

**Pan-Commonwealth Forum, 9-12 September 2019, Edinburgh, Scotland.**

## **Developing a Digital Strategy for Distance Education in Myanmar**

**Jon Gregson (The Open University, UK / Development Dreamers), Rebecca (Beck) Pitt (The Open University, UK) and Tim Seal (The Open University, UK)**

### **Abstract**

The Transformation by Innovation in Distance Education (TIDE) project (<https://www.spheir.org.uk/partnership-profiles/transformation-innovation-distance-education>) aims to contribute to the strengthening of Distance Education (DE) in Myanmar as set out in the National Education Strategic plan. This paper presents a short case study exploring how TIDE is working with stakeholders to develop an inclusive ‘digital strategy’ for the project. It outlines opportunities and challenges specific to the Myanmar context and concludes by highlighting some key emerging digital strategy approaches. These approaches have both the potential to improve the quality and workplace relevance of DE courses, and to meet wider economic development goals.

### **Introduction**

Digital technologies usage, and in particular mobile broadband access, has increased rapidly over the last five years. According to ITU (2017) by the end of 2017 mobile broadband subscriptions were expected to reach 4.3 billion (over half the world’s population), and 70% of the world’s youth (15-24) were estimated to be online. In Myanmar trends in recent uptake in digital technology are particularly dramatic; with ITU (2018) noting an “astounding increase in access to mobile networks” since 2013, and almost 90% of the population now having mobile-cellular subscriptions.

How this digital revolution impacts on Higher Education (HE) is of particular significance to Myanmar given that the majority of HE students study through a DE model and the recent introduction of the ‘One Campus: Two Systems’ model which has resulted in the decentralisation of DE provision. This paper explores how a project aimed at supporting the transformation of the HE/DE system in Myanmar is co-developing a digital strategy to make effective use of digital technologies for teaching and learning at a distance.

### **Myanmar Digital Infrastructure**

A major change in the country since 2013, has been the rapid growth in the telecommunications infrastructure ‘following the adoption of a new telecommunication law in 2013 which opened the market to competition’ (ITU, 2018). Following a tendering process two international private sector companies, Telenor and Ooredoo, plus the state owned Myanmar Posts and Telecommunication (MPT), were awarded licences to develop the infrastructure. A fourth company, Mytel, which is a joint venture of a government consortium and a Vietnamese company called Viettel was awarded a licence in 2017.

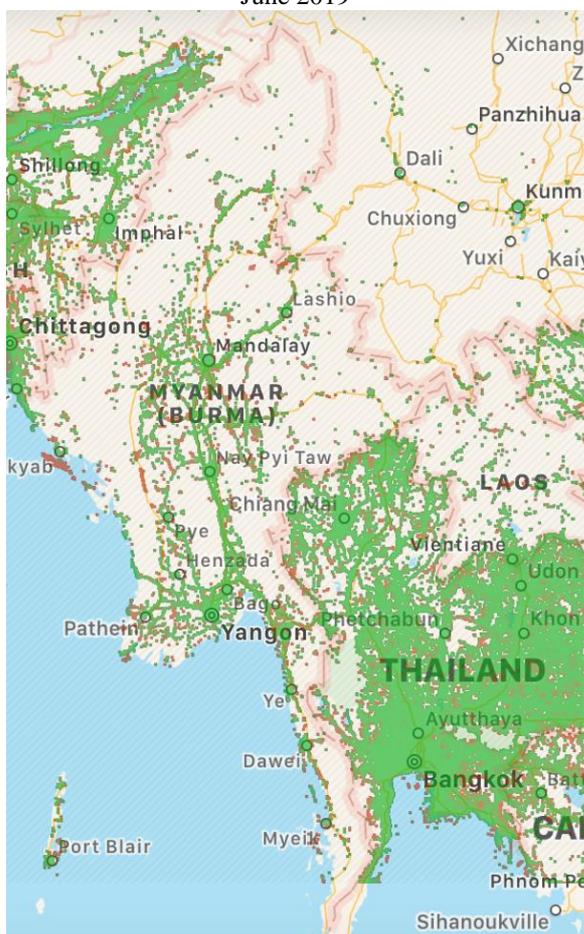
Prior to 2013, internet access was very limited, and Myanmar was one of the few remaining countries where mobile phones were not being widely used. The cost of both mobile phones and data was initially prohibitive. In 2010 SIM cards cost 1.5 million kyats (approx. £750), dropping rapidly in price to 1500 kyat (approx. £0.76) by 2013 (Htun Khaing, 2016). In 2019, there is widespread coverage and 3G and 4G access, supporting mobile broadband, available in most parts of the country. It was announced in early 2019 that 5G is anticipated to be rolled out within the next 2-3 years (Saw Yi Nanda, 2019). However, as the OpenSignal mobile coverage map for Myanmar indicates, the density of coverage and access is largely around the main cities and central part of the country. As was reported by UNESCO & IMS (2016), for example, it remains the case that a significant number of people (21.5%) particularly in rural areas only have access to broadcast/print media.

