global condition of information overload. What are the implications for Higher Education? What are the implications of digitalisation for research?

Access to education: How can populations in South Asia and Europe access the learning they need? What still needs to be done in policy, infrastructure development, pedagogical development, and quality assurance?

Meeting the demand for relevant, good quality, knowledge that is accessible to all, poses different challenges in each region, reflecting the varying contexts of each region and country. Our thanks are due to our contributors who generously shared their knowledge and insights with us as well as their commitment to education, knowledge sharing and social development through digital education. This paper aims to start a dialogue between the regions, based on their common desire to realise the enormous potential of digitalisation in Higher Education.

2 THE DIGITALISATION OF KNOWLEDGE IN HIGHER EDUCATION

The digitalisation of knowledge is having a major impact on Higher Education. This process is part of the wider context of rapid and disruptive change brought about by digital technology which has ushered in a new phase in the process of globalisation.

2.1 Global context

Digital flows have significantly increased over recent years, transmitting information, ideas, and innovation around the world and broadening participation in the global economy. In the last decade, global flows have raised world GDP by at least 10%; this value totalled $7.8 trillion in 2014 alone and data flows accounted for a larger share of this impact than global trade in goods. The impact of digitalisation has not only changed economic globalisation, but also affected social and technological processes including security, social equality and education. It has the potential to drive innovation worth trillions of dollars more in industrial and public-sector applications.

2.2 The impact on higher education

The effect of digitalisation on Higher Education has been described as a turning point in the history of education. Worldwide demand for Higher Education is expected to grow exponentially over the next 10 years, and some forecasts predict that e-learning will grow by a factor of 15, accounting for 15% of all education provision. Therefore, the educational economy is one of the major sites of investment in digital technology.

This process is changing education itself. According to the Boston Consulting Group, the process of digitalisation has influenced the learning process in a variety of ways. They identify six dominant trends which are changing the competitive landscape of Higher Education:

- Democratisation of education,
- Lifelong learning,
- Individualisation of education,
- Experimental technological advancement,
- Digitised students, and
- Changes in workforce demand.

Many argue that for Higher Education institutions, success and competitiveness in the future will depend on their ability to embrace digital opportunities. The transition to digital education is a necessary innovation in the sector as current educational systems do not prepare our children adequately for the professions of tomorrow.

2.3 Opportunities

Although the ongoing process of digitalisation of Higher Education brings challenges, for instance in relation to data protection and privatisation, it is generally applauded for its benefits. While some have pointed to the positive effects it has on the preparation of learners, employers and Higher Education
institutions alike, others have pointed to the fact that digital systems of learning increase exchange and interaction between scholars and students, and foster internationalisation.

Students see similar benefits. They argue that it enables them to focus on the content of studies, provides support for organisational problems, and grants easy access to resources such as literature and software. In addition, the benefits of digitalisation are expected to be reflected on a global scale, as it is expected that the economic benefits of increased digitalisation will become increasingly evident within developing countries.

2.4 Challenges

There remain major challenges in order to obtain the opportunities and benefits associated with the digitalisation of education:

- Universities can be slow or ineffective in adapting to the changing digital landscape. McKinsey’s Global Institute Industry Digitalisation Index ranks the education sector 14th of 22 sectors;
- Government educational and digital policies need to keep up with the fast rate of change and ensure that their education systems as a whole are fit for purpose in the digital age and meet the expectations and needs of learners;
- There is some evidence that digitalisation can exacerbate inequalities through the digital divide.

3 EMERGING THEMES

3.1 The democratisation of education

What is understood by democratisation? How can Higher Education meet increasing demand?

“All countries in the world have similar problems in relation to digitalisation. Don’t start from tech – renew pedagogy first”. [Professor Kirsti Lonka (Finland)]

3.1.1 Introduction

By many measures, the knowledge economy is booming, but participation is confined to particular firms, places and people. It appears universal, but it is not, generating many of the problems of the world today. A key challenge for Higher Education therefore is how to help democratis the economy by widening access to productive opportunity. The sector also faces the challenge of reforming itself so that it can prepare the next generation for the labour market of the future by cultivating the mindsets, skills and cultures relevant to future needs. A democratised knowledge economy is partly about technical design. It is also about enabling people to become users and makers, not just consumers.

