



# New thinking to tackle the teaching challenge in East African higher education

Working paper

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## Responding to a changing world

The Fourth Industrial Revolution, and its vision of a world systematically disrupted as artificial intelligence, machine learning and the Internet of Things combine with advances in biotechnology and nanotechnology, is predicted to have a significant impact on East Africa's economies and societies. Coupled with a youth bulge – over 60% of its population are below the age of 25<sup>1</sup> – and long-standing calls for universities to do more to meet a range of social, health, economic, environmental and political challenges – it has significant implications for the region's higher education systems.<sup>2</sup>

### Unlocking talent

East Africa's young people are bursting with talent, but they need support to unlock their ideas and abilities and to bring this to their communities, to society and to the economy. Employers warn that graduates are not meeting the needs of labour markets,<sup>3</sup> while others argue that graduates will need to be creators of economic activity and employment through entrepreneurial ventures.<sup>4</sup> The quality and relevance of teaching and learning – and their ability to anticipate future needs, rather than simply respond to today's – will be central to universities' ability to respond to these shifts.

Universities must ensure that their teaching equips their students to not only secure a job when they graduate, but to adapt as new jobs emerge in new industries, and as their communities look to them to serve them in new ways. While the challenge to which universities must rise is significant, at its heart lies the creation of spaces and environments that enable and support students to learn. In fact, as recent research from Kenya, Ghana and Botswana has shown, the teaching culture of a department, or of an institution as a whole, might be the most important factor in improving student's critical thinking skills.<sup>5</sup>

### Equipping graduates for the 21<sup>st</sup> century

While the nature of new graduate jobs may not yet be known, it is evident that they will require graduates who can navigate new digital environments, appraise many different sources of information and data, think critically to solve problems, bring new technologies to bear as they do so, and be entrepreneurial and creative in their thinking.<sup>6</sup>

While knowledge in particular subjects or fields is still important, graduates need a set of skills, dispositions and competencies that wrap around this knowledge, and enable them to develop and deploy it to solve specific problems that they encounter in their professional and personal lives.<sup>7</sup> These are often referred to as 21<sup>st</sup> Century Skills.<sup>8</sup> Students need to develop these skills, dispositions and competencies during their studies, and to further develop them when they graduate.

### Faculty are unprepared

Providing the learning opportunities that young people need will depend on teaching staff: the ability, creativity and commitment that they bring to their classrooms and to their students every day. But across the region, university faculty are often unprepared for the role they need to play. Their

<sup>1</sup> United Nations, Department of Economic and Social Affairs, Population Division, 'World Population Prospects 2019' (New York: United Nations, 2019), <https://population.un.org/wpp/>.

<sup>2</sup> Arnaldo Pellini et al., 'State Capability, Policymaking and the Fourth Industrial Revolution: Do Knowledge Systems Matter?', Discussion Paper, accessed 25 July 2020, <http://southernvoice.org/wp-content/uploads/2019/02/KS4IR-Discussion-Paper.pdf>.

<sup>3</sup> 'Survey Finds Most East African Graduates "Half-Baked"', accessed 21 August 2020, <https://www.universityworldnews.com/post.php?story=20140523130246934>.

<sup>4</sup> MacGregor, Karen, 'Special Report – Entrepreneurship and Higher Education', *University World News*, November 2015, <https://www.universityworldnews.com/special-report.php?publication=global>; Tristan McCowan et al., 'Universities, Employability and Inclusive Development: Repositioning Higher Education in Ghana, Kenya, Nigeria and South Africa' (London: British Council, 2016), [https://www.britishcouncil.org/sites/default/files/universities\\_employability\\_and\\_inclusive\\_development.pdf](https://www.britishcouncil.org/sites/default/files/universities_employability_and_inclusive_development.pdf).

<sup>5</sup> Rebecca Schendel et al., 'Pedagogies for Critical Thinking at Universities in Kenya, Ghana and Botswana: The Importance of a Collective "teaching Culture"', *Teaching in Higher Education* 0, no. 0 (15 December 2020): 1–22, <https://doi.org/10.1080/13562517.2020.1852204>.

<sup>6</sup> McCowan et al., 'Universities, Employability and Inclusive Development: Repositioning Higher Education in Ghana, Kenya, Nigeria and South Africa'.

<sup>7</sup> Joanna Wild and Mary Omingo, 'Graduate Skills for Employability in East Africa: Evolution of a Skills Matrix for Course Redesign', accessed 21 August 2020, <https://www.inasp.info/publications/skills-matrix-TESECEA>.