The ITU (2018) report that ‘over 42,000 km of backbone fibre-optic network has been laid down nationwide. Myanmar’s international Internet connectivity has radically improved, from around 30 Gbps before the start of sector reform to over 440 Gbps by April 2018’. Latest key indicators for Myanmar telecommunications access in 2017 which illustrate the transformation are provided in the table below.

This rapid transformation to a digital society, brings with it many new opportunities and challenges. Social media, and in particular Facebook has become widely used, as citizens rapidly started to make use of the Internet services via their mobile phones. In February 2016 it was estimated that there were 10 million users of Facebook in Myanmar (Htun Khaing, 2016). The use of social media has opened up communication and knowledge sharing to the general population in a country where top down and centralised approaches to censorship and media control had been the norm. However, use of Facebook has also been widely blamed for enabling hate speech which has contributed to fuelling the ethnic conflicts and tensions that the country has been facing for many years (New York Times, 2018).

There are clearly challenges to develop digital literacy, and with the Information and Communication Technology (ICT) infrastructure growing so rapidly it is not surprising that within the Education sector there are hopes the through use of digital educational technologies, the reform process may ‘leapfrog’ to new models of education design and delivery, and an institutional infrastructure can emerge that can support high quality open and DE that provides courses relevant to the job market.

Myanmar Mobile Coverage Map  
June 2019



Source: OpenSignal App (accessed 16 June 2019)<sup>1</sup>

Myanmar Key Indicators to Telecommunications  
Access and Infrastructure, 2017

Key indicators for Myanmar (2017)		Asia & Pacific	World
Fixed-telephone sub. per 100 inhab.	1.0	9.5	13.0
Mobile-cellular sub. per 100 inhab.	89.8	104.0	103.6
Active mobile-broadband sub. per 100 inhab.	75.1	60.3	61.9
3G coverage (% of population)	90.5	91.3	87.9
LTE/WiMAX coverage (% of population)	29.5	86.9	76.3
Individuals using the Internet (%)	30.7	44.3	48.6
Households with a computer (%)	16.6	38.9	47.1
Households with Internet access (%)	28.3	49.0	54.7
International bandwidth per Internet user (kbit/s)	6.9	61.7	76.6
Fixed-broadband sub. per 100 inhab.	0.2	13.0	13.6
Fixed-broadband sub. by speed tiers, % distribution			
-256 kbit/s to 2 Mbit/s	7.9	2.4	4.2
-2 to 10 Mbit/s	5.0	7.6	13.2
-equal to or above 10 Mbit/s	87.2	90.0	82.6

Note: Data in italics are ITU estimates. Source: ITU (as of June 2018).