Our research confirmed that in every country, there was a sharp focus both on widening access to opportunity, and equipping learners with the skills they need to live meaningfully and productively in the digital world.

Partly driven by the needs of the knowledge economy, there is increased demand for Higher Education across the world, and across all demographic sectors of society. This poses challenges for universities. As the labour market demands more and more digital skills, as people live longer, as mobility increases and as populations shift, there is a growing diversity in the make-up of student populations. There is increasing pressure for Higher Education institutions to respond to the needs and problems of society at both the national and global levels. There is also pressure for Higher Education to commit to addressing global challenges, especially those relating to access to education. However, there is also an increasing shift towards reduced public financing. How can this circle be squared?

This section of the report considers the impact of digitalisation in Higher Education in terms of the realities of the globalised knowledge economy and its inequalities, where the universal aspiration for quality education is shaped and constrained by a mix of global forces and even wider mega trends which affect both educators and learners.
3.1.2 Globalisation

The practices, goods and services of Higher Education are highly adapted to a globally connected world. Even today, however, the vast bulk of Higher Education still takes place in institutions, for young people aged 18-24, on physical campuses, access to which is limited by previous levels of formal educational attainment, which in turn is linked to opportunity. In short, access to Higher Education is rationed by age, cost, and the availability of time to devote to learning. Universities are still seen as the gatekeepers to the labour market and economic prosperity.

Universities are also, traditionally, independent organisations dedicated to knowledge and to sharing that knowledge through learning and publication. A university education therefore equips people with both knowledge and skills, and crucially, a critical perspective on that knowledge and on those skills. In other words, universities have traditionally taught people about a limited range of subjects, and how to think for themselves.

The motivation of students can be surprisingly conservative. They want formally recognised, quality assured, qualifications that will help them access the globalised labour market. They also want to develop as individuals. The university years are a unique opportunity to do both.

Universities, however, operate in a world where Government support is declining, and costs are increasing as demand from learners is rising. They also operate in a world where digital technology is transforming societies. Never before has it been possible for knowledge to be available to so many at so low a cost. Never before has the rate of knowledge production been greater. Never before has it been possible to publish and share knowledge so cheaply. Never before has the rate of change been so great. Never before has it been possible to collaborate in real-time across the world. Never before has the dream of education for all been a genuine possibility.

In both South Asia and in Europe, there are many innovative online projects which aim to ensure that Higher Education can be truly democratic in terms of opening up access to Higher Education for learners.

3.1.3 Mega trends

In addition to the political and economic context of globalisation, there are so-called mega-trends in knowledge and society that are shaping the world today, for better or for worse. In relation to digitalisation and education, the OECD has identified four that it sees as particularly relevant:

- Learning versus the echo chamber: Digital technology can connect people as never before, building links between countries and cultures. It encourages democracy by allowing voices to be heard, but it can also concentrate unprecedented amounts of power in a small number of hands and make the world more volatile and uncertain.
- Artificial Intelligence - first class humans or second-class robots? Education systems will need to equip young people with the skills and awareness to live in a world driven increasingly by algorithms. How can skills be adapted and updated for a changing world, with a changing jobs market? There are far-reaching questions many of which we cannot yet imagine.
- Lessons for life: Life expectancy is increasing, and a less predictable jobs market means adults are increasingly likely to need to re-train. Much more attention will have to be paid to lifelong learning, so that people are equipped to change jobs and for a much longer retirement. At present, those who need adult education and training the most, the low skilled, are currently the least likely to receive it.
- Online or offline? The internet is an integral part of young people's lives. In some countries the amount of time spent online by 15-year olds has effectively doubled in three years. Education still has to come to terms with this permanent online presence. What part should it play in learning? How can its negative impacts be reduced?

