Mainstreaming ICT in higher education delivery

We are living in the information or digital age where the use of technology is becoming universal in everything in the social, economic and even political space. Information and Communications Technologies (ICTs) are not merely a communication tool anymore; they are growing to become the foundation upon which our lives depend.

We do not only have everything going on online, but we see that technology is being integrated into everything in our daily lives - processes, tools - the list is endless. Technology is even reshaping: Government, education, healthcare, commerce, industry, and agriculture. The various common ICTs, such as the World Wide Web, computers, telephone, television sets, camera and voice recorders, enable us to produce, access, adapt and apply significant amounts of information which can generate more resources and opportunities to improve people’s livelihoods and national economies.

However, these ICTs are just a small portion of the technology that now influences or transforms our entire being: what we do, how we do it, our existence and even our visible reality as we know it. Today, the buzz is the fourth industrial revolution in which information and technology have enabled partnerships with machines resulting in new technological opportunities such as 3D printing, robotics, artificial intelligence and nanotechnology.

In Uganda, ICTs, from the simple feature phone to the new technologies associated with the 4G, do present vast transformative opportunities in almost every sector of our economy - agriculture, education, health, trade and industry. This, however, calls for the local generation of great ideas aimed at solving our domestic problems.

Equally, ICTs are no longer facilitators, but drivers of socio-economic development. ICTs will empower us to utilise technology in education for our country's socio-economic development simply because all humans are information-beavers sooner than later. Therefore, it is crucial that we understand not only as information carriers but developers of solutions. This will influence future generations and civilisation.

The use of ICT in Uganda alone is already becoming rampant. For example, Google Maps has made it possible to track which roads in Kampala have minimal traffic for convenient travel. Applications such as Safeboda, Bolt and Uber are offering us transport solutions. It is also now possible to place an order for food from local outlets and fast food restaurants through applications like Jumia. Even, many working adults are renting out their extra bedrooms or small homes to tourists for as little as $30 a day through an online platform called Airbnb.

We also see a mushrooming of the use in social networking applications to facilitate online discussions and dissemination of information including lecture notes to students.

Today, we depend mainly on giant global providers like Facebook. Imagine the impact of the 14-hour disruption Facebook suffered on 15th March 2019 to all of its products that left them mostly inaccessible across the world. What if we had our local applications?

Our Values

Today, we should be optimistic and proud of our innovations and technological advancement. We have more opportunities than ever before to do more, discover more, learn more, create more and transform a whole new world.

At the same time, we should be mindful of the choices we make. We are on the precipice of a significant shift for our world. There is going to be more computing power added to us sooner than later. Just imagine how the ICT landscape will be in the next 20 years!

Harnessing these opportunities and creating solutions that ensure we take our country forward - requires access to better address and innovative thinking about the most suitable interventions to address these. The technologies of this digital age facilitate anticipatory and algorithmic working that turn big data and algorithms into sustainable development solutions. However, not every creator seeks to make the world a better place just because I have the power to change the world, does it mean I want to change it for the better? We have to take note that such intentions differ from person to person.

Someone working in some small garage to invent some machine could be waiting to unleash the worst horror on humanity. Recently, there has been a spate of killings across the globe using automatic weapons. We also see growth in cyber threats and risks. This is just an example of how own intentions can be divergent.

As technology develops fast, shall we also develop fast enough to ensure that we can control or manage the destructive uses of these technologies? Are we grooming or educating a people that is conscientious of these fast paced developments?

Our technological infrastructure is increasingly complex and interlinked, whereby the internet does not just connect people and computers, but also television, burglar alarms, airplanes, industrial sensors and controls, and automobiles, among others. Given these developments, what rules do we have in place to govern this inter connectedness?

The Council and ICT

Our population is already seeing, and in a way, experiencing what is possible with technology - the entertainment, smart gadgets, and interactive social media, among others.

The internet guarantees them access to learning beyond the classroom. Through the internet, telecommunication in Uganda has made access to information and knowledge affordable and accessible to many.

I ought to point out that information and technology influence human nature and human existence. They impact how we behave, how machines interact with each other, how atoms may or may not interact, and how organisms beyond and within us interact. Universities such as MUL, Harvard, Columbia, Stanford and all leading institutions partly because of their emphasis on ICT led innovation.

They offer online courses for continuing education and allow people to work and study. They have also embraced current techniques such as Big data analytics and artificial intelligence to improve retention, enhance student experience and make the institutions themselves more productive.

Our universities should emulate these universities to produce similar ICT-inspired graduates as well as improve its research and education outputs. Uganda, like many developing economies, is making great strides in embracing ICT and technological innovations for socio-economic development.

I should point out that over the years, the Uganda Communications Commission, as the regulator of the communications sector in Uganda, has been engaged in promoting research into ICT development and use through different avenues such as Annual Communications Innovations Award (ACIA) and the Rural Communications Development Fund (RCDPF). We believe that Uganda can increase its competitiveness by embracing ICT.

I wish to challenge managers in higher education to spearhead the utilisation of ICT-led innovation in universities and other institutions of higher learning in Uganda to: Help us shape our future and the thinking of our people, and drive greater ICT integration in our curriculum, system and lives so that the products of our education system are competitive with the rest of the world.

We need not be afraid of these technological developments because we are the source of information leading to these developments. We need to precipitate the revolution across the globe and seek out the information required and innovate to realise the kind of education systems and products we want for today's world - systems that will transform the livelihood of the smallest person in society.

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