### The Higher Education Sector in Myanmar

During the lead up to democratic elections which took place in Myanmar in November 2015, a reform process was initiated. This process is progressing rapidly in the education sector guided by the National Education Strategic Plan: 2016-2021 (NESP) which was adopted soon after the National League for Democracy led by

<sup>1</sup> Opensignal, provide coverage apps, and also test upload and download speeds indicating the performance of different providers in Yangon, Mandalay and Nay Pyi Taw. See

<https://www.internetinmyanmar.com/opensignal-myanmar-mobile-coverage/>

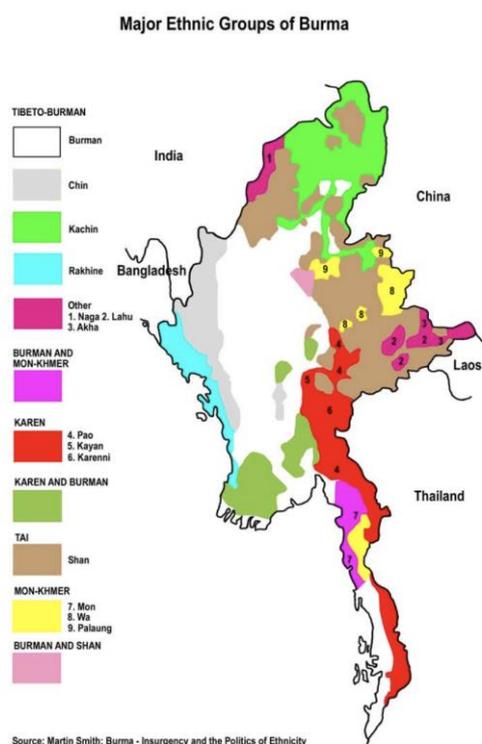
Aung San Suu Kyi came into power. In response to NESP changes are being introduced in HE/DE resulting in setting up of new bodies such as the National Education Policy Commission and the Rectors Committee, which are guiding a process to create greater autonomy and decentralisation for the HE sector.

The HE system in Myanmar comprises over 170 Universities spread widely across the country. The DE system provides undergraduate degree courses to arts and science students, and is responsible for providing HE degrees to over half a million students; approximately two thirds of students in HE Up until 2019 DE students have been registered with either Yangon University of Distance Education (YUDE) who are responsible for Lower Myanmar, or Mandalay University of Distance Education (MUDE) who are responsible for Upper Myanmar. In 2019 changes were introduced to transition to what is referred to as the 'One Campus Two Systems' model whereby 34 day campus Universities responsible for Arts and Science subjects, take over the registration of the DE students. Under this new system, they will have greater opportunity to create new DE courses relevant to their region and develop a blended model of delivery that makes effective use of educational technologies and the emerging ICT infrastructure. YUDE and MUDE are being tasked to produce short online courses, and build on existing strengths including a highly regarded diploma in law course supported via its online platform (<http://www.yudeonline.com.mm/>). The future focus for YUDE and MUDE is not yet clear, but a potential mandate could develop around a more open model of education, and responsibility for online courses for school leavers not finding University places and providing flexible postgraduate courses that support professional development.

The DE system in Myanmar faces specific challenges, including regular rotation, every two to three years of both academic and support staff to other Universities.

There are also major language challenges for students, and HE staff who are required to study and teach in English, but who's native language is one of over a hundred different linguistic groups. The main ethnic groups are highlighted in the map opposite.

Most of the 34 day campuses involved in DE provision have their own libraries, but these mainly service day students, and distance students only have access when they visit the campuses prior to examinations. There is no remote access, and ICT access on campuses remains limited. Whilst the bandwidth on campus is increasing year by year the current connections are typically 4-10 megabits per second (Mbps), with greater bandwidth typically allocated to administration and library, and not to academic departments. There is also very limited investment in employing skilled ICT staff, and many ICT installation and maintenance tasks are outsourced to third parties.