(Andreas Schleicher, OECD director of education and skills, January 2019)

Digitalised Higher Education is uniquely positioned to equip people to live in this new world. This response can take many forms and the case studies below illustrate this. What matters in relation to democratisation in the context of globalisation is that it works at both the global and local levels, bringing quality opportunities to people who otherwise would never be able to participate in the global knowledge economy.
They show how, in South Asia, a strategic governmental initiative, working with global partners and the Higher Education sector, is making leading content accessible, free of charge, adapted to local needs. In Europe a non-Governmental organisation is helping learners in incredibly difficult circumstances (refugees and asylum seekers) gain access to Higher Education.

3.1.4 South Asia

The drivers of the democratisation of knowledge in each country and region vary. Governments have a central role to play, but our survey research suggests that universities, technology companies and demand from learners are the main forces for change. In South Asia, our group discussion and interviews communicated a sense of urgency. There were acute social pressures, a desire to catch-up with other countries and regions, and an ambition to engage globally. Western models of digital pedagogy were essential, but there was a need to make them suitable for non-Western learners. The success story below describes an ambitious plan to tackle these issues head-on by connecting learners with world-class content, adapted to local needs, and available free of charge.

**Success Story: Afghanistan**

**AfghanX**: The Afghan Ministry of Higher Education is creating an ambitious national open learning management system. They are working with nine regional universities who create and design their own MOOCs to go on the edX platform. The universities can adapt the MOOCs to their own circumstances. They will also be able to adapt global MOOCs and those on Open edX to offer MicroBachelors and MicroMasters courses with vocational or technical content.

The MOOCs and classes will be used as a way to standardise the learning offer across the nine universities.

Through AfghanX, students can access free online courses in a variety of subjects. Students can do the courses without payment or they can choose to receive a verified certificate for a small fee.

3.1.5 Challenges and opportunities

The challenges of democratisation are how to:

- Ensure equitable access to the Internet – as a first step;
- Widen access to productive opportunities by increasing digital skills and capacities;
- Reform Higher Education to ensure that it is truly inclusive, meets the needs of groups and individuals, and meets the need for continuous innovation that characterises the knowledge economy;
- Realise the potential of digitalisation in Higher Education in ways that are applicable in countries at different stages of development;
- How to avoid widening digital divides as the gap between leading centres of research and development grows.

The opportunities are:

- Universities can equip citizens not just to participate in the knowledge economy but to transform it through lifelong learning;
- To focus on using digitalisation to make the knowledge economy more inclusive by creating a wider skills and knowledge base;
- Higher Education can support initiatives to widen access and encourage a spirit of experimentation with digital technology;
- Universities can support learners to develop skills and access networks, as well as acquire knowledge;
- Governments can explicitly encourage the democratisation of innovation.

There was a general view, however, that if the sector in each region and country can work effectively with its partners in government, the innovation economy, civil society, and with learners, then it can fulfil the promise of digitalisation and, more importantly, bridge divides between digital have and
have-nots, between those who have access to education and those who have not, and help create the
citizens of the world of tomorrow. These themes are explored in the following sections of the report.

3.2 Access to knowledge

We live in an increasingly global condition of information overload. What are the implications for
Higher Education? What are the implications of digitalisation for research?

“People are still not aware that there’s so much knowledge available. Once you know you can build on
each other’s ideas.” Linda Liukas, Finland

3.2.1 Introduction

In the past there was linear growth in human knowledge. Today that growth is exponential. The
quantity of knowledge available is increasing faster than ever. According to one estimate, by Lutz
Bornmann, at the Max Planck Society, and Rüdiger Mutz, at the Swiss Federal Institute of
Technology, the amount of global scientific knowledge doubles every 9 years or so.

This is an unprecedented rate of growth in human history, and the situation is complex. Impressive
though the overall rate of scientific knowledge increase is, different types of knowledge within science
have different rates of growth. For example, nanotechnology knowledge is doubling every 2 years and
clinical knowledge every 18 months. Human knowledge is only part of it, however. Machine knowledge
is increasing much faster. According to IBM, the build out of the “internet of things” will lead to the
doubling of knowledge every 12 hours.

