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COVID-19 and the digital transformation of higher education: What insights Palestinian institutes can share?

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Abstract

The spread of the coronavirus disease known as COVID-19 is a public health emergency with economic and social ramifications in Palestine and across the world. While the impacts on business are well documented, education is also facing the largest disruption in recent memory. The Covid-19 is significantly disrupting all aspects of higher education, fundamentally changing how universities operate by sparking the boom of online learning. The impact of this disruption is necessarily transformative, requiring us to rethink how we learn has been an issue of growing importance for many years. The coronavirus and ensuing lockdown currently in effect means that rethinking education is no longer something for a fun offsite in a nice hotel at the end of the semester, but an existential challenge to every dean and president and headmaster and principal around the world. Right now. Universities are shuttered. Exams are canceled. Layoffs of professors and teachers will inevitably follow. Brand-name schools will, in time, bounce back. Many other less prestigious places will never reopen their doors. At this moment of extreme peril, and in the spirit of turning crisis into opportunity, educators and administrators at every scholastic level – and those responsible for training employees in the wider workforce – must urgently reassess their existing practices and protocols. They need to reimagine how to operate in a world of remote presence, social distancing and considerable economic stress.

Keywords: covid-19, higher education, digital transformation

1. Introduction

2. Forging the future of education

The coronavirus poses a new, unexpected and unprecedented challenge to all those involved in education. In this report, Relearning How We Learn, we lay out a series of ideas and recommendations that can help educators think through what needs to be done. Today.

Ideas that may have seemed trivial or “silly” are now a route to survival. Changes that may seem too radical or unthinkable should now be regarded as serious options for serious people. As politicians and policy makers globally grapple with the steps that must be taken to deal with a new “war,” education leaders must similarly make decisions of a scale that will reverberate for generations. Positively or negatively.

As Clayton Christensen knew only too well, when disruptions come, they come not single spies, as Shakespeare would say. Dealing with this moment of disruption - a pandemic and an economic meltdown - will require those in the hot seat to act swiftly and boldly. And with foresight. This report charts the terrain ahead.

3. Executive summery

In the face of the unknown future, HEIs will need to engage in more flexible partnerships, quicker responses, different modes of delivery and new combined-skill programs to reliably prepare people for what comes next. Crucial questions include: How will we identify the most relevant skill areas? How can we overhaul our content and curriculum? How can we redefine our teaching and training approaches?

To answer these questions, we surveyed academics and administrators at leading universities of the higher education system in Palestine. Our objective was to gain insight into the changes these entities are making in their educational programs, and the challenges they face in preparing tomorrow's work.

Based on our findings, we've developed a future of learning model that incorporates the elements of change required: skills identification, overhauled approaches to content/curriculum and training/teaching, and an environment supportive of self-learning. The speed at which these elements are executed will determine how effectively action ultimately navigate the rocky path of preparing for the future of work.

4. Preparing for a sea change in learning

Many universities are developing specific strategies in reaction to the massive shift towards using technology, yet lack the vision, capability or commitment to implement them effectively. As a result, many institutions then invest heavily in IT systems that don't deliver the anticipated benefits and outcomes. These universities fail to appreciate that they don't need a digital strategy – just a business strategy that is fit for the digital age. Staying relevant in the digital age requires a strategic vision for the whole institution, a vision that is led by senior management with support from many departments, not just IT. A lack of digital literacy amongst academics, students and staff means that early engagement and interaction to build the right support networks is essential to achieving sustainable change across the entire institution. Many universities lack a clarity of vision on the disruptive impact of on Higher Education or are unable to respond effectively.

In addition, university IT departments who need to support digital initiatives are not always well equipped to do so. Inflexible policies, aging infrastructure and inexperience working with digital agencies can delay or prevent new digital initiatives from taking shape. Academics, staff and students that try and use technology in new and innovative ways can often be 'shut down' by IT departments fearing a loss of control or with concerns about risk and compliance. It's not just all about barriers to embedding and using new technology though. Having the right voice on existing social media platforms and being able to respond quickly, consistently and in the right tone can be a significant differentiator in this space. Many universities though are unsure of how to leverage these communication channels effectively and what the appropriate controls should be. Often this results in an over-complicated approval process for social media postings, deterring academics and staff who have interesting or unique points of view. The social media postings that do make it through the bureaucracy can often be stale or overly corporate, creating a jarring social media experience for many.