Source: Reliefweb (Accessed 29<sup>th</sup> June 2019)<sup>2</sup>

In recent years, through the work of the Electronic Information for Libraries (EIFL) Network<sup>3</sup>, online journal provision has been made available at a growing number of Universities. The Myanmar Academic Library Consortium<sup>4</sup> now has 27 members and is putting in place a sustainable model for subscribing to online journals. DSpace online repositories have been established at five Universities, and there has been a recently announced

<sup>2</sup> [https://reliefweb.int/sites/reliefweb.int/files/resources/10FDF327AD43B28E852571FC004C65E4-tbbc\\_REF\\_mmr300606.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/10FDF327AD43B28E852571FC004C65E4-tbbc_REF_mmr300606.pdf)

<sup>3</sup> [www.eifl.net](http://www.eifl.net)

<sup>4</sup> <https://myanmaralc.org/>

plan for a Myanmar Education Research and Learning Portal (MERAL)<sup>5</sup>. In theory these journals should now be accessible to DE students registered at any of these member Universities. Tekkatho Foundation also provides a ‘first mile’ online/offline solution to curated and typically open licensed content within a growing number of University libraries through its ‘eTekkatho’<sup>6</sup> product.

There are 25 dedicated Computer Science Universities in Myanmar, and whilst they do not currently offer DE, they support over 2,000 registered undergraduate and post graduate students generating employable graduates with skill sets that are increasingly in demand from local employers and international employers based mainly in Yangon and other ASEAN countries. At University of Information Technology, Cybercity, Yadanabon, near Mandalay, there is an e-learning centre which is developing and offering online courses, and together with the recently formed University of Information Technology, Yangon, they are involved in a Korean funded ASEAN OER project.

The University of Computer Studies, Yangon, is leading in the development of the Myanmar Research and Education Network (mmREN) and hosts the servers which currently connect four Universities. With funding support anticipated from World Bank, there is a plan to connect twenty Universities to mmREN this year, and eventually extend to all Universities. The initial phase should greatly improve connectivity and bandwidth costs for Universities and services will also be identified and built to promote greater knowledge sharing between academics nationally and internationally. Included in the ambitions for mmREN is the establishment of a national online library, which would appear to link to the MERAL initiative:

*“A key feature of mmREN will be the establishment of a national online library containing electronic copies of all books, journals, research papers, articles, course materials, reference books and other materials in Myanmar and English currently in use at all 173 Universities. All students and faculty will have 24 hour access to the online library” (MOE, 2018).*

The Ministry of Education has a data centre at its offices in Nay Pyi Taw which currently supports a portal and services related to staff management (i.e career progression and transfers), certificate verification, online library, MOE email and links to data providers such as the Myanmar Information Management Unit, MIMU.

Although the Act of Parliament related to Private Universities operating in Myanmar has not yet been passed, there are a growing number of Private Universities operating in Myanmar, often collaborating with international University partners. Examples are Strategy First University which has partnerships with publishers, professional institutes and Universities such as Edinburgh Business School, Heriot Watt, Stamford and Oxford Brookes; Myanmar Metropolitan College which partners with UBIS a Swiss University and Leeds Trinity University; and Myanmar Imperial University<sup>7</sup> which partners with University of Nottingham and Pearsons.

There is also evidence of a growing number of private sector initiatives that support innovation and the growth of e-learning with the education sector. The table below provides examples of some of these initiatives:

Phandeeyar	An innovation hub which provides seed funding to start up initiatives. The Yangon Chapter of the Founder Institute providing support to tech entrepreneurs.	<a href="http://www.phandeeyar.org/">www.phandeeyar.org/</a>
360Ed	A ‘team of educators, leveraging advances of Virtual Reality, Augmented Reality and other emerging technologies for learners in Myanmar’.	<a href="http://www.360ed.org/">www.360ed.org/</a>
Thabyay Education Foundation	Provide courses, academic and student services and an e-learning platform, focussing on neediest communities. Provision of English classes for those preparing to study abroad.	<a href="http://www.thabyay.org/">www.thabyay.org/</a>
DevelopEd Lashio	Provision of English courses, IELTS and a range of other courses including business and management and gender studies.	<a href="http://www.lashio.developed.org.au">www.lashio.developed.org.au</a>

<sup>5</sup> <https://www.eifl.net/news/myanmar-education-research-and-learning-portal>