This is a major challenge for Higher Education, especially as access to knowledge is not universal.
There are many reasons why sharing knowledge is beneficial but there are also many reasons why
knowledge is not shared. There is a knowledge divide in the world today. While the digital divide refers
to access to the Internet which gives access to information, access to data is useless without the
knowledge to understand the content, make sense of it, and use it. This inability to turn digitalised
information into economic and social value is part of a “knowledge divide” which is far more significant
than questions of access which are urgent, but which are being remedied with investment.

3.2.2 The data revolution

Within Higher Education the key is Data Science, which is an interdisciplinary field that enables us to
find meaning and appropriate information from large volumes of data and use those data to make
important decisions in business, science, technology, and even politics.

Universities therefore have a crucial role to play in relation to this revolution in data and knowledge.
Data Science as an academic field is clearly crucial, but just as important is the ability to “do data
right”. The data revolution is already having major impacts which go far beyond the simple ability to
access knowledge online into questions of what it will mean to be human, how to lead a meaningful
life, how to act ethically in a world where knowledge is shared with, produced by and shared by,
machines.

While the data-driven knowledge revolution is embraced by governmental interests, some business
and some academic leaders, challenges remain.

The first question is whether “big data” is changing traditional research practices and even the nature
of knowledge itself. Our society has an unprecedented ability to produce and store breathtaking
amounts of data and, much more importantly, we have the tools to navigate the data in such a way as
to identify patterns - correlations - within the data, rather than causations. In that way science can
advance without models or theories. This is new and it goes to the heart of how research is done.
Does the power of data render obsolete the use of the scientific method as we have known it since
Galileo as some have claimed? If so, the implications for Higher Education are profound.

The second question generated by access to data is “why learn when you can look it up? This
question too is radical as it asks the question: is understanding overrated? Could it be that smart
algorithmic searching through oceans of data can spare us the hard work and pleasures of learning
how the world works?

Both of these questions were raised repeatedly in the course of this project and a variety of views
expressed, ranging from unrestrained enthusiasm to restrained scepticism. Nevertheless, some
universities are embarking on highly strategic initiatives where data-driven digitalisation promises to
offer transformative opportunities.
3.2.3 Open research

More practically, academic research often exists behind paywalls. This restricts access by increasing costs. There are also the practices of publishing which depend on copyright. There are initiatives in both South Asia and Europe to tackle this which are highlighted below.

3.2.4 South Asia

Participants from South Asia were all committed to making knowledge available and communicated a strong desire to address all aspects of access to knowledge. There is a lot going on: major infrastructure investments, changes to legal frameworks to increase access to digital education, a focus on skills for work and employment, and a recognition of the need to address data security and trust in online learning. The need is urgent, progress is being made, even if it is not always as fast as some would like and is bringing new opportunities for economic and social development.

3.2.5 Challenges and opportunities

Knowledge and the technology to digitalise it, access it, share it and interpret it are not universally available at the same time. Therefore, the way they spread across countries is central to how global growth is generated and shared.

The challenges to access to knowledge identified in our research are:

- How to ensure that the rush to digitalisation does not exacerbate knowledge divides?
- As society moves towards a future where everyone can access information via the Internet, for whatever purpose, how can digital Higher Education help people to access, interpret, and use data and knowledge in ways that are critical, creative, and positive?
- How can Higher Education help people cope with the sheer pace at which the amount of knowledge is increasing?
- How can we work together, and bring the best knowledge in the world to bear on tackling both global and local problems?
- What policies, strategies and practices are required when future-oriented Higher Education exists within a complex system of digital infrastructure, future work opportunities, data security, and the law?

The opportunities are to:

- Build on the common understanding revealed by our research in South Asia, that the era of isolated solutions must come to an end;
- Address the challenges of the immediate future by working across organisations, in networks, and in a concerted effort;
- Make every effort to make knowledge and data openly available as widely as possible.