<sup>8</sup> These typically include clusters of: learning and innovation skills (critical thinking, problem solving, communication, collaboration, creativity, innovation); digital literacy skills (information literacy, media literacy, ICT literacy); and career and life skills (flexibility, adaptability, initiative, cross-cultural interaction).

postgraduate studies typically prepare them for research roles, not to be teachers, educators and facilitators of learning.

For many academics, their own experience of undergraduate and postgraduate study has informed an understanding that their role is to transmit facts and knowledge, and prepare students for an exam, not to nurture learning, critical thinking and independent inquiry.

Induction and in-service training programmes sometimes exist, these are often insufficient to equip lecturers for the classroom. To be able to play their full role as teachers and educators they need to be able to access more sustained programmes of training, support and mentorship.

## Old challenges need new thinking

These are not new challenges, and many initiatives have sought to address them over the years.<sup>9</sup> Some have focused on funding for African academics to spend time in better resourced universities in the North, while others have sent Northern academics to run training and capacity building programmes in African universities. In parallel, there have been efforts to improve national and institutional quality assurance systems, to improve standards from the top. While these and other approaches can provide useful tools and knowledge, they often start from the wrong place – assuming that the expertise and the impetus must come either from outside – encouraging African higher education systems to model their curricula and pedagogies on those of Northern universities – or from the top down. A third issue is relationships between students, faculty and leadership. Rather than thinking of students as recipients or beneficiaries of these efforts, they can become partners in the process of re-imagining learning.

## Enabling teachers to lead change

We need to support university lecturers and teaching staff to lead their own change – by enabling them to articulate their own visions for the learning environments they seek to create, supporting them to develop and strengthen their teaching practice to build those learning environments. It is lecturers who inspire students through their studies, encourage their thinking and intellectual development, create learning spaces which enable them to participate and engage in their own learning, and design the curricula and teaching methods that can help them to connect concepts and ideas to practical situations and real-world problems.

While there is much valuable knowledge and experience to be shared through international partnership, it is only from this starting point – faculty determining and leading their own process of pedagogical change, from local knowledge and understanding – that Northern academics and faculty developers can share their knowledge and experience to enhance this practice.

The challenge is therefore to find new ways to support university educators to transform their teaching *themselves*, and in turn to transform the opportunities that universities offer their students. How can universities and their staff rise to those challenges and support the next generation of leaders, entrepreneurs and professionals in the region?

## Where change is needed

Improving teaching and learning requires that we meet a set of interrelated needs and address a series of problems that have proven difficult to shift, due to their complexity and due to their embeddedness in institutional cultures and structures. Universities are part of national and international systems, and influenced, directed and restricted by the incentives and norms that structure these, and also because they involve many actors – within and beyond universities.

It may be helpful to think of the problem as spanning three broad areas. Exploring each of these reveals a series of further issues that need to be addressed for significant change to be possible.

1. **What is taught and how:** the quality and relevance of curricula, and an over-reliance on examinations to assess students and measure success in learning; a mis-match between the

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<sup>9</sup> Tade Akin Aina, 'Beyond Reforms: The Politics of Higher Education Transformation in Africa', *African Studies Review* 53, no. 1 (April 2010): 21–40, <https://doi.org/10.1353/arw.0.0290>; Nico Cloete, 'Higher Education and Economic Development in Africa', in *Effects of Higher Education Reforms: Change Dynamics*, ed. Martina Vukasović et al., Higher Education Research in the 21st Century Series (Rotterdam: SensePublishers, 2012), 137–52, [https://doi.org/10.1007/978-94-6209-016-3\\_8](https://doi.org/10.1007/978-94-6209-016-3_8); Goolam Mohamedbhai, 'Massification in Higher Education Institutions in Africa: Causes, Consequences and Responses', *International Journal of African Higher Education* 1, no. 1 (2014), <https://doi.org/10.6017/ijahe.v1i1.5644>.

skills that graduates take from their studies and the skills that employers expect, because of insufficient collaboration between universities and wider stakeholders, and insufficient practical or experiential learning opportunities; insufficient support to faculty to enable them to develop their teaching practice; under-resourced quality assurance and support systems.

2. **Workloads, pay, reward, incentives, support:** the challenges that faculty encounter as they juggle teaching responsibilities, research roles, administrative duties and consultancy or other outreach and extension work; large classes sizes; a lack of incentives or rewards for effort that is invested in teaching rather than research; a lack of professional development support.
3. **Institutional structures and facilities:** insufficient laboratory, library, IT and digital infrastructure to serve large numbers of students; insufficient support to faculty and students to make good use of digital tools for teaching and learning.

## Supporting teaching staff to enable student learning

We argue that we need to start with the teachers, and to build out from here to address the other dimensions of the problem – and to engage teachers in that process. Critically, this requires support, encouragement and reward for faculty to develop as teachers and educators. This implies a very different focus to the standard preparation for an academic career, which emphasises research training through doctoral study. From our work with faculty over the last four years, we have identified five domains in which educators need support to transform their practice, and that if their institutions. These are inevitably interconnected, but we believe all are necessary.