<sup>6</sup> <https://www.etekkatho.org/>

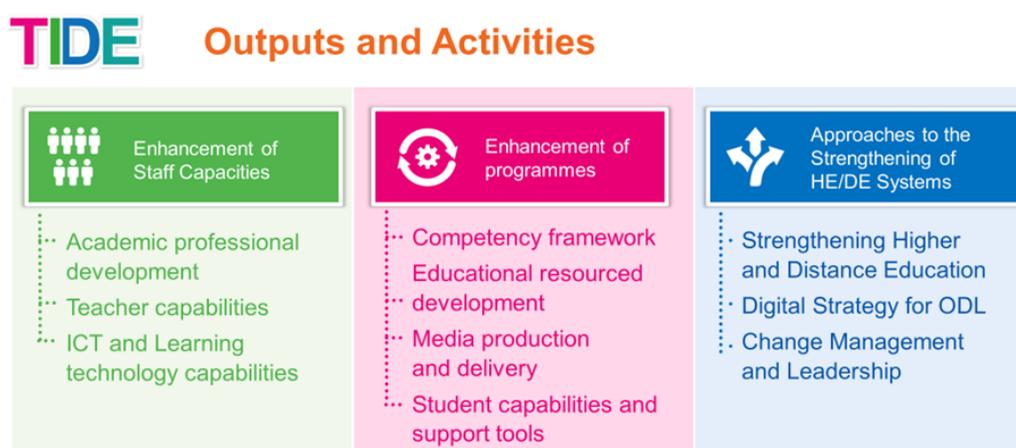
<sup>7</sup> <https://www.mic-education.com/>

Myanmar Mobile Education Project (MyMe)	Non Formal Education (NFE) and outreach work focussing mainly on out of school children. making innovative use of Raspberry Pi computers and content adapted for local use.	<a href="http://www.mymeproject.org/">www.mymeproject.org/</a>
Utter	An English language app, and supported English language teaching on a tailored learning environment (developed in India)	<a href="http://www.facebook.com/YourEduApp/">www.facebook.com/YourEduApp/</a>
Dedaabox	Short courses (mainly English and Business) developed in Myanmar for study on a mobile phone or computer.	<a href="http://www.facebook.com/dedaabox/">www.facebook.com/dedaabox/</a>
mmTutors	Tutoring support for matriculation students	<a href="http://www.mmtutors.com">www.mmtutors.com</a>
VoiceTra (UCSY in Myanmar)	Language translation app with Japanese funding, based on voice recognition, and covering several languages including English to Myanmar.	<a href="http://voicetra.nict.go.jp/en/">http://voicetra.nict.go.jp/en/</a>
Open Development Myanmar	Open data platform supported by Phandeyar, providing maps and data services.	<a href="https://opendevelopmentmyanmar.net/">https://opendevelopmentmyanmar.net/</a>
Myanmar Information Management Unit	Maps and Information management services provided by the UN Country Team and Humanitarian Country Team to strengthen stakeholder planning and decision-making	<a href="http://themimu.info/">http://themimu.info/</a>

## The TIDE Project

The Transformation by Innovation in Distance Education (TIDE) project is one of a portfolio of nine projects that fall under the Strategic Partnerships for Higher Education Innovation and Reform (SPHEIR) programme which is funded by UK Aid through the Department for International Development. The project which commenced in February 2018 runs until the end of September 2021. The TIDE partnership comprises the OU UK as the lead partner, Oxford University, University of Manchester, Irrawaddy Policy Exchange (IPE), Yangon University, Yangon University of Distance Education, and Yadanabon University.