Finally, Digital technology has enabled many innovative teaching techniques such as flipped classrooms, richer distance learning experiences and hybrid (a combination of online and face to-face) teaching models. However, even though they don't always like to admit it, many universities and academics view teaching as being secondary to research. Getting the most out of learning platforms such as Blackboard, Canvas or Moodle requires a significant investment of a university's time

– an investment that is only made when teaching is recognised as a valued activity. As a result, many learning platforms have simply become repositories where lecture notes are stored for download, delivering little benefit for the student or the provision of data for use in analytics.

The elements associated with dependability were equally important in the employment of interactive systems, including e-Government facilities and systems. However, provided that this essential element was not emphasised in the research in the literature of e-Government employment, it was then suggested in this study as the primary element in the model. These elements comprised two essential components, namely perceived trust (PT) and regulations and policies (RP) factors.

5. The digital strategy

The University must become a digital business leader to achieve the future depicted by the University Strategic Plan. Digital business leadership in research, learning, and teaching requires the University to be data-driven and customer-experience focused. Transformative and lasting cultural and behavioural changes must occur beyond technology delivery to effect major sustained performance improvement. This Strategy describes the vision, principles, and capabilities the University needs to flourish within and adapt to a rapidly-changing environment. This Digital Strategy should support the former IT Strategic Plan, and signals:



Fig 1: The Digital Framework

University communities and the digital strategy

Palestinian Universities aims to be an internationally recognised institute of higher learning that produces future leaders who are talented, trained, well-educated, and have high regards for culture and high morality, plus a towering personality. Universities is a diverse organisations comprised of overlapping communities and collectives: many staff are also students or alumni, and most academic staff are concurrently researchers and teachers. The narratives below illustrate how implementation of the Digital framework can empower and enable members of the primary University customer communities.

5.1 Researchers

Recognizing that technologies tools play increasingly important roles, the University must enable and support its researchers to better utilize these technologies. The University should provide researchers with a suite of useful

technical, collaboration, and advisory services tailored to meet general and specific research and collaboration needs. The services researchers need will be easy to discover, well-described, enabled for use by collaborators from inside and outside the University, and offered with personalised, relevant, and timely assistance.

Researchers will also have access to a comprehensive set of sustainable services to manage, archive, share, and publish research data created by the University. Digital techniques will support researchers to publish research outputs with open access, wherever possible.

5.2 Students

Future students will establish continuous relationships with the University as a hub for lifelong learning, beginning at high school and continuing into employment. Through enduring relationships, students will understand the learning opportunities available to them and how they enable future careers and development.

Students should be supported by advisors as they are guided through end-to-end journeys that traverse administrative and academic services, and will collaborate with peers and staff easily and safely, and enjoy improved social connectedness. New experiences will be made possible by digitalization, and implementing this Digital Strategy will support the evolution detailed by the Learning and Teaching Plan. The University will trial, measure, and establish non-traditional course and programme structures based upon micro credentials. Initially, these initiatives may be targeted to lifelong learning.

5.3 Academics

The digital platform for learning and teaching enables enhanced pedagogy, and provides a consistent learning environment and personalised experience for teachers. Teachers, including supervisors of research students, are supported and empowered to experiment and innovate with flexible discipline based pedagogical practice.

Learning and teaching should be supported by digitalized processes to enhance student engagement and the quality of feedback, and to reduce manual administrative effort and paper-based readings and assessments. Teachers can access course-related software remotely from their own devices, with media content for lectures and events being created and shared easily to support flipped classrooms and online courses.

Digitally-enabled learning-spaces should be optimized to meet diverse needs, including real-time interaction and collaboration. New technologies such as augmented reality should be made available to staff to increase digital capabilities in teaching.

Using analytics and digital tools, teachers will recognize the potential individual students have, and provide accurate advice on future studies and careers to prepare them for success. A future digital platform should be composed of integrated learning and teaching solutions enabled with learning analytics for individual students, classes, courses, and the institution.

5.4 Staff

The community of staff includes everybody employed by the University, irrespective of whether they hold a professional or an academic position. All staff should be competent and confident in finding and using digital

services, and services should adapt to provide personalised experiences by considering factors such as an employee's position and personal preferences. Employee experience should be valued and considered deliberately in designing the services and systems staff use and consume.

Customer journeys should be designed for staff and provide cohesive, end-to-end experiences. Increased use of online services will reduce paper-based forms and manual approvals, increasing fulfilment speed across all business processes.

Within the next few years, all staff will require digital skills and capabilities more focused upon collaboration, information management, creativity, critical analysis, and adaptive thinking.