Our argument here is not simply a theoretical one, however. Innovative work in East Africa over the last four years has shown that real and significant shifts in practice are possible, when academic staff are encouraged and support to rethink their teaching and to act as leaders and champions for change in their institutions.<sup>10</sup>

### 1. Philosophy: the foundations of teaching practice

While there is growing evidence of innovative pedagogy in many institutions on the continent, from classroom teaching to assessment,<sup>11</sup> there is a significant reliance on models of teaching and instruction which emphasise the transmission of knowledge, deposited into the minds of passive students. To create the right kind of learning environment, teaching staff need to share a common philosophy of education.<sup>12</sup> This philosophy must begin from a recognition that, since knowledge is in flux, students need to be encouraged to see knowledge as complex, uncertain, contestable and changing, and to be exposed to diverse perspectives and viewpoints as they learn.<sup>13</sup> Students must come to their own understanding, and that it is the teacher's role to facilitate this process of engagement and critical reflection.<sup>14</sup>

### 2. Learning design: meeting students' needs

From this philosophical starting point, faculty then need practical tools and support to translate their ambitions for teaching, and the learning ambitions of their students, into structured curricula. They need to be able to identify the goals of a programme – the learning outcomes for their students, and the skills, competencies and dispositions they can hope to gain, alongside a grasp of specific bodies of knowledge – and to use this to structure a series of courses and modules, with the appropriate pedagogical strategies and methods, that translate these goals into a facilitated process of learning for students, in and beyond the classroom, and that include mechanisms for students and teachers to assess their learning along the way.

<sup>10</sup> Evidence here is drawn from the work of the TESCEA partnership: [www.inasp.info/tescea](http://www.inasp.info/tescea)

<sup>11</sup> R. Schendel et al., 'Pedagogies for Critical Thinking: Implications of Project Findings for Higher Education Policies and Practices in Ghana, Kenya and Botswana', Report, UCL Institute of Education: London, UK. (London, UK: UCL Institute of Education, 1 February 2019), <https://discovery.ucl.ac.uk/id/eprint/10089563/>.

<sup>12</sup> Rebecca Schendel, 'Constructing Departmental Culture to Support Student Development: Evidence from a Case Study in Rwanda', *Higher Education* 72, no. 4 (2016): 487–504, <https://doi.org/10.1007/s10734-016-0036-6>; Schendel et al., 'Pedagogies for Critical Thinking at Universities in Kenya, Ghana and Botswana'.

<sup>13</sup> Schendel et al., 'Pedagogies for Critical Thinking'.

<sup>14</sup> Paulo Freire, *Pedagogy of the Oppressed* (Penguin Classics, 2017).

### 3. Engaging with employers and stakeholders

In the process, faculty, and ultimately students, need to engage with expertise and knowledge beyond the academic world and beyond the university. To identify learning goals and outcomes, teachers need to understand what will be expected of their students when they graduate. This means engaging with those who are likely to employ them in professional roles, to understand how knowledge and skills will need to translate into practice. To develop curricula that enable students to engage with knowledge and ideas, but to understand how these may translate into practice, they will need to find ways to engage employers and professionals in that learning process, or to enable students to engage in spaces of practice.

### 4. Equity: creating learning environments for women and men

Creating a learning environment for all requires that the learning needs of male and female students are addressed in teaching and learning processes. This means understanding both the learning needs of male and female learners, examining the ways in which pedagogies, curricula and classroom environments create or perpetuate exclusion according to gender, and supporting teaching staff to be gender-aware and gender-responsive in the ways that they design and plan their courses and facilitate learning in the classroom. When a gender lens is applied to pedagogy, it is possible to develop more inclusive teaching and learning practices that balance both women's and men's participation.<sup>15</sup>

### 5. Changing practice: mentoring and support

A guiding philosophy, and a curriculum which is aligned to a student's eventual learning outcomes are essential, but the challenge is to translate this into the classroom environment. For some, the shift that transformative learning encourages them to make is enough to push lecturers to experiment with new ways of teaching, but for many, deeper support is needed. Institutions need a cadre of staff who can both champion the approach and support their colleagues to put it into practice. In addition to running further workshops and providing other training opportunities, they can act as day to day mentors, helping lecturers to work through new approaches or troubleshoot difficulties and help think through appropriate strategies. In doing so this group of staff can also help to support a scale-out to other faculties and schools in their universities.