TIDE aims to improve the quality of DE in Myanmar, and the employability of DE graduates and contribute to NESP. There is an academic focus on 'Education for Environment and Sustainable Development' (EfESD) and the project is designed under three main strands of activity. The first stream is concerned with capacity development, and through a cohort based programme of residential schools, webinars, in-country seminars and online courses, academic and support staff participants participate in training and knowledge sharing activities related to EfESD related academic knowledge, teaching and pedagogy, and ICT and library skills. The second stream is concerned with supporting the development of programmes and content that reflect 21<sup>st</sup> century skills needed in the workplace, competencies required by employers, platforms for delivery of online and blended DE, and the development of Open Educational Resources (OERs). The third stream is focussed on working with policymakers to develop strategy to strengthen HE/DE. It is in this strand that there are components to develop 'digital strategy', design and implement 'ICT pilots' and also support change management within institutions so that they can work in ways that can embrace new approaches relevant to the digital age.



## Three Major Strands of TIDE Activity

### **Towards a Digital Strategy for strengthening Distance Education in Myanmar**

The challenge for the TIDE project is to support the development of digital strategy that can contribute positively to the ‘leapfrogging’ ambition of policy makers involved in the DE/HE sector in Myanmar. This requires the project to have a good understanding of local developments in the telecommunications and ICT infrastructure, and within HE/DE more generally, as well as recognising the emerging role of the private sector in providing a potentially vibrant set of actors who can catalyse reform, support progress in the HE sector and contribute to higher quality sustainable solutions.

Whilst there is a ‘National Education Strategic Plan’ for the five years to 2021, that expresses ambition in relation to the emerging role of ICTs, the specifics related to HE and DE in particular are less clear. The TIDE project is therefore seeking to respond to a strategic agenda related to use of digital technology that is not yet clearly mapped out. There was a recognised need to develop some understanding of what digital technology could contribute to HE/DE at the National level, and then to seek to focus TIDE activities linked to ICT to respond to the strategic priorities.

A digital strategy for HE is not a new idea, though there are few publicly available examples to be found. One relatively recent example is the Scottish Government’s Digital Learning and Teaching Strategy (2016), that outlines the value added in ‘enhancing learning and teaching’, ‘improving educational outcomes’ and ‘building digital skills’. The strategy is organised under four major objectives:

- 1) Develop the skills and confidence of educators in the appropriate and effective use of digital technology to support learning and teaching
- 2) Improve access to digital technology for all learners
- 3) Ensure that digital technology is a central consideration in all areas of curriculum and assessment delivery
- 4) Empower leaders of change to drive innovation and investment in digital technology for learning and teaching

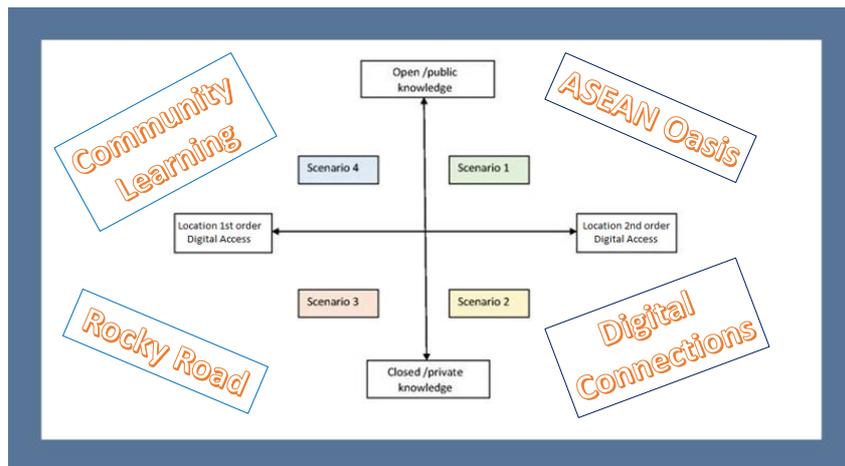
These objectives reflect the need for skill development, access, consideration of the role of ICTs and empowering change.

A focus on ‘digital education’ and the role of ‘digital educators’ is also starting to gain traction, and this is evident on the agendas of international conferences such as the upcoming international conference at Sukhothai Thammathirat Open University (STOU) on distance learning titled ‘Research and Innovation for a Digital Society’, and in the strategic thinking of Universities. For example, the University of London Centre for Distance Education commissioned a ‘Digital Educator Project’ study which was recently completed (Gillies et al, 2019) that explored the cutting-edge skill development needs for ‘digital educators’ involved in DE.