For the most part, these changes will augment, not replace, the capabilities staff possess today. Human Resources should play an increased role in preparing and supporting staff for success: achieving this will require organizational learning and development to provide new content and to embrace new delivery styles. Partnership with Human Resources in all digitalization projects is now essential to understand and prepare the staff learning and development resources needed for those projects to deliver full potential benefit.

5.5 Alumni and external partners

The Digital Strategy enables the University to better fulfil its role as critic and conscience of society, and to understand and fulfil the needs of alumni and friends, donors and contributors, parents and industry and government, peer organisations, key communities, and service-providers from the wider digital ecosystem.

The University establishes lifelong, reciprocal relationships with alumni that connect them to the University and to one another. Adopting a customer-focused approach supported by analytics enables alumni segments to be identified, and communications, engagement, and relationships to be tailored appropriately to the needs and desires of each member. The Digital Strategy builds upon existing initiatives to create detailed insights into alumni relationships that enable the University to better understand, recognise, and strengthen alumni engagement.

Effective strategic engagement with key organisations government, peer organisations, and industry partners is crucial to building and sustaining the outlook and international standing of the University.

6. Foundations for success

6.1 Creating an environment for success

This Digital Strategy describes the vision, principles, and capabilities the University needs to flourish in a rapidly-changing environment. The Digital Strategy presents a coordinated approach to transforming service experiences for all University constituents. The foundations for success are outlined below.

6.2 Digital skills and capabilities

People require adequate digital skills and capabilities to thrive in the modern world effectively and safely, and the University has a responsibility to foster a climate of digital fluency. These new skills neither replace nor render irrelevant the skills and knowledge people possess today. Instead, they augment and complement existing thinking

and practice to enable new opportunities and new delivery models.

Adopting a digital capabilities framework will enable the University to determine the needs of its customers, establish training programmes, and design experiences that grow communities and prepare them to become the researchers and leaders of tomorrow.

Equity, both in terms of equitable access to technology and equitable opportunities to grow digital skills and capabilities, must be ensured. Adopting digital techniques that personalize experiences and provide greater flexibility to all constituents will assist in providing equitable access and opportunity. Customer-focused design should consider deliberately the accessibility and inclusiveness of experiences created by University processes, systems, and services.

6.3 Digital ethics

At the core of digital business is the collection, preparation, and assessment of widely-varied and richly-detailed transactional data about people, services, things, and the interactions between them. These data, and the analytical practices applied to them, are essential for an organisations to create valuable customer insights and viable predictive models of concerns such as student success and employee engagement, and therefore to provide its customers with usefully-personalised services and nudge-based interventions. Basing admission, selection, promotion, and other decisions upon the predictive models and analytics that operate upon these data carries significant ethical responsibility to avoid inbuilt biases in predictive models, ensure appropriate access to and use of data and protect the integrity and safety of the data.

To substantiate the ethical grounding of the Digital Strategy principle “Zero compromise in privacy or confidentiality commitments”, the University must define its approach, governance, and guidelines for the collection and use of rich transactional data.

6.4 Culture and empowerment

Organisations characterized as digital leaders are nimble, comfortable taking calculated risks, have cultures that empower and engage their staff, and maintain ruthless focus on customer experience — such organisations exhibit high Digital Quotient. For the Digital Strategy to be successful, the University must raise its Digital Quotient by transforming, at all levels its approach to: Decision-making, Empowering staff by delegating ownership of processes and solutions, Experimentation and innovation, removing silos in order to focus on end-to-end customer journeys and Accepting manageable risk.

6.5 Partnering

Creating end-to-end customer journeys demands holistic, approaches to service design, requiring new partnering models that span traditional organizational boundaries. Skilled teams aligned to business capabilities will assist faculties and service divisions to gain maximum benefit from central services to form closer relationships with their customers, using methodologies such as road mapping, design thinking, and Agile delivery. Opportunities to partner with the University’s researchers and teachers should be sought proactively, and should occur through co-design activities and direct consultation. Partnerships with external

organisations, including government, industry, and providers of services in the wider digital ecosystem, should be established to ensure the University maintains a contemporary, inclusive, outward-looking approach.

6.6 Application portfolio management

A large applications fleet supports the business operations of the University. There is much diversity in the fleet, which includes decades- old enterprise applications, modern software-as-a-service solutions, and a broad collection of home-grown solutions. New factors now determine application-lifecycle decisions, which must consider customer- experience, longerterm, and wider context benefits than in the past.