### 6. Influencing institutional change

Alongside this, teachers, and particularly leaders within those communities, will need to engage their institutions in a process of change. That might be identifying where policies or procedures need to be flexed or adapted or persuading and engaging managers and leadership at higher levels, so that new approaches to teaching are permitted, and supported, or that teachers are rewarded and incentivised to make these changes. It might also involve engaging more systematically with their communities beyond the institution, to begin to soften the boundaries between a university, its community, and the organisations which employ its students. These are critical elements to the process of change, but they are more likely to be successful where a clear case for change has been made, and policies and processes are reformed in response to that change.

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<sup>15</sup> Jennifer Chapin and Verity Warne, 'Gender Responsive Pedagogy in Higher Education: A Framework' (Oxford: INASP, October 2020), <https://www.inasp.info/publications/gender-responsive-pedagogy-higher-education>.

## Change is happening

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Results from recent work by a partnership of academics, faculty developers, and social entrepreneurs working together with four universities in East Africa<sup>16</sup> illustrate what can be achieved when the six domains outlined above are integrated and used to guide a process of rethinking teaching and learning.

### Lecturers are passionate about becoming better teachers and are able to design more effective courses

- More than 300 academic faculty have been engaged through transformative learning workshops and have gone on to re-design over 180 courses across many disciplines and departments.
- They are delivering more engaging teaching, that puts their students at the centre, and supporting new initiatives like student clubs and conferences. They are better equipped to design courses based on learning outcomes rather than content, to align teaching and assessment strategies, and to facilitate learning in new ways.
- An evaluation demonstrated a significant shift in eight key elements of teaching practice: from use of critical thinking and problem-based learning techniques; to the use of group work and other active learning techniques; to efforts to make pedagogy more gender-responsive.
- There was also a shift in attitudes, with teachers recognising that students bring their own knowledge to class, and that students learn best when they are supported to master concepts and principles rather than amassing fact-based knowledge.
- An assessment of lesson plans revealed significant improvements in the quality of teaching and learning design: explicit learning outcomes which cover on critical thinking, problem solving, teamwork, learning how to learn, and foster dispositions such as social responsibility, caring for communities and the environment; detailed and realistic activities; clear assessment methods; and responding to the contexts of their classes and student groups.

### Students are starting to see the change

- 3,700 students have experienced these new approaches in their teaching. 94% express satisfaction with their educational experience, valuing the opportunity to learn as a team, and through practical assignments, new types of interaction with their lecturers, and a greater orientation towards the needs of their communities.
- Students' own practice of problem-solving and critical approaches to learning has shifted. Students are seeing new possibilities emerge in their learning, are growing in confidence, and are responding to the new freedoms that lecturers are giving them.
- Students have themselves become ambassadors and champions for these changes – encouraging their lecturers through their more active participation in the classroom, positive feedback, and efforts to organise extra-curricular student groups.

### Businesses and communities are becoming more engaged in university teaching and learning

- Universities' engagement with local employers and stakeholders have led to the latter's involvement in the design of courses, helping universities understand youth labour markets better, and supporting student learning directly, sharing their expertise as guest speakers or creating placements and project opportunities to provide practical learning.
- Universities' external stakeholders are becoming champions of their local institutions, and helping to understand the skills, behaviours and mindsets students need, and offering new models for academic governance.

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<sup>16</sup> For more information see: [www.inasp.info/tescea](http://www.inasp.info/tescea)

## Universities are creating an environment to enable transformative learning

- The energy and passion of faculty to improve teaching, and their efforts to engage university leadership, has in turn encouraged institutions to revise their policy frameworks and processes – conscious that these shifts are also needed to enable and embed wider change. Policies have been revised or developed anew to cover teaching and learning, gender, staff appraisal and promotion, community engagement and quality assurance.
- Perhaps more significantly, efforts by vanguard faculty members have helped to shape new visions for their institutions, with change embraced by faculty boards, senior managers, senate and council.
- Significantly, the emphasis on equity in the classroom – particularly through work with teaching faculty on gender-responsive pedagogy – has helped to nurture a greater concern for equity at institutional level too.

## Scaling this further

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While there is evidence of significant shifts, there is still a way to go to effect deep and lasting change across universities. But it seems clear that this approach – putting teachers at the centre of the change process, inspiring and enabling them to rethink their teaching and to shift their and their students’ approach to learning, and then ensuring that institutional systems, processes and policies supports this – offers the possibility for real transformation.

What’s more, it puts the power to do so in the hands of the people closest to those needs, with the best understanding of the environments in which students learn, and with the greatest potential to effect real change.

While it will require targeted additional investment, the framework is one which allows this can be done using the expertise and resources of national higher education systems and universities themselves.

We’re keen to hear from other universities – within East Africa and beyond – who are committed to driving similar change in their institutions. If you share our ambitions, get in touch.

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