### **Methodology**

The process of developing a digital strategy for the TIDE project is now underway and documented below are steps taken so far to engage with key stakeholders in Myanmar. These stakeholders included educators and academics from the public and private sector, policy makers, and members of civil society and innovators.

Initially the project sought to develop insights that could help frame a vision of what DE in Myanmar could look like by 2030, placing emphasis on learning from good international and regional practice, whilst not importing solutions that had worked elsewhere but which may not be right for Myanmar. A foresight workshop was held in September 2018 (OU, 2018) and a range of scenarios were developed providing contrasting narratives describing the vision for the future under different circumstances. These four scenarios reflected the levels to which the wider society and HE sector, (a) had developed strong ICT infrastructure and digital literacy skills, and (b) had responded to the opportunities presented by open access models for licensing and knowledge creation and sharing.



Foresight scenario quadrant and narrative titles

Each scenario was described with characters to bring to life the teaching and learning experience envisioned and the institutional model that would be supporting it. These narratives can be found in the workshop report (OU, 2018). The scenario modelling generated discussion around drivers of change, and about possible and preferred strategies for strengthening DE and the role of educational technologies.

The foresight process set the scene for a ‘Digital Requirements Workshop’ which took place in February 2019. Participants at this workshop were drawn from TIDE supported public sector Universities, Private Sector Universities, NGOs, and companies working on e-learning initiatives.



Photo: Participants at the Digital Strategy Workshop, at 360Ed, Yangon, February 2019

### Recommendations: Emergent Strategy and Links to TIDE Project Activities

At the Digital Requirements workshop group based activities helped identify, map out and prioritise an important list of activities relating linked to a systemic model for HE/DE, where activities were categorised under the headings of people, processes, data, software and hardware. From this analysis some high level strategic objectives were derived which are listed below. For each objective we have started to specify a range of contributing activities. Note that these ‘objectives’ are workshop outputs for further discussion and development. They have not yet been adopted either by the project or at any official level.

Objective	Linked TIDE Activity
1) Improve and extend ICT Infrastructure	<ul style="list-style-type: none"> <li>• TIDE ICT pilots are being used to generate learning</li> <li>• MOE control capital expenditure budgets</li> <li>• Investment in infrastructure is outside of project scope</li> </ul>
2) Strengthen DE/HE systems and institutions through contributing to the development of: (a) future plans for YUDE and MUDE (b) regional day campus Universities that can support blended learning.	<ul style="list-style-type: none"> <li>• Capacity development related to ‘one campus two systems’</li> <li>• Convening discussions on ‘strengthening HE/DE’ to support institutional road-mapping development for DE/blended learning delivery.</li> </ul>
3) Explore development a National Digital Education Platform to support online education services for 16-18 year old school leavers, undergraduates, postgraduates and lifelong learning	<ul style="list-style-type: none"> <li>• Contribution to early discussions around needs and proof of concept</li> <li>• Longer term plans outside scope of TIDE</li> </ul>
4) Develop learning management systems	<ul style="list-style-type: none"> <li>• TIDE media production workshops</li> <li>• ICT and e-learning pilots generate learning, but budgets to scale up would require new funding</li> <li>• Change management component can help selected Universities work manage changes that can support new systems and working practices.</li> </ul>
5) Equip staff with skills to be digital educators	<ul style="list-style-type: none"> <li>• TIDE residential school training for academic and ICT staff, and OER development activities build collaborative team based approaches</li> <li>• Media production and specialist AV training</li> </ul>
6) Students 21 <sup>st</sup> century skills are developed	<ul style="list-style-type: none"> <li>• TIDE OER outputs will include focus on digital literacy and workplace competency requirements</li> </ul>

Additionally, the following cross cutting enabling activities were identified:

- The need for improved English language skills for both teachers and students
- Establishing stakeholder engagement mechanisms e.g. ICT working Group (which includes a number of participants from the workshop), and a reference group with links to the Rectors committee, DHE, MOE and NEPC
- Market research activities to promote relevance and employer engagement

## Conclusion

It is evident from the policy level changes and rapidly emerging digital initiatives outside the TIDE project that strategy has to be emergent and flexible. Our approach has been one of iterative collaboration based on partnership principles that value co-design, and that is responsive to a changing context. This has led to development of an understanding of priorities that are linked to emerging strategy. This helps to ensure the project remains focussed on key capacity development and longer term objectives that make effective use of ICTs.

It has been important to set up mechanisms for monitoring change in the external context, identify other relevant ICT projects and developments and ensure clarity on what is within TIDE scope and what is beyond. The TIDE strategy development process we have been set in motion has been an essential aid to adaptive management, planning, communication and engagement. It has helped the project team, together with stakeholders, to develop a sense of the longer term needs and generated insights that will be valuable as TIDE contributes to the delivery of the NESP.

## References

Fawsett S and Gregson J (2017) Investigation of Myanmar's distance education sector and proposals for strengthening, Open University UK

Flor, A (2015) A scoping study on the promotion of ASEAN regional integration through open and distance higher education.

Gillies, Gregson, San Diego, Sheehan, Thurairaja-McKeever (2019), Digital Educator Project Report, University of London Centre for Distance Education

Htun Khaing (2016) Social Media shines a light on Myanmar's taboo topics. Myanmar Times. Retrieved from: <https://frontiermyanmar.net/en/social-media-shines-a-light-on-myanmars-taboo-topics>

ITU (2017) ICT Facts and Figures. International Telecommunications Union (ITU). Available from: <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2017.pdf> [Accessed 25 June 2018]

ITU (2018) Measuring the Information Society Report Volume 2. ICT Country Profiles, [https://www.itu.int/en/ITU-D/LDCs/Documents/2017/Country%20Profiles/Country%20Profile\\_Myanmar.pdf](https://www.itu.int/en/ITU-D/LDCs/Documents/2017/Country%20Profiles/Country%20Profile_Myanmar.pdf) [Accessed 16th June 2019]

Ministry of Education (2018) Draft Terms of Reference: Myanmar Research and Education Network System Design Study, Partnership between the Ministry of Transport and Communication and Ministry of Education, Myanmar

Saw Yi Nanda (2019) Myanmar to go 5G in 2-3 years, Myanmar Times. Retrieved from: <https://www.mmtimes.com/news/myanmar-go-5g-2-3-years.html>

New York Times (2018) Facebook Admits It Was Used to Incite Violence in Myanmar, New York Times 6th November 2018, [Accessed 16th June 2019], <https://www.nytimes.com/2018/11/06/technology/myanmar-facebook.html>

National Education Strategic Plan 2016-2021 (2016) Government of the Republic of the Union of Myanmar, Ministry of Education, [Accessed 16th June 2019] [http://www.moe-st.gov.mm/wp-content/uploads/2018/01/NESP\\_20Summary\\_20-\\_20English\\_20-\\_20Final\\_20-\\_20Feb\\_2023.pdf](http://www.moe-st.gov.mm/wp-content/uploads/2018/01/NESP_20Summary_20-_20English_20-_20Final_20-_20Feb_2023.pdf)

Scottish Government (2016) Enhancing learning and teaching through the use of digital technology, Crown Copyright OGL [Accessed 16th June 2019] <https://www.gov.scot/publications/enhancing-learning-teaching-through-use-digital-technology/>

TIDE (2018) Future models for distance education in Myanmar: A report on the digital education foresight workshop, Open University UK

TIDE (2019) Digital Strategy Requirements Draft Report, Open University UK

UNESCO & IMS (2016) Assessment of Media Development in Myanmar. *UNESCO & IMS* Retrieved from: <https://www.mediasupport.org/wp-content/uploads/2016/06/Myanmar-MDI-report-June-2016.pdf>