Overall, there was a strong feeling that Higher Education is the key site of knowledge exchange. Its role as both a cause and an effect of globalisation positions it as the key point where knowledge is produced, shared within research communities and with learners, and, increasingly, where transdisciplinary debates about the society of the future are taking place. That has significant implications for learners, universities, businesses and governments.

3.3 Access to education

How can populations in South Asia and Europe access the learning they need? What still needs to be done in policy, infrastructure development, pedagogical development, and quality assurance?

“The sky is the limit but even when we inhale oxygen, we’ll be digitised. We have started depending so much on technology.” Farzana Shahid, Information Technology University, Pakistan

3.3.1 Introduction

Access to education is about more than physical access to online learning through technology. This report does discuss that, but it reflects more on what access means for each region. While it is true that there is a general awareness of the opportunities, affordances, and challenges of digital
technology and of the very practical questions that need to be addressed, the question that this study addressed was to understand how Higher Education is addressing the different questions of access, and what the impact of doing so was on Higher Education in two very different regions of the world.

3.3.2 Access to education: the global challenge

Achieving universal access to education (Sustainable Development Goal 4) is a global challenge. SDG4 is about more than access to Higher Education. As the United Nations notes, some 30% of children still receive no education at all, and while more children are accessing education, it is often of very low standard - more than 50% of children and adolescents worldwide are not meeting minimum proficiency standards in reading and mathematics.

The UN recognises that disparities in access to education along the lines of gender, urban-rural location and other dimensions still run deep and urges Member States to invest more in education infrastructure, particularly in the 47 Least Developed Countries (LDCs). Two of the countries included in this report, Afghanistan and Nepal, are among the countries the United Nations identifies as LDCs. A country is classified among the LDCs if it meets criteria related to poverty, human resource weakness (including in education), and economic vulnerability.

SDG 4 aims to: “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. This report is timely in that progress against the SDG4 targets will be reviewed at the high-level UN political forum on sustainable development in July 2019. Target 4.3 of SDG 4 is specifically relevant to this report, as it commits countries to “Ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university” by 2030.

The United Nations sees digital education as central to progress. The roadmap for SDG4, the Education 2030 Framework for Action (FFA), recognises that a well-established and well-regulated tertiary education system can take advantage of technology, open educational resources and distance education to improve access, equity, quality and relevance. UNESCO is therefore developing initiatives at regional and national levels and working with donors, Member States and stakeholders, to address quality enhancement, internationalisation and digital education. Digitalisation in Higher Education therefore has a crucial role to play in meeting SDG4 and our research highlighted initiatives which are addressing that.

3.3.3 South Asia

Rising demand in South Asia for access to Higher Education is currently not being met, despite its growing importance in economic development. As South Asian countries grow their economies, the role of the Higher Education sector in facilitating a skilled, knowledgeable workforce has become critical.

There is, however, a disconnect between the needs of the market and the courses offered by Higher Education institutions which has contributed to high levels of graduate unemployment and underemployment. A successful outcome-based Higher Education experience is becoming more of an imperative in South Asia, where unemployment is not an option.

Female representation in leadership remains low by any benchmark, despite huge progress being made at undergraduate level with women almost reaching parity in numbers with men. Numbers in Afghanistan, for example, have grown from virtually zero during the Taliban era to nearly 180,000 women in tertiary education today. However, just 3 per cent of vice-chancellors in the region are women.

Our research confirmed that digital technology undoubtedly offers the possibility dramatically to increase access to Higher Education in South Asia. The first priority in the region is access to learning, making learning opportunities available to people who have never before had the opportunity to participate. Education offers the chance to help effect national transformation, holding out the prospect of economic growth, employment, and a way to address deep-rooted social inequalities.

The challenges and opportunities identified in this research are described below. There is no doubt that there are very significant initiatives underway. However, there may be a knowledge deficit in how to take advantage of these investments. As the World Bank notes: “while access to devices, connectivity and digital learning content is spreading quickly around the world, knowledge about how to harness increased levels of access to technology in ways relevant and practical for policymakers and educators in so-called ‘developing countries’ is not spreading anywhere near as quickly.”
They go on to note that: “The vast majority of research and documentation related to the use of educational technologies around the world is generated from within 'highly developed' countries (most of them in Europe, North America and East Asia), animated and informed by research questions and the needs of education communities and education systems in these same countries.”