6.7 Strategy and governance

The Digital Strategy is the primary strategic artefact for technology direction-setting and technology decision-making at the University. Implementation of the Digital Strategy should be governed and monitored actively through existing structures.

6.8 Underpinning digital capabilities

The University must establish digital capabilities underpinned by robust technology services. These digital capabilities create value and opportunities that can benefit all customer communities. The investment required to strengthen or create the digital capabilities must be aligned to the vision and principles of this Digital Strategy. The digital capabilities are:

6.9 Customer experience design

To become a customer-focused organization, the University requires a customer experience design capability. This capability consists of a design-thinking practice guided by meaningful analytics and by continuously-updated customer-journey models, and facilitates co-design processes in which customers participate directly.

6.10 Cloud enablement

The University should have an overall Cloud Strategy, has to adopt some cloud software solutions, and has some internal cloud-like platforms. The University needs the appropriate people, process, and technology capabilities to support the expected growth in the delivery of business functionality through cloud services. This change will not happen overnight, but will follow a measured, pragmatic sequence. Initially, establishing the ability to integrate quickly and cost-effectively with cloud services is essential to becoming customer-focused and digitally enabled.

6.11 Awesome delivery

To become effective, substantial change is required to the culture and processes for technical service delivery. Governance and delivery should be realigned towards Agile, matched by business commitment to defining needs and engaging in the development process.

6.12 People and teams

The goal of People and Teams is assembling a technical workforce that is the right size and shape, has the right mix of skills, is organized into the right places, and is available at the right price to deliver strategy successfully. Building

this capability will invest in people and inform the creation of long-running teams equipped and empowered with contemporary tools for delivery.

6.13 Value management

An IT Performance practice should be established, seeking cost-reduction opportunities and increases in the business value of the overall service portfolio. This should include evidence gathering, removing low value activities and services, and ensuring service benefits are fully realised through: Defining a service taxonomy, new roles and responsibilities, enforcing consistent governance and organisational change management and establishing an analytics and reporting practice for technology service-delivery that enables the measurement of benefits and value.

6.14 Accessible, integrated digital university

Adopting a service-centric architecture for delivering all integration and bespoke development activities undertaken within the University will provide every constituent with ready access to all of the data and functionality they need and are entitled to access from University systems and services, enabling a rich ecosystem for innovation.

Pervasive data integration across processes and systems is a crucial underpinning for the creation of cohesive and personalised customer experiences. The patterns and processes for delivering integration services to the University should continue to improve and standardise as benefits from the new middleware platforms are delivered.

6.15 Advanced analytics practice

An advanced analytics practice is required for the University to understand and serve its students, for evidence-based decision-making, service personalisation, and value management. Access to new data sources such as social media streams and machine-readable log files is needed for advanced analytics.

7. Methodology

We conducted a telephone survey between March 2020 and July 2020 with 27 higher education professionals.

8. Key findings

Our research reveals the following key trends, the impacts of which will soon ripple throughout the higher education industry:

The majority of HEIs (72%) agree it's extremely important to prepare students to work alongside emerging digital technologies. They have a mammoth task ahead, though: HEIs estimate that 62% and 57% of their total staff and students, respectively, will be prepared to handle new types of work driven by emerging digital technologies in the next five years.

Tasks of the future will be done by the new tools (i.e., AI, AR/VR, big data, IoT), which respondents believe will have a significant impact on work in the next five years, which will make some people's skills and capabilities irrelevant, and leaving behind those unable to keep up. Of the university surveyed, 76% are already confronting a daunting talent gap, and 73% feel the skills gap will widen in the next five years.

Finally, breaking down the status quo is a tall order for HEIs. Many HEI respondents (84%) expressed concern about meeting the challenge of preparing the future work,

particularly when it comes to delivering learning with greater speed, agility and flexibility.

9. Conclusion

To conclude we have to come to grips with the fact that this isn't going to be a temporary crisis, this is probably a long term transformation of the education that we are going to adjust with.

Despite the transition into the digital can be daunting, universities that develop the right business strategy that includes responsibility for digital technologies within every department can open up a host of exciting new opportunities to engage with students, academics and staff.

There is no single way to deliver particular outcomes through digital technology, but by listening to end users, valuable insight can be gained and acted upon. By empowering individuals across the institution to try new ways of working with digital technologies and providing them with the support and guidance they need, a university can transform itself from a faceless organisation into a vibrant institution with its own digital personality.

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