They go on to report that the World Bank, inspired by an idea conceived by the UK Department for International Development, is setting up a Research and Innovation Hub on Technology for Education to address this.

Success Story- Pakistan

The Universal Service Fund was established by the Government of Pakistan (Ministry of Information Technology) to spread the benefits of the telecom revolution to all corners of Pakistan. Universal Service Fund promotes the development of telecommunication services in un-served and under-served areas throughout the length and breadth of the country.

The main objectives of Universal Service Fund (USF) are to:

- Bring the focus of telecom operators towards rural population and increase the level of telecom penetration significantly in the rural areas through effective and fair utilization of the fund.
- Improve the Broadband penetration in the country.
- Bring significant advances towards enhancement of e-services, both in rural as well as urban areas of the country.

Its projects include:

- Broadband for Sustainable Development Projects
- Broadband for Un-served Urban Areas. The Broadband Program has been launched aiming at improving broadband penetration in unserved 2nd/3rd tier urban areas;
- Optic fibre Connectivity to unserved tehsils (administrative districts)
- ICTs for Girls – which aims to provide ICT facilities to increase the employability potential of the girls in Pakistan. The programme has:
  - Established computer labs in 144 “Women Empowerment Centers” in un-served and underserved areas of Pakistan. Through this program over 15,000 girls will be trained annually at state-of-the-art computer labs under the coaching and training program of Microsoft, and
  - Established Computer Labs in Government Girls Institutions of the Islamabad Capital Territory - 226 Schools have been provided with ICT Model Labs and 202 teachers have also been placed at these institutions. These teachers have been trained by Microsoft under Train the Trainer program on 21st Century Super Skills. This project will help in making over 110,000 girl students studying in Islamabad's schools “Computer Literate” and bring them to the level of students elsewhere in the world.

3.3.4 Challenges and opportunities

The challenges of access to digital education in South Asia are:

- Commitment from Governments in South Asia to making education a priority, with sustainable strategies for implementation at institutional level and strategic programmes and initiatives to drive change;
- Infrastructure: there needs to be a stable supply of electricity and affordable and reliable Internet access at prices that are affordable for most people;
- Human resources: faculty need to be trained to ensure that they can make use of digital technologies;
- A legal and regulatory framework that encourages and supports access to online learning;
- Robust quality assurance, security arrangements to prevent cheating and parity of recognition for online and traditional education;
Measures to make access equitable.

The main opportunities of extending access are:

- More inclusive education, that is better quality, for more people, for longer;
- Universities enhance their role as drivers of future economies;
- More informed, critical and capable societies;
- More equality of opportunity that in the long run makes for more stable societies where everyone can participate on equal terms.

4 CONCLUSIONS

The Fourth Industrial Revolution – the digital transformation of life as we know it – is based on a shift from digitalisation to innovation based on combinations of technologies, and it promises significant productivity increases in the late 2020s which can be available to countries that are ready for it;

These gains will elicit new challenges for Higher Education - an obvious issue is the need for lifelong skills development as the workforce transforms – this concern is already shaping digital policy and impacting on Higher Education. The need for higher skill levels also applies within Higher Education, for faculty and for students;

Access to digital Higher Education has to be equitable to ensure the maximum opportunity for participation in society and the economy of the future and thus achieve the promised gains of the Fourth Industrial Revolution. This will pose significant challenges which must be addressed as digital is the only way to provide quality learning at population-scale and meet the needs of individual learners;

There are differences and similarities between the impacts of digitalisation on Higher Education in South Asia and Europe. The greatest challenges and opportunities are for future collaboration for the common good. These two great regions can and must learn from each other. Specific areas where this report has identified opportunities for collaboration are:

- Making progress towards the SDGs where, for example, experienced MOOC providers from Europe can help train future educators;
- Creating gateways for research and knowledge exchange on topics of mutual interest.

REFERENCES


